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WOMEN IN POVERTY

TYRANNY OF THE HOUSEHOLD

Investigative Essays on Women's Work

Devaki Jain

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SHAKTI BOOKS is devoted solely to publishing studies on Women. The aim of the several series under this imprint is to provide documentation, analyses, interpretive comment and research findings on all aspects of the various issues related to women, from the standpoints of anthropology, sociology, history, politics, economics and social history. Emphasis will be placed on the Third World experience and contributions invited from academicians, professionals with field experience, social scientists and scholars. In those areas of social concern where formal data are scanty or unavailable, informal but fully authenticated studies will be considered as part of a holistic treatment of a complex and, in many ways, still undefined subject.

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Introduction

A perception which arises out of the studies of family and household, from the point of gender, is the troubled question of the traditional hierarchies associated with these forms of organisation. Family with father and mother or husband and wife, and the rituals that have gone into marriage, and the rules of behaviour, and the role allocation that have been spelt out, sometimes provide an impossible barrier to equality between the sexes. Thus it is a common phenomena all over the world and across history—that as women begin to feel their way and wish to affirm some autonomy for themselves, some freedom to choose and fulfil their individuality, the first institution that begins to crack is the family. It is understandable that today, women, whether in the first world, the socialist world or the third world, often attack the institution of family as one of the strongholds of female oppression and want to challenge this concept, and ask for space to create new families.

These *new* families would try to have the sense of bonding, of responsibility, of social security, of even continuity as the old families had but they would also provide the individuals choices in coming together, and building a relationship on their own terms, and not on terms handed to them by antiquity, traditions, ideology—most of which stemmed from patriarchy or male attitudes to female capabilities and roles.

It is difficult to demarcate, but it is important to show that the household as a concept does not necessarily come under the same form of attack because it is associated with residence. Yet since very often the two are taken as one and the same and since household is the term used more frequently in economic and statistical analysis, a detailed examination of the dynamics of the household is important. It can help not only to examine the

types of tyrannies as well as possibilities that exist in the household, but also to see how far the concept of household can be reorganised to provide the kind of organisation that women may want to belong to, especially in the developing world.

Family and household are not the same entity either conceptually or in relation to statistical theory and method. Household is usually defined in terms of residence or habitat and family in terms of something more intimate in human terms of relationships. In some ways the word family is used for representing the most primary form of social organisation by sociologists whereas the term household is used by economists and statisticians. But again with the same purpose namely as the ultimate or primary unit of organisation.

We have concepts like household occupation. household enterprise, household type, which is similar but not the same as family occupation, family enterprise or family type.

A household may be engaged predominantly in a certain occupation but that may not be the family occupation or the family enterprise. Family occupation and enterprise seem to suggest either ownership by the family or some traditional homogeneous type of skill or activity.

Yet analytically especially when we look at age and sex-based inequalities within these two forms of social and economic organisations, we find that the two are not very different whether within the household or within the family. Both in terms of allocation of social powers and in the allocation of physical items, women are always lower in the hierarchy. Further if sometimes they do have positions of social power within the family due to age or custom or what are called the rules of conduct, this is certainly not associated with economic power namely control over resources, incomes and their distribution.

Thus it could be said that it is more often the case that the household more than the family contains or conceals within it gender-based inequalities. It is often also suggested that this inequality strides across the usual barriers of stratification such as class, caste, race and religion. It is even suggested that while in a highly stratified society like India it is difficult to justify gender as a basis of social and political formation, as gender too is riven by class, caste and religious-based distances, if conceptually we move away from *inter-household* distances to *intra-household* analysis, it is possible to find the basis for such formations. In other words whereas clustering by class or caste is done on the basis of *units of household* clusters ; clusterings on the basis of gender could be derived from the intra-household characterisation, *units of individuals*. By emphasising individual autonomy, perhaps women would provide a strategy for all, that is women, men and children. In other words, women's choices of alternative paths to progress would establish opportunities for all.

Thus women from within households have the common experience of facing different forms of intra-household subordination whatever the class or caste, and this common experience within this world of household could not only provide the basis of organisation but also provide perspectives which could be called feminism, or the method and articulation of women.

Today, amongst the poor in rural areas, whether they are scheduled castes or not, poverty and unemployment are so acute that there is a great push towards various types of migration which has also diluted the family. Then there is the economic phenomenon of female-headed household where women are bread-winners and nurturers. Family therefore is not a crucial foundation for these classes and castes.

In the Indian context where the tradition of family, its bonds, its interdependence, its burning loyalty to each other are worshipped, whether they are real or not, the way the scenario is usually painted is to suggest that the family is a homogeneous unit. Individuals work towards the optimization of the family well-being. In other words, the interest of all members of the family would naturally coincide, as each of them would be working not for himself, but for the benefit of all the interconnected units. A father would labour to bring home bread for the rest of the family, the women, the children, his parents, perhaps even his brothers and sisters. The women and children in turn would work to look after each other and the rest. If one person in a family is called to represent the family, or given access to development opportunities, the interest of all would be covered, and further if information is being gathered for a decision-making purpose, whether it is to design a programme of benefits, whe-

ther to collect an opinion on wider polity, or on local crises, one person from the family, male or female, should be able to reflect that family's needs.

This is perhaps quite all right when the family does have a lifestyle where there is some sharing of information, even if not sharing of tasks, and when there is at least a basic minimum wherewithal which does not require difficult decisions of distribution within the family. In other words, this is a fair presumption in families like yours and mine.

But in a household with a crisis for survival, with insufficient resources, at the lowest levels of poverty, the patterns of family life are different. Man, woman and child are all endeavouring to keep themselves alive through some activity whether it is to dig for roots, to examine garbage for waste, or to travel long distances for wage work. There is not much time to share each other's lives around a family hearth or sitting room. Lives, by necessity, get acutely segregated both in space and in tasks and to that extent perceptions are limited to personal experience.

Men may know that their women are working hard to fetch water and fuel, to tend children or cattle, but they may not know how hard and at what cost. Women may know that their men are labouring for a wage, that a job may be humiliating and enervating—but they may not know what the men know. Domains of experience become thickly demarcated and so ignorance gets petrified. Individual members of the family are unable to speak for the others and those who have less access to this tool of communication, such as women and children, remain neglected.

Little children do not know family as we know it. What do the little children of construction workers in Delhi know of family, or of any social institution such as a school? They know rubble, they know one parent—or perhaps not even a parent—a sibling. They grow up without a neighbourhood, seeing large numbers of men and women working around them. Similarly, what would a child from Ratnagiri or from Tehri Garhwal know of family? The father may be away in Delhi working as a cook or a driver if from Tehri Garhwal or in Bombay if from Ratnagiri.

Much has been written about the sociological family—the

customary, formal, non-formal rules and procedures that operate within it. But the sociological family is different from the economic family—and the economic family, especially amongst the poor has not been studied sufficiently. These households are not institutions with rules and regulations. Their autonomy is a fiction—and the usual argument that any interference with allocation within the household is aggression on the household's autonomy, a convenient and cruel morality or moral blindness. Where there are no choices what freedoms are we taking away?

The much studied sociological family is often described as the microcosm of the world—or larger society. It may not be sufficiently realized how true this is of the economic family—for this economic household contains in it the economic characteristics of the larger world: namely unequal distribution of economic power; benefits related to ownership, capital, access, responsibility, and gender. The less the resources in a family, the greater the inequality within it.

Many societies have attempted to move away from family to new forms of collective organisation. The communes of China and Vietnam, the Kibbutz of Israel, the Ashrams of Gandhi, and even the new communities in Europe and North America are examples of this thrust.

But while most of them arose out of an interest in reorganising production and distribution, Gandhi's effort arose out of a recognition of the tyranny of the family on women. He wrote:

> Marriage is probably the oldest social institution and the most abused . . . . In this unequal struggle of women against social tyrannies imposed on them, nothing has played so crucial a part as marriage. It is in fact the base from which the continuous attacks on them are made. For men it is a cloak which covers a multitude of their failings, the betrayals of their social obligations.

He saw role allocation whether between men and women, or between castes and classes, as the source of stigma and subordination. So he made an attempt to make manual work, night-soil lifting, kitchen work an sewing, tasks for all men and women who lived in an ashram. Today when women find the

family tyrannical—in the West or East—they demand an end to role stereotyping.

The essays that have been collected in this volume range from those looking at specific distribution of nutrition and health within households, through the methodology of their measurement to external attitudes and perceptions that enhance this discrimination.

The main thrust of these essays is to first, quantify, reveal and analyse the inequality in nutrition, in energy outputs and inputs in workloads that exist within these households. And second, to show that the existing methodology of measuring both the produce of women as well as its distribution in India and elsewhere is inadequate as it stands today. Some ideas on how measurement can be improved to reveal these inequalities is provided.

Several of the essays in this volume have made an attempt to quantify the extent to the sex-wise inequalities within a household in distribution of consumption resources and in devolution of responsibilities. Sen and Sengupta in their paper "Malnutrition of Rural Children and the Sex Bias" have presented their findings of a survey of total child population of two somewhat differently situated villages of West Bengal. They found that a bias against female children is inbuilt in the familial cultural values. The greater value put on male children is not necessarily supported by the actual experience of the people concerned. Nevertheless unless the families are exposed to modern, urban values mainly through mother's education, the bias remains even in relatively prosperous households. Similarly, Chowdhury, in his paper "Maternal Nutrition in Rural Bangladesh" has given the findings of a large and extensive sample survey. These show that in their continuous cycle since adolescence, of pregnancy-lactation-pregnancy, the women of Bangladesh have traditionally received little additional nutrition. Therefore women of reproductive age as a group are the worst sufferers from malnutrition whether as a result of lean season scarcity or secular increase in poverty.

Batliwala in her papar on "Women in Poverty: The Energy, Health and Nutrition Syndrome" analyses available data regarding relative input of calorific energy by rural men and women in

their daily activities. Her findings are that women's daily activities, which are mostly perennial, use up more calories than even the peak period activities of men. This holds true even if one leaves out women's additional calorific requirements during pregnancy and lactation. It is worth noting that Chowdhury's study had also shown that women of Bangladesh have to bear the responsibility of child nutrition through breast feeding for as long as an average period of 30 months. The distribution of food within the family, however, usually does not correspond to this division of responsibilities. In the region covered by the study of Batliwala allocation of food to women was on an average about 25 per cent below that to men.

The Visaria study "Indian Households with Female Heads: Their Incidence, Characteristics and Level of Living" is an attempt to derive some information on this topic from the standard nationwide official data sources, i.e., the population census and the national sample survey enquiries. The official conception of who is the head of a household is severely biased by prevalent social values: but even from this underestimation of female-headed households, it becomes quite clear that such households are severely handicapped by a lack of assets and other sources of earning. Their responsibilities in the form of number of dependents however remain almost the same.

The next two studies, i.e., Dutt's and Krishnaswamy and Rajgopal's are explorations in the general belief that however handicapped a particular group is, an increase in the general level of welfare of the surrounding population will benefit if by a "trickling down" process. Public policies following these precepts assume that programmes for backward classes or regions will also benefit women of the concerned groups. The papers point out that unless there are special programmes to help women in particular, they are more than likely to miss out on the benefits. Indeed, the programmes may lead to a worsening of women's relative position, because their few benefits generally go to men. Also, unless such programmes are directed to the specific needs felt by the women concerned the standard schemes for maternal welfare or adult literacy may do little to alleviate their actual problems. Interestingly, this was also one of the findings of ths Sen and Sengupta study mentioned above that a

general welfare scheme like land reforms does not alter the intrafamily sex bias in nutrition. It takes a specific nutrition scheme for children to achieve that result.

The two papers on women's position in the labour market approach the theme from a somewhat different angle. Sen in her paper has examined the interregional variations in the relative participation of women as wage labour in agriculture. For a given crop, women, if allowed to participate in the work, retain almost identical tasks. In rice cultivation they mainly do transplanting weeding, harvesting and the pest harvest operation, but while in some regions, these tasks are performed wholly by women, in other they are shared by workers of both sexes. Sen finds that their interregional variations are thus not so much due to technological factors but mainly to intercultural variations in the taboos on women's work.

Similarly Banerjee is concerned with the nature and extent of sex-wise discrimination in the labour market. After considering and allowing for standard economic factors which can account for women's relatively inferior position, she suggests that the nature of occupations assigned to women and their evaluation by society are once again closely related to women's work and its evaluation within the household.

There is then a strong prima facie case for arguing that, in our society, the inadequate recognition and low evaluation of women's role in the households has been the major factor contributing to the generally low status and welfare of women. However, in order to establish the case sufficiently strongly to demand radical changes in an institution as deeply entrenched as the household, it is necessary to have a broad based, strongly objective data system. This is precisely the problem for women's studies. The conceptual framework of existing data systems is not value neutral: it reflects the biases of the society in that a large part of women's work is lumped under the broad label housework and then, following the standard international conventions, women are grouped amongst the non-workers and their product is left out of the national product estimates.

That the Indian data collecting agencies have never questioned this setup is not necessarily because of their deliberate chauvinism. As Bhattacharya in his paper "On the Issue of Under-

enumeration of Women's Work in the Indian Data Collecting System" has pointed out, the nature of women's work and the varying circumstances under which it is carried out, often creates genuine problems of perception of it not just by investigators but also by the women themselves and by their family members. Most of women's work is done indoors. It is often interspersed with housework and quite often the value of their products is very low, relative to the total income of the household. In spite of considerable debate, no methodology has yet been devised for collecting such data on standards required for international comparisons.

Jain has been a pioneer in India in her attempts to devise a methodology of bringing to light the numerous productive tasks that women do and the extent of their day-to-day involvement in them. This is necessary in order to assess the extent to which women are actually productive as participants in economic activities. Jain has undertaken a survey of women's work in several villages of Rajasthan and West Bengal. She recorded in detail the activity patterns of selected women in these villages over the entire day for extended periods during a year. Her findings which are given in her paper "The Household Trap: Report of a Field Survey of Female Activity Patterns" are interesting in themselves because of the interregional cultural variations they bring out. No less interesting is the light she throws on the feasibility of such a method of field survey where an investigator stays for some time in the village and observes the women at close quarters to record their daily lifestyle. She contends that this is the only way to break the barriers of perception that have led to continuous neglect of women's economic role.

Krishnamurthy in his paper, "The Investigator, the Respondent and the Survey: The Problem of Getting Good Data on Women" is also concerned with this issue of methodology. He too appreciates the need to devise an alternative method of data collection for a better appreciation of women's contribution to the economy but he has several reservations about the method of long period observation suggested by Jain. Large-scale surveys have their own limitations in that the investigation has to be through a number of scattered investigators who cannot be

expected nor allowed to use their own understanding in drawing out responses. He is somewhat sceptical about the suitability of Jain's method to large-scale surveys because of the difficulties of devising adequate and suitably neutral investigative aids.

Mukherjee in his paper "Contributions to and Use of Social Product by Women" is concerned with the other side of the same coin, i.e , a methodology for evaluation of work in order to give it due weightage in estimates of the national product Since most of women's work is not valued for the market, their contribution to the national economy is totally ignored, and they are relegated to the inferior status of dependent. He argues that this underestimates not only the value of women's labour but also the general level of welfare in the country. His suggestion of measures for valuation of this work are very tentative and meant basically to stimulate research in this very important field.

This very brief survey of the papers in this volume probably helps to identify its basic character. In a field often dominated by emotional reactions and subjective valuation, these scholars are all trying to provide a sound underpinning of unbiased data to their theoretical analysis. This is essentially the main objective of the group—Economists Interested in Women's Issues (commonly known as EIWIG)—which had originally organised these debates.

It is the hope of those who have brought together these papers that this volume will provide the first step to further investigations of the household, further changes in statistical collections and statistical method. It is also their hope that imperfections in the papers can be discussed and improved upon.

At another level these papers emphasize the need to see gender-based inequality as an intense harsh reality. Why, it can be asked, after seeing the quantitative data of female effort and contribution, does this society deprive them? They seem vital for this society's existence and continued survival. They are sole supporters, daughters support parents in old age almost in equal proportion to sons, they put in longer hours of labour, they nurture at all cost and yet they are fed less, provided less health care.

Subsuming this issue within class and caste in India, is causing

havoc and decimating Indian women. Survival strategies for poor women and infants are revealing and praiseworthy, but demean the society which has closed its doors of perception to this reality. This book is a small attempt to burst open these doors.

This collection of essays is a result of a process initiated at the first National Conference on Women's Studies held at Bombay in 1981.

In the field of women studies, economic and statistical research is still not fully explored and developed or brought together. Yet various issues emerge when women are studied which question existing economic theories, classificatory systems, definitions, concepts and measurement technologies.

At the first National Conference on Women's Studies, some economists met and agreed that it would be useful for a group to be formed which could be called: Economists Interested in Women Issues. The overall purpose of forming a loose network would be to consolidate existing knowledge on data, analysis, and policy problems concerning women insofar as it enters the purview of economics and statistics.

Some issues which were identified as requiring workshops, and seminars to consolidate knowledge, explore and clarify hypotheses, substantiate criticisms were:

1. Work and employment—concepts, definition, measurement.
2. Data base—for perceiving, quantifying inequality between sexes including within the household, in access to goods and services.
3. Home based work—problems, prospects.

It was felt that once a list of interested persons was formed with some additional information on their special interest, research and other experience, this could also provide a list of resource persons which could serve bodies like the National Statistical Advisory Board or the Planning Commission and others when they need scrutinies and consultations.

Thus an informal society of economists interested in women's issues was born. This society planned a series of seminars which would create an intra-disciplinary forum and fill some of the gaps. The first seminar was held in Delhi in 1982 and concentr-

ted on a number of technical aspects of women's work and employment. It emphasised the data base, both what it revealed as well as how it needed to be improved. The second seminar held at Calcutta, in 1983 concentrated on providing more information relevant to women's work within poverty households. Even here, however, the focus included both phenomena as well as the measuring tools.

A third seminar has been held in Madras in 1984. This seminar discussed the link between the organisation, technology and women's employment. We hope this process will go on, each time peeling off another layer of fact and fiction in relation to women's work and employment.

The focus of this volume is on women in poverty households: the kind of issues that need to be highlighted as well as the kind of methodologies that have to be used. The implicit aim is equality.

DEVAKI JAIN
NIRMALA BANERJEE

PART ONE

WITHIN THE HOUSEHOLD

1

Malnutrition of Rural Children and the Sex Bias[1]

AMARTYA SEN AND SUNIL SENGUPTA

The severity of endemic hunger and malnutrition in rural India has been much discussed. One particular aspect of it that deserves special attention is the appalling level of malnutritioned children. Further, there is the additional issue of sex bias. In an earlier study by one of the authors of this article, information relating to the greater extent of female malnutrition of various types (from "slight" to "severe") among children was analysed.[2]

This paper reports on some empirical fieldwork done by the

[1]This study was conducted at the Agro-Economic Research Centre at Santiniketan during January to April 1983. Financial support from Oxford University and Leverhulme Foundation for expenses incurred is gratefully acknowledged. For helpful advice and suggestions, we are indebted to Benoy Bhattacharya, Eva Colorni and Madan Gopal Ghosh. We are grateful for help in data collection to Manju Das, Shiba Pada Ghosh and Nityananda Roy, and for assistance in data processing to Ashok Banerji, Jocelyn Kynch and Surojit Ghosh.

[2]Amartya Sen, "Family and Food : Sex Bias in Poverty", mimeographed, Oxford University, 1981, to be published in P. Bardhan and T.N. Srinivasan, (eds), *Rural Poverty in South Asia*, Columbia University Press, forthcoming. See also his Coromandel Lecture, "Food Battles: Conflicts in the Access to Food," New Delhi, 13 December 1982; reprinted in *Mainstream*, 8 January 1983, and his joint paper with Jocelyn Kynch, "Indian Women: Well-being and Survival," *Cambridge Journal of Economics*, forthcoming.

authors at the Agro-Economic Research Centre at Santiniketan. One of the problems with malnutrition studies is the difficulty of getting exact information regarding the age of the children, and this is a serious obstacle since the usual measurement of malnutrition is based on "weight for age." While there are other measures of malnutrition, they typically require considerable medical expertise; the 'weight for age' criterion is less susceptible to measurement errors. The test of "weight for age" has indeed been very widely used and there is also some scope for comparability with results elsewhere. But the difficulty of getting accurate age data is a serious one. In this empirical study, special attention was paid to collect these data accurately, including double-checking the age information with the help of persons resident in the village familiar with the exact history of each family.

The second reason for doing primary data collection was the belief that data about the children must be systematically related to information about the economic and social background of each family. This we have tried to do.

The two villages that were selected for study are both in the Birbhum district of West Bengal. One of them, viz., Sahajapur, is about 7 km from Bolpur town, and is a roadside village, connected with Bolpur by a metalled road. The other, viz., Kuchli, is 15 km from Bolpur, and is much more isolated from the town. Indeed access to Kuchli is difficult at all times, and more so in the rainy season. Sahajapur is the bigger of the two villages, consisting of 205 households, compared with 126 households in Kuchli. Sahajapur has also been studied extensively in the past by the Agro-Economic Research Centre at Santiniketan, during 1956, 1961 and 1981—the last being a study by John Harris.[3]

There has been a very active land reform programme around Kuchli, and the results of that are visible in the pattern of land ownership in that village. On the other hand, Sahajapur has a programme of direct nutritional intervention in the form of providing lunch for Santal children (250 gm of milk and pulses

[3]John Harris, "Making Out on Limited Resources or What Happened to Semi-Feudalism in a Bengal District," *CRESSIDA*, Calcutta, April 1982.

per child per day), who constitute a substantial part of the population of children in Sahajapur (as indeed they also do in Kuchli, but there without the benefit of direct nutritional intervention).[4] In both villages, left-wing parties are influential, and the level of political activism quite high.

Altogether 236 children were studied, all below 5 years of age (i.e., aged 60 months or less). Of these 236, the number from Sahajapur was 146 and from Kuchli 90. The numbers of boys and girls were not equal, which is not surprising in a sample of this size and type. There are 80 boys and 66 girls of this age group from Sahajapur and 42 boys and 48 girls from Kuchli. These are indeed all the children in this age group in the two viilages, except that two boys from Kuchli are not included since they were away in another village throughout the period of the survey and later checking. The surveys are basically cases of complete enumeration, rather than of samples.

Malnutrition of Children in General

The general level of malnutrition of children in both the villages is distressingly high.[5] For the purpose of classification we used the standard "Weight Curves from Birth to Five Years of Age" used in this part of the country. In these standard curves, Curve I, which is described as bounding the "weight of average well-fed healthy children", is in fact related to the international anthropometric standards, often called the "Harvard Standard", but it corresponds to 80 per cent of the Harvard Standard for nearly all ages (with the exception of weight at age 0 where it is about 90 per cent of the standard).

[4]In both villages, however, the primary schools (one each in the two villages) are covered by the mid-day meal programme with a quarter pound of bread per head supplied to students. Children above 5 are admitted to such schools.

[5]It may be mentioned here that both the villages were severely affected by drought in the months between July and September 1982. But at the time of the present study in February-March 1983, both the villages were found to have substantially recovered from the effects of the drought, in terms of the usual drought induced characteristics such as widespread emaciation. For a detailed report on the effects of drought of 1982, see *A Study in Drought in Birbhum, West Bengal*, edited by Sunil Sengupta, Agro-Economic Research Centre, Santiniketan, 1982.

The growth charts are standardly used in India, and it is useful to note that the instructions to the para-medical staff in this region, given along with the diagram of four Weight Curves (denoted respectively as I, II, III and IV), include the following:

> Children whose weights fall between lines I and II are slightly undernourished and require nutrition education of the mother and supplementary feeding at home. Children whose weights fall between lines II and III are undernourished and require supplementary feeding at the Anganwadi. Children whose weights fall below line III are severely malnourished. Consult the doctor and follow his advice. Children whose weights fall below line IV will have to be hospitalised for treatment.

We shall refer to children between lines I and II as "slightly undernourished", between lines II and III as "moderately undernourished", between lines III and IV as "severely undernourished", and below line IV as "disastrously undernourished.

Both in Sahajapur and Kuchli, eight per cent of the children were found to be disastrously undernourished. As far as other levels of undernourishment are concerned, while the extents were remarkably high in both villages, Sahajapur consistently did worse than Kuchli. Table 1 presents the information in percentage terms for comparison. It is easily checked that

TABLE 1. PERCENTAGE OF VARIOUS LEVELS OF UNDERNOURISHMENT OF CHILDREN BELOW 5 IN THE TWO VILLAGES

Village	*Below I*	*Below II*	*Below III*	*Below IV*	*Undernourishment Index*
Sahajapur	93	72	41	8	54
Kuchli	84	64	34	8	48

Sahajapur dominates Kuchli in terms of undernourishment (using "Lorenz Curve" type comparison). It is, however, convenient to have a numerical index of malnutrition, and this

has been done here by weighted averaging with the weights of 1 for the slightly undernourished, 2 for the moderately undernourished, 3 for the severely undernourished, and 4 for the disastrously undernourished, and then normalising this total score to run between an absolute minimal figure of 0 (in the case of everyone being on line I or above), and 100 (in the case in which everyone is below line IV). In term of this index, Kuchli's undernourishment score is 48 and that of Sahajapur 54,

The difference between Kuchli and Sahajapur is not surprising. Even though Sahajapur is more integrated with the urban economy, it has the disadvantages as well as the advantages of that integration. In particular, the problem of having to compete with more powerful buyers in a system of competitive "entitlement" has been discussed elsewhere in general terms.[6] There is also the more obvious fact that the extent of landlessness is much more pervasive in Sahajapur.[7] While 60 per cent of the children in Sahajapur were from the families that are landless, only 18 per cent in Kuchli come from such families. Furthermore, even the average amount of land owned by the Kuchli population, in families with children, works out as more than 33 per cent higher than the corresponding figure for Sahajapur.

Table 2 presents a comparative malnutrition picture of children from landed and landless families in the two villages.

TABLE 2. PERCENTAGE OF UNDERNOURISHMENT OF CHILDREN BELOW 5 BY LAND OWNERSHIP STATUS

Village	*Below I*	*Below II*	*Below III*	*Below IV*	*Undernourishment Index*
Sahajapur Landless	96	76	41	7	55
Kuchli Landless	94	88	50	25	64
Sahajapur Landed	89	66	41	8	51
Kuchli Landed	82	59	31	4	44

[6]See Amartya Sen "Poverty and Famines: An Essay on Entitlement and Deprivation", Oxford, Clarendon Press, 1981.

[7]John Harris in his study, referred to earlier, has pointed to increasing concentration of ownership in Sahajapur.

Not surprisingly, the landed do relatively better than the landless in both the villages, but there are some interesting additional features. The Kuchli landed do consistently better than the Sahajapur landed at every level and the over-all undernourishment score of Kuchli landed children is 44 and that of Sahajapur landed children 51.

On the other hand, as far as the landless population is concerned, Kuchli's record seems worse than that of Sahajapur with an undernourishment score of 64, as opposed to 55 in Sahajapur. This may well be connected with the direct nutritional intervention benefiting the scheduled tribe population in Sahajapur, with no corresponding programme in Kuchli. This point is brought out also by the fact that while the scheduled caste children of Sahajapur do much worse than the scheduled caste children of Kuchli, the scheduled tribe children of Sahajapur do marginally better than the scheduled tribe children of Kuchli. And this is despite the fact that 46 out of the 51 scheduled tribe children of Sahajapur come from landless families. In Table 3 the comparative picture of undernourishment of the three caste groups are presented.

TABLE 3. PERCENTAGE OF UNDERNOURISHMENT OF CHILDREN BELOW 5

Village	*Below I*	*Below II*	*Below III*	*Below IV*	*Undernourishment Index*
Sahajapur caste Hindu	86	61	33	6	47
Kuchli caste Hindu	91	64	36	6	49
Sahajapur Sch. Castes	100	83	48	4	59
Kuchli Sch. Caste	80	60	25	5	43
Sahajapur Sch. Tribes	96	73	43	12	56
Kuchli Sch. Tribes	82	76	53	18	57

It is, incidentally, interesting to note that while the Kuchli landed children do very much better than the children from Kuchli landless families, the difference is much less sharp in Sahajapur (see Table 2).

Malnutrition of Children by Sex

We now turn to the question of sex bias. In both the villages the girls are systematically more undernourished at every level. But while the gaps are mild in Sahajapur, they are very sharp in Kuchli. In Table 4 the comparative performance of boys and girls in terms of undernourishment are presented. By the undernourishment index, Sahajapur girls do only 4 per cent worse than Sahajapur boys[8], but Kuchli girls are 41 per cent more undernourished, in terms of this index than Kuchli boys.

It is quite remarkable that the village with a much lower level of malnutrition of children in general, viz., Kuchli, should have so much more sex bias than the more undernourished village of Sahajapur. In fact, looking at Table 4 one would get

TABLE 4. PERCENTAGE OF UNDERNOURISHMENT OF CHILDREN BELOW 5 BY SEX

Group	*Below I*	*Below II*	*Below III*	*Below IV*	*Undernourishment Index*
Sahajapur boys	94	71	39	6	53
Sahajapur girls	92	73	44	9	55
Kuchli boys	79	52	19	7	39
Kuchli girls	90	75	48	8	55

[8]Indeed, the extent of average sex difference in weight-for-age in Sahajapur is small enough to be not out of line with the differences that are observed in richer countries as well (see for example J. Heimendinger's comparisons of samples of Swiss boys and girls in *Helv Paediat Acta*, volume 19 (1964). However, the average picture in Sahajapur is a little deceptive, since girls actually do relatively better than boys in landed (and caste Hindu) families and the relative deprivation of girls in Sahajapur is sharper among landless (and scheduled caste and scheduled tribe) families than the average picture for the village as a whole. These contrasts are taken up later.

the impression that the performance of Kuchli girls is just about the same as that of Sahajapur girls. The entire gain of Kuchli over Sahajapur in terms of lower average malnutrition children as well as the greater sex difference in Kuchli both seem to be due to the superior nutritional status of the Kuchli boys vis-a-vis Sahajapur boys.

While Table 4 presents the assessment of health of children in relation to exogenously given nutritional standards, it is also possible to assess the relative performance of different groups in terms of the internal growth dynamics of the respective groups. The relationship between weight and age of children is well approximated by a power curve (even though it is obviously faulty for age 0). The following equation was fitted for the different groups, with w standing for weight in kg and a for age in months, with k and p two coefficients to be estimated: $w=ka^p$. The results for the four groups—Sahajapur boys, Sahajapur girls, Kuchli boys and Kuchli girls—are presented in Table 5.

TABLE 5. AGE WEIGHT GROWTH CURVES
POWER *fit* : $w=ka^P$

Group	*Number*	*Estimated k*	*Estimated p*	R^2
Sahajapur boys	80	2.21	0.399146	0.76
Sahajapur girls	66	2.31	0.376124	0.78
Kuchli boys	42	2.27	0.414923	0.73
Kuchli girls	48	2.32	0.373543	0.63

It can be easily seen that in each village boys grow faster than girls, but while the growth difference is relatively mild in Sahajapur, it is more sharp in Kuchli. In both villages the fitted curves suggest a higher weight for girls than for boys for the very early ages, with the growth curve of boys crossing that of girls from below, and with the gap widening monotonically thereafter. The point of cross-over is around six months in Sahajapur and just below two months in Kuchli. The slight advantage of girls over boys at very early ages seems to correspond to the well-known phenomenon of lower neo-natal mortality of female infants vis-a-vis male infants, followed (in India) by systematically higher infant mortality for females over males beyond the neo-natal period.

It should be observed that also in terms of the growth curves the performance of Sahajapur girls is very close to that of Kuchli girls, but Kuchli boys do very much better than Sahajapur boys.[9] If the contrast between Sahajapur and Kuchli could be interpreted as reflecting the impact of land reform and other general economic advantages of the population of Kuchli vis-a-vis that of Sahajapur, then it would be natural to conclude that these relative advantages have benefited mainly the male children leaving the female children more or less where they were.

However, while there is something in that reading, the picture is more complex, since there are other differences between Kuchli and Sahajapur, including a programme of nutritional intervention in Sahajapur, to which reference has already been made. Such a programme clearly would have the effect of reducing the gap between boys and girls since the programme of public feeding does not discriminate against girls in the way in which family arrangement clearly do.

As far as the impact of nutritional intervention is concerned it is perhaps of some significance to note that the gap between scheduled tribe girls and boys is much less sharp in Sahajapur (60 and 52 index values respectively) than in Kuchli (70 and 44 respectively). The scheduled tribe group in Sahajapur is the only one benefiting from this direct nutritional intervention. The scheduled caste groups share with scheduled tribes, higher

[9]Another way of comparing the extent of sex bias is to examine the relative performance of boys and girls within the same household. Of the 105 households in Sahajapur, 18 have children below 5 of both sexes, and in 9 of these households, female children have inferior nutritional status than male children, whereas the opposite is the case in 5 such 'shared' households. In Kuchli, out of 63 households, 15 are 'shared' with female inferiority in 8 households and superiority in 2. Thus, Kuchli's excess of female deprived households (40 per cent) is much greater than Sahajapur's (22 per cent).

landlessness in Sahajapur compared with Kuchli. They do not, however, have the benefit of nutritional intervention. While both the scheduled caste boys and scheduled caste girls do substantially worse in terms of undernourishment in Sahajapur

TABLE 6. PERCENTAGE OF UNDERNOURISHMENT OF CHILDREN BELOW 5 BY SEX AND CASTE GROUPS

Group (Total number in brackets)	*Below I*	*Below II*	*Below III*	*Below IV*	*Under-nourish-ment Index*
Sahajapur Boys : total (80)	94	71	39	6	53
Sahajapur CH boys (27)	89	63	33	11	49
Sahajapur SC boys (27)	100	78	44	4	56
Sahajapur ST boys (26)	92	73	38	4	52
Sahajapur Girls: total (66)	94	73	44	9	55
Sahajapur CH girls (22)	82	59	32	0	43
Sahajapur SC girls (19)	100	89	53	5	62
Sahajapur ST girls (25)	100	72	48	20	60
Kuchli Boys: total (42)	79	52	19	7	39
Kuchli CH boys (16)	88	50	19	13	43
Kuchli SC boys (18)	72	50	17	0	35
Kuchli ST boys (8)	75	63	25	13	44
Kuchli Girls : total (48)	90	75	48	8	55
Kuchli CH girls (17)	94	76	53	0	56
Kuchli SC girls (22)	86	68	32	9	49
Kuchli ST girls (9)	89	89	78	22	70

than in Kuchli, scheduled tribe boys and girls taken together do marginally better in Sahajapur vis-a-vis Kuchli, with scheduled tribe girls in particular doing very much better. The comparative pictures are presented in Table 6.

It may be possible to argue along the following lines. Greater landlessness and worse general economic circumstances in Sahajapur hits both scheduled caste children and scheduled tribe children badly. However, the scheduled tribe children get the compensation of direct nutritional intervention in Sahajapur. Since that intervention is non-discriminatory between sexes, the compensation is particularly effective for scheduled tribe girls, and indeed they end up doing absolutely better in Sahajapur than in Kuchli.

It should also be noticed that the sex bias against girls in caste Hindu families is much sharper in Kuchli than in Sahajapur, and indeed in Sahajapur, girls do consistently better than boys in such families. It is not easy to find an immediately convincing explanation for this, though the involvement of the upper class families in Sahajapur with more urban values obviously has some bearing. Members of most caste Hindu families in Sahajapur actually work in Bolpur, and there is some evidence of greater inroads of modernism in caste Hindu families in Sahajapur compared with the corresponding families in Kuchli.[10]

Economic Circumstances and Cultural Factors

It was remarked earlier that the incidence of landlessness is very much greater in Sahajapur than in Kuchli. Since the discrimination against girls is much less in Sahajapur than in Kuchli (even though the average standard of nutrition is lower in Sahajapur), it may be tempting to think that landless families would have less discrimination against girls, and that this would play its part in reducing the sex bias in Sahajapur.

But this line of reasoning does not take us very far. In fact,

[10]The contact of Sahajapur with Bolpur town is very much closer than that of Kuchli. Even in terms of employment, among the caste Hindus in Kuchli, only a small proportion (5 out of 14) work in urban areas, whereas among the Sahajapur caste Hindus, a substantial majority do so (12 out of 18),

the extent of sex discrimination is sharper among landless families than among landed ones both in Kuchli and in Sahajapur, as can be readily checked from Table 7. While the ratio of the undernourishment indices for girls vis-a-vis boys works out at 1.31 for landed families in Kuchli, it is 1.70 for landless families in that village.

TABLE 7. PERCENTAGE OF UNDERNOURISHMENT OF CHILDREN BELOW 5 BY SEX AND LAND STATUS

Group (Total number in brackets)	*Below I*	*Below II*	*Below III*	*Below IV*	*Under-nourishment Index*
Sahajapur boys landed (36)	92 (33)	67 (24)	44 (16)	11 (4)	54
Sahajapur boys landless (44)	95 (42)	75 (33)	34 (15)	2 (1)	52
Sahajapur girls Landed (26)	88 (23)	65 (17)	38 (10)	4 (1)	49
Sahajapur girls landless (40)	(98 39)	75 (30)	48 (19)	13 (5)	59
Kuchli boys landed (35)	77 (27)	49 (17)	20 (7)	6 (2)	38
Kuchli boys landless (7)	86 (6)	71 (5)	14 (1)	14 (1)	46
Kuchli girls landed (39)	87 (34)	69 (27)	41 (16)	3 (1)	50
Kuchli girls landless (9)	100 (9)	100 (9)	78 (7)	33 (3)	78

Both these ratios decline sharply as we move from Kuchli to Sahajapur, but the difference remains. In fact, while the ratio of nutritional indices for girls vis-a-vis boys among Sahajapur landless is 1.13, among the Sahajapur landed the tables are turned and the ratio is 0.91 with girls doing better than boys in terms of this index.

It is not obvious that landownership is quite an adequate index of the economic basis of prosperity. It is, of course, in general true that the level of malnutrition increases as we move down the ladder of landownership. Also it is the case that no family in either village owning 5 acres or more of land has any child of either sex who is 'disastrously undernourished' (i.e, below line IV), while in contrast every category of families owning less or no land in both villages have some boys as well as some girls in the 'disastrously undernourished' category. However, the index of undernourishment of boys in landless families in Sahajapur is marginally lower than that of landed families in that village.

TABLE 8. PERCENTAGE OF UNDERNOURISHMENT OF CHILDREN BELOW 5 BY SEX AND MOTHER'S EDUCATION

Group (Total number in brackets)	*Below I*	*Below II*	*Below III*	*Below IV*	*Under-nourishment Index*
Sahajapur boys literate mothers (17)	88 (15)	59 (10)	29 (5)	0 (0)	44
Sahajapur boys illiterate mothers (63)	94 (59)	73 (46)	40 (25)	8 (5)	54
Sahajapur girls literate mothers (19)	80 (15)	67 (11)	26 (5)	0 (0)	43
Sahajapur girls illiterate mothers (47)	100 (47)	77 (36)	49 (23)	13 (6)	60
Kuchli boys literate mothers (16)	81 (13)	38 (6)	13 (2)	6 (1)	35
Kuchli boys illiterate mothers (26)	77 (20)	62 (16)	23 (6)	8 (2)	43
Kuchli girls literate mothers (18)	94 (17)	78 (14)	50 (9)	6 (1)	57
Kuchli girls illiterate mothers (30)	87 (26)	73 (22)	47 (14)	10 (3)	54

In fact, in Sahajapur there is some advantage in classifying the population not in terms of the landed and the landless but in terms of mother's education, i.e., whether literate or illiterate. Table 8 presents this data for boys and girls separately for both Sahajapur and Kuchli. In Sahajapur for both boys as well as girls it is clear that children with literate mothers do consistently better in terms of nourishment than children with illiterate mothers, and this is reflected by 'dominance' as well as by the index of malnutrition.

It should be mentioned here that the classification according to mother's literacy should not be read as isolating the impact of mother's education as such, since more prosperous families also tend to have more educated mothers. In fact, the classification according to mother's education is an amalgam of the impact of economic prosperity as well as of maternal education per se.[11]

Be that as it may, the classification according to mother's education does not have as simple a pattern in Kuchli as it has in Sahajapur. While the level of undernourishment of boys seems to be quite clearly greater for children with illiterate mothers, in the case of girls the opposite seems to be the case (though not very strongly in quantitative terms). In assessing the picture it is worth bearing in mind the possibility that in the more isolated village of Kuchli, education is a less revealing index of economic circumstances than it is in Sahajapur with greater urban integration.

We must also take note of the phenomenon (already discussed) that due to land reform, most Kuchli families—even those with no literate members—have land and therefore a basis of economic substance. The contrast between Kuchli and Sahajapur is also connected with the relatively worse performance of caste Hindu girls in Kuchli compared with their relatively better performance vis-a-vis boys in Sahajapur, on which we have already commented.

Caste, landownership and mother's education are closely

[11]Mother's education may also better reflect the present state of economic opulence of the family than the education of "the head" of the family, since the latter may be quite old and brought up in the earlier generation.

linked with each other but not quite so closely linked as to make it immaterial which indicator we use. The exact pattern of relationships requires further investigation in the context of these two villages, and of course elsewhere.

In explaining the generally lower sex bias in Sahajapur compared with Kuchli, it may be useful to look at indicators of economic 'value' of males vis-a-vis females to the head of the family since the difference between the two is supposed to provide an economic rationale of sex bias from the point of view of the head's interest. Such contrasts may be related to: (*i*) greater support in old age from sons and others on "sons' side" (e.g, daughter-in-law, or son's son); (*ii*) greater work support from adult co-inhabitants on "sons' side", when the head is less than 60 and typically economically active; and (*iii*) greater earning power of boys vis-a-vis girls before they reach adulthood.

In Table 9 the information regarding support of aged persons is presented for both villages. Not surprisingly it is found that

TABLE 9. ECONOMIC SUPPORT FOR AGED PERSONS FROM SONS' AND DAUGHTERS' SIDES

	Number of Aged Persons (Above 60)	*Number of Aged Persons Living with Earning Adults on Sons' Side (Percentage in Brackets)*	*Number of Aged Persons Living with Earning Adults on Daughters' Side (Percentage in Brackets)*
Sahajapur	58	46 (79)	5 (9)
Kuchli	48	34 (71)	8 (17)
Sahajapur CH	29	23 (79)	1 (3)
Kuchli CH	33	25 (76)	5 (15)
Sahajapur SC	22	16 (73)	3 (14)
Kuchli SC	13	8 (62)	3 (23)
Sahajapur ST	8	7 (88)	1 (13)
Kuchli ST	2	1 (50)	0 (0)

the extent of support from adults on "sons' side" is substantially larger than that on "daughters' side". As far as the relative positions of the two villages are concerned, Sahajapur

seems to have a slightly greater dominance of sons' side to the support of old people, and this does not help to explain the lower level of sex bias in Sahajapur. On the other hand, the numbers are small and the differences probably not significant. We also know from past surveys of Sahajapur that the extent of dependence on sons was not so incomparably more than on daughters in that village in the past (see Table 10). (Unfortunately, there are no corresponding data from the past for Kuchli.) However, it is in fact, quite plausible to argue that beliefs about greater economic value of sons in terms of support in old age is based on a much wider social and cultural climate than one can hope to find in terms of local experience in each village.

TABLE 10. HISTORY OF ECONOMIC SUPPORT FOR AGED PERSONS FROM SONS' AND DAUGHTERS' SIDES IN SAHAJAPUR

	Number of Aged Persons (Above 60)	*Number of Aged Persons Living with Earning Adults on Sons' Side (Percentage in Brackets)*	*Number of Aged Persons Living with Earning Adults on Daughters' Side (Percentage in Brackets)*
All 1956	26	11 (42)	7 (27)
All 1961	44	18 (41)	6 (14)
CH 1956	14	2 (14)	3 (21)
CH 1961	24	7 (29)	1 (4)
SC 1956	9	6 (67)	4 (44)
SC 1961	15	8 (53)	3 (20)
ST 1956	3	3 (100)	0 (0)
ST 1961	5	3 (60)	2 (40)

As far as work support by adult members respectively on sons' and daughters' sides are concerned, the data on Table 11 indicate that more than half the heads of families below 60 have no such work support of either type. However, the relative extent of involvement of daughters' side is less paltry in Sahajapur than in Kuchli, and it is strong for scheduled caste families in Sahajapur.

TABLE 11. WORK SUPPORT FROM EARNING ADULTS ON SONS' AND DAUGHTERS' SIDES FOR HEADS BELOW 60

	Number of Heads of Household below 60	*Number of Such Heads Living with Earning Adults on Sons' Side (Percentages within Brackets)*	*Number of Such Heads Living with Earning Adults on Daughters' Side (Percentages within Brackets)*
Sahajapur	186	42 (23)	13 (7)
Kuchli	101	41 (41)	1 (1)
Sahajapur CH	61	12 (20)	0 (0)
Kuchli CH	45	17 (38)	0 (0)
Sahajapur SC	73	22 (30)	11 (15)
Kuchli SC	43	15 (35)	1 (2)
Sahajapur ST	52	8 (15)	2 (4)
Kuchli ST	13	9 (69)	0 (0)

As far as economic activities of boys and girls are concerned, Table 12 presents comparative data for the two villages for the age-group 7 to 14. In both villages boys are more involved in "earning" as it is usually defined, while girls are more involved in "collecting", in the form of gathering cowdung, collecting left-over paddy from the field after harvest, etc.[12] Taking earning and collecting together, there is not much difference between boys and girls in either village, but the involvement of girls in earning proper is very much less in Kuchli than in Sahajapur.

In terms of work support on daughters' side and gainful activities of girls, Sahajapur would seem to have a noticeable edge over Kuchli, and it may be tempting to see the impact of these differences in the lower sex bias in that village. However, caution is needed in pursuing such an interpretation. As was already mentioned in discussing the allegedly greater value of sons vis-a-vis daughters in providing support in old age, beliefs

[12]For a detailed description of this type of earnings in the families of rural poor, see Sunil Sengupta and M.G. Ghosh, *State Intervention in the Vulnerable Food Economy of India and the Problem of Rural People*, Indian Council of Social Sciences Research, Delhi, and Centre of Studies in Social Sciences, Calcutta, 1978.

of these types in general relate to broader social and cultural background and not just to local conditions within the village.

TABLE 12. ECONOMIC ACTIVITIES OF BOYS AND GIRLS BETWEEN 7 AND 14

	Number of Children of 7-14 Age		*Number of Such Children Earning (Percentages in Brackets)*		*Number of Such Children Collecting (Percentages in Brackets)*		*Number of Such Children Earning or Collecting (Percentages in Brackets)*	
	Boys	*Girls*	*Boys*	*Girls*	*Boys*	*Girls*	*Boys*	*Girls*
Sahajapur	117	109	25 (21)	13 (12)	6 (5)	15 (14)	31 (26)	28 (26)
Kuchli	86	81	17 (20)	4 (5)	4 (5)	14 (17)	21 (24)	18 (22)
Sahajapur CH	40	45	1 (3)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)
Kuchli CH	44	35	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Sahajapur SC	51	47	15 (29)	8 (17)	1 (2)	7 (15)	16 (31)	15 (32)
Kuchli SC	38	39	14 (37)	1 (3)	4 (11)	12 (31)	18 (47)	13 (33)
Sahajapur ST	26	17	9 (35)	5 (29)	5 (19)	8 (47)	14 (54)	13 (76)
Kuchli ST	4	7	3 (75)	3 (43)	0 (0)	2 (29)	3 (75)	5 (71)

At any rate, other influences on beliefs and values have to be considered, even though it is not entirely unreasonable to expect considerable impact of earning activities of girls and supporting activities of daughters in a changing economic world, with growing urban integration, as one sees in Sahajapur.

The contrast between the castes is very sharp in respect of activities of boys and girls. Hardly any child of either sex is engaged in earning activities in caste Hindu families in either village. Thus, while the greater economic involvement of girls

may be of some relevance for attitudes in scheduled caste and scheduled tribe families, the outlook prevailing in caste Hindu families must be seen as influenced by other variables. The diminution—indeed reversal—of sex bias among caste Hindu families in Sahajapur in contrast with caste Hindu families in Kuchli has already attracted our attention earlier. We have commented on the growing urban involvement of caste Hindu families in Sahajapur compared with the more isolated Kuchli, but this is a field which requires a much more precise investigation.

Land Reform and Nutritional Intervention

We have noted earlier that Kuchli with a better land position in the form of a lower incidence of landlessness (partly a result of the land redistribution programme implemented widely in the village) has a better nutritional level of children than Sahajapur. In the latter, landlessness is widespread with the land redistribution programme benefiting only a few. But in terms of sex bias, Kuchli families (including those who have benefited from the land redistribution programme), showed a much higher bias against female children compared with Sahajapur families. On the other hand Sahajapur with a direct nutritional programme for tribal (Santal) children showed not only a higher nutritional level for this category than its counterpart in Kuchli, but also a much reduced sex bias.

There is a further related issue which is worth a comment from the point of view of policy. As far as land redistribution is concerned, both Sahajapur and Kuchli are covered by the same general state policy, and also both have active leftist movements. The difference in the extent of land redistributed between the two villages is due primarily to the relative shortage of distributable land in Sahajapur. (The amount of distributable land under land reform depends on both the total availability of land and the size distribution of holdings in relation to ceiling limits.) In West Bengal, even with one of the most active land reform programmes in the country, only a minority of landless and nearly landless families (holding less than one hectare) could be covered by the land redistribution programme. Even if all the land that has been acquired by the

government were ultimately redistributed, the extent of coverage of families would still be perhaps only about one half.[13]

Land redistribution and nutritional intervention are both effective in combating general deprivation including malnutrition, as is confirmed by our case study also. Of the two, land reform obviously has a more lasting and deeper impact on the rural economic structure. But with the ability of land redistribution programmes to reach only a proportion (e.g., one half) of the needy families, even when such a programme is most effectively implemented (as in West Bengal, in contrast with the record in many other parts of the country), a programme of direct nutritional intervention for the rural poor remains necessary. Such a programme will also have the additional advantage of more directly combating sex bias in nutrition within the family.

Conclusion

The empirical studies of the nutritional conditions of children below 5 years of age in the two villages of Sahajapur and Kuchli have provided firm evidence of: (*i*) remarkably high incidence of undernourishment, even of the "severe" and "disastrous" types, and (*ii*) systematic sex bias reflected in higher deprivation of girls vis-a-vis boys. The sex bias is reflected both (*a*) in the greater prevalence of undernourishment of various degrees among girls than among boys, and (*b*) in the lower growth dynamics of girls vis-a-vis boys.

Another finding is an important contrast in nutritional standard of children as well as in sex bias of nutritional deprivation between the two villages studied. Interestingly enough the village with the better over-all nutritional record has much sharper sex discrimination.[14] The economic benefits accruing to

[13]See Sunil Sengupta, "West Bengal Land Reforms and the Agrarian Scene", *Economic and Political Weekly*, Vol 26, Nos. 25 and 26, June 1981.

[14]This is brought out both by comparison of shortfall vis-a-vis exogenously given nutritional standards (curves I, II, III, and IV respectively, and the overall "undernourishment index") and by comparison of respective growth dynamics given by the power fits. In fact, the nutritional inferiority of girls in Sahajapur is sufficiently slight in terms of both comparisons to be statistically doubtful, whereas the nutritional inferiority of girls in Kuchli is large and statistically significant.

the children of Kuchli through land reform, etc., seem to have primarily benefited boys vis-a-vis girls. In the two villages of Kuchli and Sahajapur, the performance of girls in terms of nutritional criteria are broadly similar, and it is the better position of boys in Kuchli that seems to make both the average nutritional record of Kuchli noticeably higher and also the extent of sex bias clearly greater.

We have discussed possible influences operating on the two villages which may throw light on the various contrasts between them. We shall not dwell again here on the factors already discussed.

We have also discussed some policy issues related to the respective roles of land reform and direct nutritional intervention. The former makes a more fundamental difference to the

One way of checking the significance of the difference between boys and girls is to combine the data for all children and then use a dummy variable for boys. This produces a significant (at 1 per cent level) dummy for boys vis-a-vis girls when applied either to the constant k, or to the power coefficient p, in the case of Kuchli, but neither in the case of Sahajapur. Interestingly enough, the data of the two villages combined also produced a significant dummy addition for boys when done either for the constant or for the power coefficient. The adjustment gives somewhat better results when the dummy variable for boys is applied to the power coefficient.

The results of power coefficient adjustments are given in the table below, applied in the form:

$\log w = \log k + p \log a + b \log a$ (dummy for boy)

A similar picture is obtained by comparing boys and girls in terms of the "ordinal" criterion of "dominance", e.g., a boy "wins" over a girl if he is both younger and weighs more than the girl and similarly the other way. In Sahajapur, while boys "win" in this comparison over girls about 30 per cent more often than girls do, in Kuchli boys win 3.3 times more often.

Village	*Number*	*Estimated log k t-stat.*	*Estimated p t-stat.*	*Estimated b t-stat,*	R^2	*F-statistic*
Sahajapur	146	0.817374	0.382468	0.009995	.78	247.83
		14.69	20.19	1.04		
Kuchli	90	0.834599	0.375766	0.034900	.68	91.24
		8.55	12.53	2.47		
Both	236	0.822185	0.380226	0.019056	.74	326.31
		16.55	23.52	2.38		

structure of rural society. However, given its basically limited coverage (even when effective implementation is achieved), the case for nutritional intervention remains.

In that context it is worth emphasising that direct nutritional intervention through supplementary feeding has the additional advantage of combating sex bias in nutrition within the family, as is brought out by the contrasting patterns of relative deprivation of scheduled tribe and scheduled caste girls in Sahajapur vis-a-vis Kuchli. Increasing the income of the rural family may be an inadequate instrument in combating the unequal deprivation of the female child.

2

Maternal Nutrition in Rural Bangladesh[1]

A.K.M. Alauddin Chowdhury

Poverty, the most pressing problem in rural Bangladesh, is manifest in socio-economic disruptions, ill health and poor nutritional conditions for all people. However, the group which probably suffers most is women of reproductive age. Chronic scarcity of food, as well as cultural food taboos in rural areas have probably caused Bangladeshi women to develop a sacrificial value system with respect to their food consumption.[2] Females consume less food than males in terms of quality and quantity,[3] although their needs are greater.[4] This gap increases

[1]This research was supported by the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR B), ICDDRB is supported by countries and agencies which share its concern about the impact of diarrhoeal diseases on the developing world. Current donors giving assistance to ICDDRB are : AGFUND, Australia, Bangladesh, France, Japan, Saudi Arabia, Sweden, Switzerland, United Kingdom and USAID.

An earlier version of this paper was presented at the Workshop on "Women and Poverty" 16-17 March 1983 organised by the Centre for Studies in Social Sciences, Calcutta and sponsored by the ICSSR and the KSSR, Eastern Regional Centre.

[2]N. Rizvi, "Socio-economic & Cultural Factors Effecting Food Intake of Mothers and Young Children in Bangladesh". Paper presented in the International Conference on Action Model to Improve Maternal & Infant Nutrition in Developing Countries, Manila, 1982.

[3]L.C., Chen, E. Haque, and S. D'Souza, "Sex bias in the family allocation of food and health care in rural Bangladesh," *Population and Development Review, 1* (1), 1981.

[4]N. Harmish, and M.B. Munro, Nutrient requirements during pregnancy, Volume II. *American Journal of Clinical Nutrition*; *34*(4), 1981.

in times of increased food scarcity.

Two additional stresses on women can aggravate this condition: (*i*) frequent pregnancies; and (*ii*) prolonged lactation until the next pregnancy.[5] Physiologically, both pregnant and lactation states in women demand more nutrients than do non-pregnant and non-lactating ones. For Bangladeshi women this pregnancy-lactation-pregnancy cycle begins during the adolescent period with the first conception, and is repeated until the end of reproductive life. This cycle plus the physically demanding daily labour[6] may increase the nutritional needs of Bangladeshi women to higher than the recommended level.

However, the average nutrient consumption in Bangladesh is below the recommended level, and recent data show that consumption of nutrients has even declined in recent years.[7] Nutrient consumption among females is even worse when compared to their need. This will lead to deteriorating health conditions among females, as well as among infants, even in the short run.

This paper focuses on the nutritional status of Bangladeshi women during the reproductive process, and its acuteness by age and season.

Methods and Study Design

The detailed methodology of the data collection has been described elsewhere.[8] However, in this paper a short methodology is given for the convenience of the reader.

A sample of 2,446 married women (age below 50 years) from 14 villages were selected for the study. This prospective study covered a period from October 1975 to April 1978. At the beginning of the study, a one-time short questionnaire was given

[5]Sl. Huffman, A.K.M.A. Chowdhury, J. Chakraborty and N.K. Simpson, "Breast-feeding Patterns in Rural Bangladesh," *The American Journal of Clinical Nutrition*; *33*, 1980.

M, Kabir, and A.J.M., Sufian "Breast-feeding Practices in Bangladesh," *Journal of Preventive and Social Medicine*; *1* (1), 1982.

[6]M. Cain, SR Khanam and S. Nahar "Class Patriarchy and Women's Works in Bangladesh," *Population and Development Review*; *5* (3), 1979.

[7]*Nutrition Survey of Rural Bangladesh, 1975-1976*, Institute of Nutrition and Food Science, University of Dhaka, Bangladesh, (unpublished), 1977.

[8]A.K.M.A. Chowdhury and S. Becker, *Determinants of Natural Fertility*, Volume I, ICDDR, B Dhaka, Scientific Report No. *48*, 1981.

covering retrospective events and socio-economic variables. The women were asked about their education, the occupation of their husbands, the numbers of living children, lead children, still births and miscarriages, the date and type of the last pregnancy termination, and present reproductive status. Women who entered the study after October 1975 were also given this questionnaire.

For the prospective work, each field worker was assigned approximately 20 women to interview in a given day. Visits to each woman were made at monthly intervals. If the respondent was absent, the worker visited a second time in the same month in order to complete the interview. If the woman was still absent, this was noted on the form, and information for two-month interval was collected on the next round. If a woman was absent for more than six months continuously she was considered an outmigration, and excluded from the study from that point of time.

During the first year of the study, the field work had two components; interviews and nutritional measurements. Information on reproductive status, breast feeding status, absence in the past month (of either the husband or the respondent), illness (of either spouse), and child death or marital status change was recorded on a monthly data sheet for each woman. The maternal nutritional data collected were of two types: (*i*) anthropometric measures (height, arm circumference and weight); and (*ii*) biochemical measures (hematocrit level). Height was taken only in the first month of the study, while other anthropometric (weight and arm circumference) measures were recorded for each month of the study. Blood samples were taken in every alternative month only in the first year of study.

Because of the large size of the sample, 5 field workers were employed for these activities. It was necessary to ensure that the workers were taking measurements in the same way and obtaining similar results. This checking was done by using a regression equation: Weight=Constant+B_1 Height+B_2 Arm Circumference. The workers were trained until B_1 and B_2 for five workers were not significantly different from each other.

For weighing, beam balance scales, measuring in increment of 20 grams and with a range of 65 kg, were used. Scales were checked to ensure accurate measurements. Because of the rough field conditions and the sensitivity of the beam balance

scales, each was tested with a standardized weight before any weighing in the field. All weights were taken with the women clothed as usual in sarees, wearing no shoes or heavy ornaments.

Heights were measured in centimetres with a stadimeter. The women stood with their backs against the vertical rod, with feet parallel and heels, buttocks, shoulders, and back of head touching the board. Measurements were taken to the nearest 1 cm.

Arm circumference was measured on the left arm. Using a plastic centimetre tape, the midpoint of the upper arm was determined with the arm bent at the elbow, and the point marked on the arm with a pen. This point is half way between the tip of the olecranon process and the tip of the acromial process. With the arm hanging loosely at the side, its circumference was measured at this point.

Finger tip blood samples for biochemical analysis were taken from each woman every alternate month. Hematocrit level and total protein estimation was done by Goldberg Refractometer in the Field Station.

Results

In Table 1, the nutritional status of pregnant women is presented and compared with never pregnant women. Analysis was done in a cohort approach. In this approach, cases were censored because of the cut-off point of study and for pregnancy termination. In the first month of conception there were 1,675 women months of exposures. Only 766 months of exposure were observed in the ninth month of gestation, and 1,011 months of exposure in the eighth month of gestation. The number of observations in hematocrit measures were fewer, compared to the number of observations in weight and arm circumferences. As described earlier, this was due to (*i*) blood samples being collected every alternate month; and (*ii*) a high number of refusal cases.

Women in the first month of pregnancy weighed an average 40.90 kg, and increased to 45.6 kg by the ninth month of gestation. Absolute weight gain was about 5 kg. A similar pattern of low weight gain was also observed in India.[9] This pattern of

[9]L. Rahman, "Influence of Maternal Nutritional Factors Affecting Birthweight," *The American Journal of Clinical Nutrition 34* (4), 1981.

TABLE 1. NUTRITIONAL STATUS OF PREGNANT WOMEN IN RURAL BANGLADESH

Month of Gestation	*Women Month of Exposure*	*Weight (kg)*	*Per cent Standard Weight*	*Arm Circumference (cm)*	*Hematocrit (per cent)*
Pregnant:					
1 month	1,676	40.9 (1197)	77	22.1 (1273)	35.9 (258)
2 months	1,510	41.0 (1221)	—	22.1 (1303)	35.4 (236)
3 months	1,423	41.1 (1147)	77	22.0 (1169)	34.5 (204)
4 months	1,315	41.6 (1081)	77	22.0 (1083)	33.1 (172)
5 months	1,223	42.4 (1009)	77	22.0 (1014)	32.7 (128)
6 months	1,159	43.4 (980)	75	22.1 (985)	30.9 (84)
7 months	1,103	44.3 (935)	75	22.0 (935)	31.0 (92)
8 months	1,011	45.1 (864)	74	21.9 (869)	29.9 (66)
9 months	766	45.6 (675)	73	21.7 (575)	30.0 (67)
Never pregnant (currently married)		42.4 (58)	80	22.4 (58)	36.6 (54)

Note : Figures in parenthesis indicate number of women whose nutritional measure was taken.

low weight gain during pregnancy may be in keeping with this already low weight as compared to the standard. Compared with a hypothetical standard weight and weight gain,[10] it was found that Bangladeshi women are only 77 per cent of standard weight at conception, and maintain this 77 per cent till the fifth month of gestation. From the sixth month of gestation onwards, maternal nutrition starts decreasing and reaches 73 per cent of standard

[10]M. Gueric, P. Jutsum and B. Sorhaindo, "Anthropometric Assessment of Nutritional Status in Pregnant Women: A Reference Table of Weight for Height by Week of Pregnancy," *The American Journal of Clinical Nutrition, 35*, 1982.

weight by the ninth month of gestation. A similar pattern is observed for arm circumference. In the third trimester of pregnancy, arm circumference also decreases. Hematocrit data indicate that in the third trimester of pregnancy, prevalence of anaemia is around 50 per cent (Hematocrit 30 per cent). The number of cases for hematocrit estimate were lower, compared to the number used to estimate weight and arm circumference. This was because while blood samples were collected five times in the first year of study, anthropometric measurements were taken every month for consecutive 29 months. Moreover, there were more refusals when blood samples were being collected. Anthropometric measures from refusal cases were not different from those cases where blood samples were successfully collected. This may be caused by the physiological change during pregnancy. In Western countries, approximately 25 per cent to 35 per cent of women in their third trimester who do not take food supplements suffer from anaemia (Hct 30 per cent).[11] These patterns indicate that there is a relative deterioration in nutritional status among women in their third trimester of pregnancy.

Fig 2.1 shows the growth pattern of women during pregnancy by seasonality of conceptions. Previous studies have shown a pattern of striking seasonality of conceptions, where 45 per cent of conceptions occur during March through May. In Bangladesh, the period of highest scarcity of food is from August through October. During this period, the rice price is at its highest, and the family food stock is the lowest of the year.[12] In this figure, three growth curves for pregnancy are drawn on the basis of months of conceptions. Those who conceived between July and October were classified as Group III. These three groups were under observation to view pattern changes during the scarce period.

It can be seen that the absolute weight gain in Groups I and II was 4.5 kg. However, the weight gain in Group III was 5.7 kg. It also can be seen from the figure that growth in the first trimester of pregnancy was minimal for all groups. The rates of growth in the second and third trimesters reflect the

[11]T. Lind, "Nutrients During Pregnancy," Vol 1. *The American Journal of Clinical Nutrition*; *34* (4), 1981.

[12]L. C. Chen, Haque Ev and D'Souzas, *op. cit.*, 1981.

effects of the lean period (July to October). Group I, which was in the lean period during the third trimester of pregnancy, showed the slowest growth at that point. Group II, which was

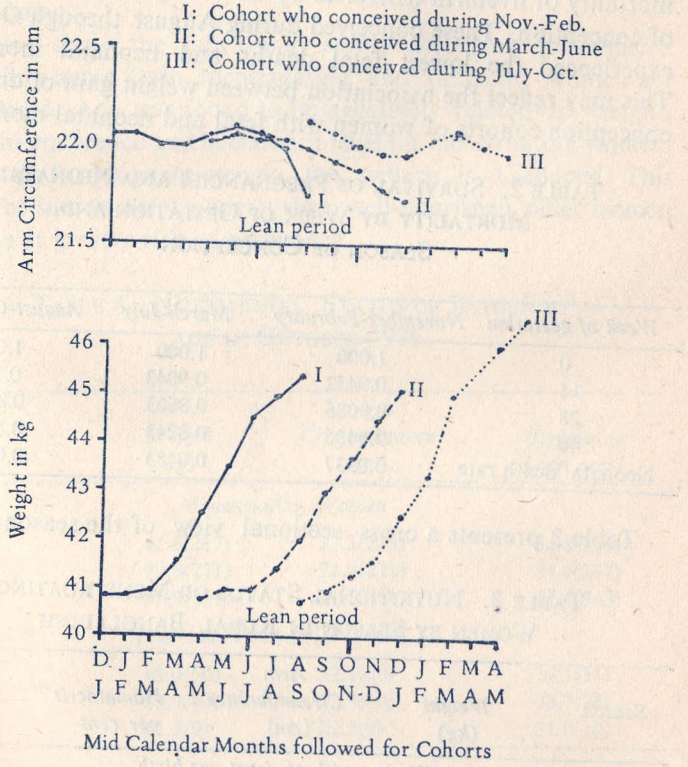

FIG. 2.1. Seasonality of growth pattern of pregnant women.

in the lean period during the second trimester, also showed slower growth in that period than did Group I. Group III, in the lean period during the first trimester, was not even slightly affected by the lean period. Arm circumference data also are presented in the same figure. Here too the pattern of nutritional stress during the lean period is clear. Moreover, the relative rate of deterioration of nutritional status in the third trimester of pregnancy, as compared with the first and second trimesters, again is reflected in arm circumference data. Most conceptions in Bangladesh occur during March through

May (Group II), and the lean period coincides with the second trimester of pregnancy.

Table 2 presents the survival of pregnancies and neonatal mortality of livebirth deliveries by week of gestation and season of conception. These conceived during August through October experienced the lowest fetal deaths and neonatal mortality. This may reflect the association between weight gain of different conception cohorts of women with fetal and neonatal mortality.

TABLE 2. SURVIVAL OF PREGNANCIES AND NEONATAL MORTALITY BY WEEK OF GESTATION AND SEASON OF CONCEPTION

Week of gestation	*November-February*	*March-July*	*August-October*
0	1.000	1.000	1.000
14	0.9452	0.9043	0.9464
28	0.9086	0.8603	0.8942
40	0.8456	0.8243	0.8617
Neonatal death rate	0.0337	0.0483	0.0256

Table 3 presents a cross sectional view of the seasonality of

TABLE 3. NUTRITIONAL STATUS OF MENSTRUATING WOMEN BY SEASON IN RURAL BANGLADESH

Season	*Weight (kg)*	*Arm Circumference (cm)*	*Hamatocrit per cent*
	Women with at least one birth		
January 1976	40.0 (754)	21.8 (633)	35.7 (638)
May 1976	40.4 (752)	22.0 (750)	35.0 (809)
October 1976	39.7 (798)	21.8 (800)	34.0 (809)
	Women with no birth		
January 1976	42.2 (63)	22.3 (54)	37.1 (62)
May 1976	42.7 (58)	22.5 (58)	36.9 (54)
October 1976	42.5 (47)	22,0 (47)	35.2 (62)

nutritional status of menstruating women. It shows that weight, arm circumference and hematocrit reach minimal levels during the month of October, the lean period. This phenomenon was found to be true for both menstruating women who have experienced pregnancies, as well as for never pregnant menstruating women.

Table 4 shows the nutritional status according to women's age. Here again both menstruating and pregnant women are considered. Age was fouad to be negatively related to weight, arm circumference and hematocrit level for menstruating women. However, for pregnant women, the pattern is U-shaped. This could be interpreted to mean that well-nourished older women may be at greater risk of pregnancy.

TABLE 4. NUTRITIONAL STATUS OF WOMEN BY AGE IN OCTOBER 1976

Years	*Weight (kg)*	*Arm Circumference (cm)*	*Hematocrit (per cent)*
	Menstruating Women		
15-25	41.6(217)	22.3(218)	34.8(234)
25-34	39.8(271)	21.8(271)	34.6(267)
35-49	38.9(357)	21.6(358)	33.4(362)
	Pregnant Women (1st Term)		
15-25	43.0(50)	22.1(50)	34.1(51)
25-34	40.9(40)	21.7(40)	33.7(36)
35-49	41.1(9)	22.2(9)	31.8(10)

In Bangladesh, breast-feeding is universal and, if the child survives, is continued up to the next pregnancy. The median length of breast-feeding is more than 30 months,[13] and the length of post-partum amenorrhea is 17 months.[14] Table 5 pre-

[13]S. Becker and A.K.M.A. Chowdhury, "Determinants of Natural Fertility in Matlab, Bangladesh" Paper presented in the annual meeting of the Population Association of America, Pittsburg, 14 April 1983.

[14]I.C. Chen, S. Ahmed, M. Gesche, and W.H., Mosley "A Prospective Study of Birth Interval Dynamics in Rural Bangladesh." *Population Studies*, 1974.

sents the nutritional status of post-partum women by month since last birth. Most of these women were lactating. The cohort approach was adopted for analysis. Cases were censored mostly due to the study's cut-off point and to the resumption

TABLE 5. NUTRITIONAL STATUS OF POST-PARTUM AMENORRHEA IN RURAL BANGLADESH

Month of Post-Partum	*Women Month of Exposure*	*Weight (kg)*	*Arm Circum-ference (cm)*	*Hamatocrit (per cent)*
1 Month	1511	43.8	21.5	31.9
		(1067)	(1113)	(169)
2 Month	1375	41.0	21.4	33.3
		(1136)	(1177)	(131)
3 Month	1232	41.1	21.6	33.9
		(1062)	(1077)	(141)
4 Month	1117	41.0	21.6	35 4
		(931)	(932)	(83)
5 Month	1004	40.9	21.7	34 5
		(857)	(851)	(72)
6 Month	922	40.7	21.7	35.2
		(750)	(754)	(22)
7 Month	843	40.6	21.7	34.4
		(706)	(706)	(38)
8 Month	775	40.4	21.7	35.9
		(648)	(648)	(26)
9 Month	714	40.4	21.7	34.9
		(605)	(605)	(21)
10 Month	659	40.3	21.7	35.0
		(553)	(555)	(21)
11 Month	602	40.1	21.7	—
		(504)	(505)	—
12 Month	549	39.2	21.7	—
		(460)	(459)	

Note: Figures in the parenthesis indicate number of women whose nutritional measurement was taken.

of menses. During the first year post-partum, women show a slight nutritional stress in terms of weight loss and no stress in terms of reduction in arm circumference. The hematocrit level in the post-partum period recovers and reaches 35 per cent by the length month post-partum. This reflects the common phy-

siological phenomenon of recovery from pregnancy-related anaemia during the post-partum period. In general, Table 5 shows that the weight of mothers decreases, but arm circumference or hematocrit improves. This weight loss may be due to the lean period effect of the year, as it is experienced during pregnancy; or it may be because the nutrient reserve during pregnancy was insufficient for lactation.

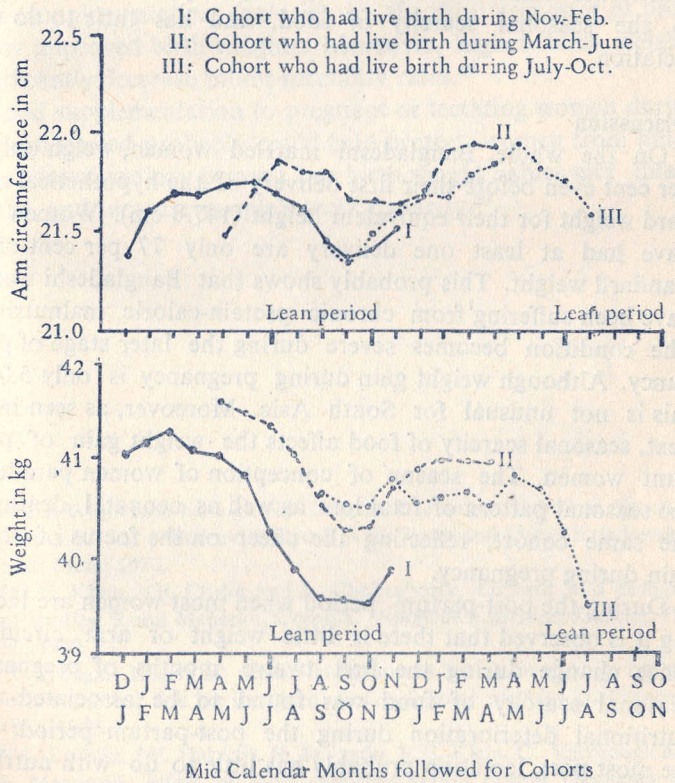

FIG. 2.2. Seasonality of nutritional status of woman in post-partum amenorrhea.

Fig. 2.2 shows the seasonal pattern of maternal nutrition during post-partum amenorrhea. Classification of seasons was made on the basis of calendar months when pregnancy was terminated. As in Figure 1, here again those who terminated

during November through February were included in Group I, those who terminated during March through June were in Group II. The rest were classified as Group III. It can be seen from the figure that when the women in post-partum amenorrhea pass through the lean period of the year, they experience nutritional stress. This reflected in changes in both their body weights and arm circumferences. Whatever deterioration in nutritional status takes place in the post-partum period is due to the seasonal scarcity of food, and has little to do with lactation.

Discussion

On the whole, Bangladeshi married women, weigh only 80 per cent even before their first delivery of the hypothetical standard weight for their equivalent height (147.8 cm). Women who have had at least one delivery are only 77 per cent of the standard weight. This probably shows that Bangladeshi women have been suffering from chronic protein-caloric malnutrition. The condition becomes severe during the later stage of pregnancy. Although weight gain during pregnancy is only 5.0 kg, this is not unusual for South Asia. Moreover, as seen in the next, seasonal scarcity of food affects the weight gain of pregnant women. The season of conception of women parallelled the seasonal pattern of fetal loss as well as neonatal deaths of the same cohort, reflecting the effect on the foetus of weight gain during pregnancy.

During the post-partum period when most women are lactating it is observed that there is little weight or arm circumference change during the first twelve months of pregnancy. Seasonal scarcity of food was found to be associated with nutritional deterioration during the post-partum period. For the most part, lactation probably has little to do with nutritional deterioration in the post-partum period.

Anaemia in pregnancy was found to be a very acute condition in Bangladesh. Iron deficiency, the primary cause of anaemia in pregnant women, can have adverse effects on the mother and foetus, as well as decrease the work capacity of the

human population.[15]

Maternal nutrition was observed to deteriorate with age. This probably happens due to an excess demand for nutrients in women who have frequent pregnancies, as age advances. This condition is aggravated by the seasonal scarcity of food.

Studies have shown that weight gain during pregnancy is directly related to birth weight[16] of the foetus. In addition, studies in Hyderabad[17] as well as in Guatemala[18] showed that food supplementation (calorie) in the third trimester of pregnancy improved birth weights. Moreover, higher birth weights significantly decrease infant mortality rates.[19]

Food supplementation to pregnant or lactating women during the lean period probably could help protect women from nutritional deterioration, prevent low birth weight babies and infant deaths, and increase people's work capacity.[20]

[15]H.S. White Iron-hemoglobin Chapter 7. *Human Nutrition: Nutrition and the Aduli 3B.* edited uy Roslyn B Alfin Slater and David Kritchevsky. Plenum Press, 1980.

[16]M.U. Khan, Gt Curlin and J. Chakraborty, Growth and development studies: Rural Meheran, Comilla. *Bangladesh Medical Journal*; (7): 74-90, 1979.

[17]L. Iyengar, Effects of dietary supplements late in pregnancy on the expectant mother and her newborn. *Indian Journal of Medical Research*; 55 (85), 1967.

[18]A. Lechtig, J.P. Habicht, H. Delgado, R.E. Klein, C. Yarbrough and R.E. Martorell, Effect of food supplementation during pregnancy on birth weight. Pediatrics; 56 (508), 1975.

[19]W.H., Mosley "Social determinants of infant and child mortality: Some considerations for an analytical framework". Discussion paper for a conference on Health and Mortality in Infancy and Early Childhood, Cairo, May 18-20, 1980.

[20]S. D'Souza and A. Bhuiya "Socio-economic mortality differentials in a rural area of Bangladesh," *Population and Development Review* ; 8 (4), 1982.

3

Women in Poverty: The Energy, Health and Nutrition Syndrome[1]

SRILATHA BATLIWALA

Dorland's *Medical Dictionary* defines the word syndrome as "a combination of symptoms resulting from a single cause or so commonly occurring together as to constitute a distinct . . . entity." It is hard to find a more apt definition of energy, health and nutrition and their relationship to poverty.

It may be felt that poverty has an impact on the health and nutrition of the poor, regardless of age and sex. Is there something unique about its impact on women? Or do women bear an additional burden—in terms of their health, nutrition, or anything else—in an impoverished situation? This paper attempts to show what they do—and also why strategies for women's health and nutrition need to be emphasised within strategies for general development.

In the field of nutrition, most strategies have been aimed at increasing food intake indirectly or directly.[2] Women are targets of the latter programmes only during pregnancy and lactation. On the other hand, there has been little or no study of the possible effects of reducing energy expenditure—or to put it simply, reducing the overwhelming drudgery of the poor, and especially of poor women. This is not proposed as an alternative to raising food intake, but as an additional (and possibly critical) facet of improving women's nutrition and health. Such energy saving, as we shall see, is not only a nutritional asset, but may also release a significant amount of women's time.

In this paper, we will attempt to examine the interrelationship between woman's work (i.e., their energy output), the growing scarcity of energy resources for survival, and its impact on women's health and nutrition.

The greater work load on women has been merely watched for centuries and rather embarrassedly reduced to a sheepish joke by men. But until recently, there was no detailed study of the relative work outputs of men and women and the nature of such work. In 1981, however, ASTRA[3] (a cell of the Indian Institute of Science, Bangalore) published the report of their three-year field study of rural energy consumption patterns.[4] The study was conducted in rural Karnataka with a sample of six villages comprising 560 households and a population of 3,452.

One of the most significant results of ASTRA's study was the role of human energy—and specifically women's energy—in the rural energy matrix. Table 1 summarises the findings.

If we exclude firewood, we find that human beings were the most significant energy contributors—even more than animals. Moreover, if we disaggregate human energy, men, women and children contribute 31 per cent, 53 per cent and 16 per cent of human energy, respectively. The ASTRA study also showed that most human energy was spent not so much on productive activities but on survival tasks such as gathering firewood, fetching water, ond cooking.

[1]Based on the article "Rural Energy Scarcity and Undernutrition: A New Perspective," in *Economic and Political Weekly*, Vol. XVII, No. 9, 27 February 1982, p. 329-33.

[2]K.V. Natarajan, "Administration and Organisational Implications of Nutrition Programmes of India"—Paper presented at a Seminar on Social and Economic Aspects of Nutrition, New Delhi, 1974, National Institute of Public Co-operation and Child Development (NIPCCD), "UNICEF Study of the Young Child—Indian Case Study." New Delhi, 1976; S. Batliwala, "Hunger and Health—Analysis of the Nutrition Problem in India," the Foundation for Research in Commodity Health, Bombay. 1978.

[3]The application of Seience and Technology of Rural Areas.

[4]ASTRA, *Rural Energy Consumption Patterns—A Field Study*, Bangalore, Indian Institute of Science, 1981.

TABLE 1. PATTERN OF VILLAGE ENERGY SUPPLY AND CONSUMPTION

Source-wise Contribution		*Sector-wise Consumption*	
Source	*(Per Cent)*	*Activity*	*(Per Cent)*
Human	7.7	Agriculture	4.3
(Men)	(3.1)		
(Women)	(3.8)		
(Children)	(0.8)		
Animal	2.7	Domestic	88.3
Firewood	81.6	Lighting	2.2
Kerosene	2.1	Transport	0.5
Electricity	0.6	Industry	4.7
Other	5.3		

Source : ASTRA, *Rural Energy Consumption Patterns—A Field Study*, Bangalore, Indian Institute of Science, p. 80.

What is the role of women in these activities, and what is the magnitude of the burden on them compared to that on men? To determine this, we have to examine the hours per day spent on domestic and agricultural activities and translate these into calorie costs. Table 2 presents the break-up of hours per day spent on agricultural and domestic activities by men and women. The most significant aspect of Table 2 is that while women average about 6 hours a day on survival-related and agricultural tasks, men average only 4 hours a day on the same. Also, the ASTRA study did not monitor other domestic work such as cleaning, sweeping, washing clothes and utensils and child care, all of which are calorie-intensive and all of which are performed almost exclusively by women. On the other hand, most of the other (i.e., non-enumerated) tasks carried out by men are sedentary in nature—such as visiting the tea shop, trips to panchayet offices, talking with friends, etc.

We have now to translate the activities of men and women into calorie costs and compare them with calorie intake. However, this is not as simple as it seems for once again the neglect of women in social research or the ideological biases within existing information becomes a handicap.

Ramanathan and Nag have reviewed virtually all calorie cost studies in the country for various activities in their paper

TABLE 2. HOURS PER DAY SPENT ON DOMESTIC AND AGRICULTURAL ACTIVITIES

Activity	*Hours Per Day*		
	Man	*Woman*	*Child*
(*A*) *Domestic*			
Gathering firewood	0.33	0.41	0.24
Fetching water	0.02	0.78	0.13
Cooking	0.02	2.28	0.18
Carrying food to farm/walking to farm	1.00	1.14	
Livest ock grazing	1.63	0 47	1.02
(*B*) *Agricultural*			
Ploughing	0.18	—	—
Irrigation	0.30	—	—
Transplanting	0.08	0.33	—
Weeding	0.08	0.33	—
Harvesting	0.18	0.19	—
Winnowing	—	0.09	—
Threshing	0.14		—
Manuring	0.13	0.84	—
Nursery	0.17		
Harrowing	0.03	—	—
Transporting	0.05	—	—
(*C*) *Other activities* (sweeping, cleaning, child care, personal cars, play, sitting)	9.79	7.94	8.42
(*D*) *Rest and sleep* (approx)	10.00	10.00	14.00

Source: Compiled from data given in ASTRA, "Rural Energy Consumption Patterns—A Field Study," Indian Institute of Science, Bangalore, 1981.

"Energy Cost of Human Labour."[5] They found energy cost estimates for only 10 agricultural activities, compared to 70 industrial and military activities. Furthermore, there were no female equivalents for these agricultural tasks, as though women have not baen participating in agriculture for several millennia!

The unkindest cut of all is when we find that the few women's

[5]N.L. Ramanathan and P.K. Nag, "Energy Cost of Human Labour," National Institute of Occupational Health, Ahmedabad (n.d.).

energy costs (10 to be precise) which have been measured are clubbed under 'sedentary people' and include for such pleasant tasks as sewing, knitting, type-writing, piano-playing and singing! Where have 90 per cent of India's women gone—the ones who work from morning to night at back-breaking domestic and economic tasks and also carry the burden of pregnancy and child care?

Under the circumstances one is forced to approximate the energy expenditure of women in the concerned tasks by using the formula:

$$\frac{\text{energy cost/minute/adult male} \times \text{Basal Metabolic Rate}}{\text{Basal Metabolic Rate}}$$

(the BMR for moderate workers is used throughout the formula)

This gives us the estimates of energy cost per minute per activity for men and women presented in Table 3. Note that all starred figures are estimates based on the above formula.

We are now ready to calculate the activity-wise energy output per day for men and women, shown in Table 4.

A note of explanation is needed here: Agricultural activities are obviously seasonal, but here they have been averaged over the whole year to obtain a daily figure, which is more appropriate for determining daily energy output and comparing it with calorie intake. Thus, during some months of the year, agricultural activities will account for much higher energy expenditure than shown in Table 4.

Returning to Table 4, we see that the calorie (energy) expenditure of women is higher than that of men. The difference appears more marginal than I suspect it really is. First of all, the 'other' activities of men, could not be clearly enumerated.

The shortage of off-season employment opportunities makes it doubtful that they spend a lot of energy on non-agricultural activities. Therefore one can postulate that during off-seasons, the total calorie expenditure of men may be significantly lower than that of women.

Secondly, we see that most of the energy expenditure of women is on daily, life-supporting tasks which must be performed regardless of season and which are generally not shared

by men viz., cooking, fetching water, gathering firewood, washing cleaning, and child care.

TABLE 3. CALORIE COST OF DOMESTIC AND AGRICULTURAL ACTIVITIES (CALS/MINUTE)

Activity	*Calorie Cost*		
	Men	*Women*	*Child*
(*A*) *Domestic*			
(1) Gathering firewood	5.2		
(a) Walking to source	5.2	4.4*	4.6*
(b) Return trip with load	6.4	5.5*	5.7*
(2) Fetching water			
(*a*) Walking to source	5.2	4.4*	4.6*
(*b*) Return trip with load	6.4	5.5*	5.7*
(3) Cooking	2.5*	2.1*	2.2*
(4) Carrying food to farm/ walking to farm	5.2	4.4*	4.6*
(5) Livestock grazing	2.8	2.4*	4.6*
(6) Others (sweeping, cleaning, child care, personal care, play, sitting, etc.) average	1.5*	1.5*	1.7*
(*B*) *Agricultural*			
(1) Ploughing	5.5	4.7*	—
(2) Irrigation	3.3	2.8*	—
(3) Transplanting	5.1*	4.3*	—
(4) Weeding	5.1*	4.2*	—
(5) Harvesting (manual)	5 3*	4.5*	—
(6) Winnowing	5.3*	4.5*	
(7) Threshing	5.4	4.6*	
(8) Manuring	4.0*	3.4*	
(9) Nursery	3.5*	3.0*	
(10) Harrowing	6.5*	5 5*	
(11) Transporting (by bullock cart)	2.0*	1.7*	

*All estimated or approximated figures

Source: (*i*) N.L. Ramanathan and P.G. Nag, "Energy cost of Human Labour," National Institute of Occupational Health, Ahmedabad.

(*ii*) R. Rajalakshmi, "*Applied Nutrition*" (Second edition), Oxford and IBH, New Delhi, 1974.

Thirdly, many of the above activities create a demand for human energy because of the scarcity of other energy resources.

If cooking fuel and water were readily available close to the user and the efficiency of stoves improved, a saving of nearly 500 calories per day per woman could be effected. Is there a need to bring about such an energy saving at all? If food intake more or less matches calorie output, there would appear to be no cause for concern. ASTRA's nutrition survey (unpublished) in the village Ungra (based on monitoring of food purchase and use over a two-month period) found that the

TABLE 4 : ACTIVITY-WISE CALORIE EXPENDITURE PER DAY

Activity	*Calorie per day*		
	Men	*Women*	*Child*
(*A*) *Domestic*			
(1) Gathering firewood	115	122	74
(2) Fetching water	7	232	40
(3) Carrying food to farm/ walking to farm	312	301	—
(4) Cooking	3	287	24
(5) Livestock grazing	274	68	155
Sub-total	711	1010	293
(*B*) *Agricultural*			
(2) Ploughing	59	—	—
(2) Irrigation	59	—	—
(3) Transplanting	25	85	—
(4) Weeding	25	85	—
(5) Harvesting	57	51	—
(6) Winnowing	—	24	—
(7) Threshing	45		
(8) Manuring	31	10	—
(9) Nursery	15		
(10) Harrowing	12	—	—
(11) Transporting	6	—	—
Sub-total	334	255	—
(*C*) *Other Activities* (sweeping, cleaning, child care, personal care, play, sitting, etc.)	878	715	655
(*D*) *Rest and sleep* (approx.)	550	500	650
Total	2,473	2,505	1,598

average individual intake per day was around 2,300 calories. But this, like all other nutrition surveys in the country, assumes an equal distribution of food within the family—a highly questionable assumption.

The staple diet in this area is 'ragi' which is cooked to a dough and separated into balls for eating. When local women were questioned as to how they distribute the balls, their answers provided the following ratio: 2 balls for a man, 1.5 for a woman and 1 for a child. Obviously this would be a questionable basis for disaggregating the overall calorie consumption of the family—but it gives us a rough idea of intra-familial inequalities in food distribution. It also shows that food intake is determined not only by work output, but also by social and cultural factors which have to be studied, described and tackled.

Let us for a moment return to the above ratio and assume it is valid. Applying it to the overall cereal consumption per day per family (4.24). The relative food intake per man, woman and child would then be 3,270 calories, 2,410 calories and 1,640 calories per day respectively. This means an intake deficit of nearly 100 calories per day per woman, whereas a man has an intake surplus of nearly 800 calories.

A deficit of 100 calories a day doesn't look serious until we link it to certain facts:

(*i*) The vast majority of villagers have worm infestations, these parasites can "steal" as much as one-fourth the total food intake.

(*ii*) This intake level for women is a "maintenance" level which makes no allowances for the additional 500-600 calories required during pregnancy and lactation—and Kamala Jaya Rao[6] has shown that one-third adult Indian women are in that condition at any point in time, without the benefit of additional nutrition during these "vulnerable" periods.

All of the nutrition programmes in the country are aimed at pregnant and lactating women—though how much of this extra

[6]K. Jaya Rao, "Who is Malnourished: Mother or the Women". *Medico Friends Circle Bulletin*, February 1980, pp. 1-5.

nutrition actually reaches these women is a moot point.[7] But what of the nutrition deprivation suffered by girls from infancy to pregnancy? And what of the woman who have fulfilled their reproductive roles, but must continue to work for their family's survival without enough food to meet their needs?

Most frightening of all is the growing school of thought which uses theories of biological adaptation (the "homeostasis" theory) and clever statistical gymnastics to prove that there is in fact no such calorie gap.[8]

The doyen of this school is Prof. P.V. Sukhatme, a biostatistician with considerable clout who a decade ago smashed the theory of the "protein gap" in the diets of poor people. He demonstrated that the protein gap only occurs when there is a calorie gap—but when overall intake of calories is sufficient, the amount of protein is also adequate.[9] He was undoubtedly responsible for elbowing out the vested interests who would have liked to manufacture and market supplementary protein to people who had barely enough to eat.

Today his work has taken quite a different direction—a direction which has frightful implications for women. To grossly oversimplify his theory, he states that just as there is inter-individual variation in food intake, there is also an intra-individual variation. So at times we eat more, and then we eat less. Thus, ascribing some arbitrary norm such as "recommended daily allowance" is meaningless, since both inter- and intra-individual food intakes will fall into a normal bell curve, even though everyone is healthy.[10] Form here, he goes on to state, that the only two indicators of malnutrition (either in the form of overnutrition or undernutrition) are: whether body weight remains basically constant (i.e., it is "maintained"), and whether the normal level of activity (for which read "work") is maintained. He believes that anyone who meets the above criteria cannot be termed malnourished.

[7]K.V. Natarajan, *op. cit.*

[8]P.V. Sukhatme, "On Measurement of Poverty," *Economic and Political Weekly*, Vol. XVI, No. 32, p. 1318-24.

[9]P.V. Sukhatme, "Protein Strategy and Agricultural Development,", Presidential address, All India Agricultural Economics Conference, 31 October 1972, BHU, Varanasi, Indian Society of Agricultural Economics.

[10]P.V. Sukhatme, "On Measurement of Poverty," 1981.

Sukhatme also does not want us to be carried away by Western norms of how tall or heavy we should be. A thin, small person is neither stunted nor underweight—she/he has merely "adapted" to efficiently use the little food to be had while continuing to labour away for survival.

Therefore, this "calorie-gap" suffered by women and by many of the poor is of little consequence—because they adapt themselves and carry on. However, if our above calculations are correct, then the question remains: can women "adapt" to calorie deficits of 500 or 600 calories during pregnancy and lactation?

Even if they can, Sukhatme ignores the possibility that such adaptation over a lifetime may have disastrous consequences on health. Is this why more women die, and die earlier than men?[11] Is this why maternal mortality is so high—400/100,000[12]? Is this why the average birth weight of poor babies is as low as 2.5 kg.,[13] leading to so much child wastage? In other words this may be the starting point of the vicious circle of maternal undernutrition, low birth weight babies. high infant mortality, high fertility. In this context, health care service can play an important role in alleviating the health problems of women to some extent—but do they?

First of all, women's health has been confused with maternal health—once again on the assumption that women and maternity are one and the same thing. The only women-oriented programmes in the national health sector have been maternal and child health schemes and to some extent family planning. The health system has yet to waken to the fact that there are a large number of women in need of health care who are neither pregnant nor lactating.

Secondly, the outreach of health services is very poor with respect to women. Examination of in-and-out-patient records of medical institutions reveals that for every three men who avail of these facilities only one woman does so. This is by no means

[11]ICMR/ICSSR Study Group, "Health for All: An Alternative Strategy," Indian Institute of Education, p. 132, 1981, Pune.

[12]*Ibid*, p. 231.

[13]National Institute of Nutrition, "Nutrition Atlas of India,', Hyderabad, p. 27-29. 1971.

because women are healthier, but because in the Indian family, the importance given to a woman's ailments is considerably less than that given to a man's illness.

Thirdly, the very nature and structure of the health service system militates against its reaching women. Our health system is institution-based. Women have neither the time, mobility, child care facilities nor the leisure to travel long distances at great expense to seek out the services available in hospitals and health centres, often at the loss of a day's wage. A momiciliary system which reaches the doorstep would naturally benefit more women.

Finally, in our culture, it is women who can best reach out to and care for other women. Yet in the present health services, male functionaries heavily outweigh the females. Although the number of women doctors has been steadily rising, few of these are working in the rural areas. It is the lone cadre of auxiliary nurses/midwives, poorly paid, poorly supervised and equipped, sexually harassed and overloaded with work, who are the sole guardians of women's health. Even the celebrated community health worker scheme, defeated our hopes when over 80 per cent of these selected and trained turned out to be men. Let us now summarise the picture so far.

The scarcity of other energy resources in a rural area creates a demand for human energy—particularly in survival-related tasks. When human energy is expended, women contribute the greatest share. But in comparison to this energy output, women get a lower share of food intake, and face a nutritional deficit. Added to the work burden, women also suffer further energy deprivation due to repeated pregnancies and breast feeding, high morbidity and intestinal infestations. Health care can alleviate this burden to some extent, but women apparently have less access to health care facilities due to the nature and structure of these services. These factors naturally affect all the poor, but apparently women are more considerably affected because of their special biological, social and economic roles.

The complexity of the problem is too mind-boggling for anyone to offer quick solutions, but the following series of questions must be answered if we are to even begin tackling the problem. The questions are:

(1) What is the actual pattern of women's work in different regions?

(2) What is the energy cost of the activities performed by men, women and children in different socio-economic groups—both urban and rural?

(3) What are the effects of human energy saving on nutrition status—with and without increasing food intake?

(4) Are the calorie intake norms or recommended daily allowances for women at various activity levels realistic?

(5) What is actual food intake of women (at all ages and biological stages) and men?

(6) How do women utilise the time released by the provision of alternative energy resources for survival tasks?

(7) What is the actual extent and pattern of morbidity amongst women?

(8) What is the outreach of health services to all women, and what is the level of utilization of the former by the latter?

In conclusion, although one cannot offer facile solutions, the interrelationship between energy scarcity, women's work, nutrition and health suggests a three-pronged strategy:

Women's deprivation occurs at three levels, the socio-cultural level, the environmental level and the service/programmes level. All women's movements are aimed at breaking the rigid patriarchal system giving priority to increasing the availability of energy resources for activities performed by women (collecting fuel and water, cooking, etc.) is another facet of the strategy, and one where devising an appropriate technology can play an important part. Finally, there is an urgent need for restructuring and expanding the scope of existing health and nutrition programmes to reach out to all women and to draw them into its network.

How best all this can be achieved is matter for further debate and discussion. Perhaps the major thrust has to be on the political front, mobilising women to form an articulate section of society.

4

Indian Households with Female Heads: Their Incidence, Characteristics and Level of Living

PRAVIN VISARIA AND LEELA VISARIA

Recent years have witnessed a welcome upsurge of interest in the living conditions of women who form half the human race but generally fail to be treated on par with men in many aspects of life. In India, the unequal status of women has been reflected in their numerical deficit, particularly marked in the Northern states. While the situation in the pre-census period can only be a matter of speculation, it seems reasonable to postulate that the deficit of women could not have been a sudden development of the second half of the 19th century and the 20th century. Also, the primary explanation for the deficit of women in the population appears to be the fact that females encounter higher risks as compared to men, of death from infancy onwards at least up to the end of their productive period. This leads to a lower life expectancy at birth for females than for males. This is indeed indicative of their lower status in the Indian society.[1]

The focus of this paper is not on the deficit of females in the population but on households where females are reported to be heads. Our objective is to examine the empirical evidence relating to the concern and the widespread belief that female headed

[1]Pravin Visaria, *The Sex Ratio of the Population of India*, Census Monograph No. 10, Office of Registrar General, New Delhi, 1971.

households are a particularly disadvantaged segment of the society and that such women, most of whom have little or no literacy attainment, have meagre resources to support the families that they head. Further, there is hardly any prospect of improving their levels of living unless and until their children, especially male children, grow up and are in a position to receive education, stable employment or take care of family land. But by then, women would generally cease to be the heads of the households.

Data Sources

A major source of data pertaining to heads of households are the Indian censuses of 1961 and 1971. Since the tabulation programme of the two censuses was not comparable, our analysis aims at broad inferences about the prevailing situation rather than at a study of intercensal changes. Also, we have explored the data only at the state level rather than at a district or the regional level (which might yield some interesting insights). The 1981 census tables relating to the composition and size of households are yet to be compiled from the 20 per cent of sample of the household schedules.

The discussion of census data is supplemented by an exploration of the level of living of households with female heads in Gujarat and Maharashtra states of India (on the basis of state samples) in terms of their monthly per capita expenditure during October 1972—September 1973 (th 27the Round of the National Sample Survey hitherto referred to as NSS). The simultaneous colleetion of data on economic activities and consumption expenditure in the NSS provides a challenging opportunity for analysis, although only micro-studies would indicate the validity of the census or the NSS data with respect to (*a*) the identification of the heads of households and (*b*) the extent to which estimates of monthly per capita consumption expenditure reflect the economic welfare of the surveyed households or individuals. From the 32nd Round of the NSS (July 1977—June 1978) no tabulations taking account of the sex of the head of the household have been generated because the primary interests of the users of these data are different. It would be useful, however, to initiate some special tabulations of these data, if the requisite resources are available.

Limitations of Available Data

Various limitations of the data must be noted at the outset. The distinction between a family and a household is not easy to convey in Indian languages. Also, as noted below, the identification of the head of a household does not generally receive the time or attention of the investigators or enumerators it deserves if the household headship is to be used as a criterion for an assessment of the status or living conditions of women. The influence of cultural factors operating in our generally patriarchal, patrilineal and patrilocal society is so strong that both the investigators and the respondents are likely to misreport (generally leading to under-reporting), the cases where women are the heads of households. Therefore, the data have to be interpreted with considerable caution although the observed interstate differences discussed below appear quite plausible and provide a basis for further inquiries and research.

What is a Household?

Webster's Third International Dictionary defines a household as a "social unit comprised of those living together in the same dwelling place." The identification of these social units on a systematic basis in India as a whole is a relatively recent phenomenon of the post-Independence period, beginning with the 1951 Census.[2] Differences between a household and a family arise either because relatives or members of "a family" have to live separately and cannot have a common kitchen for whatever reason or because some unrelated members live together in a common dwelling unit and cook together. A large-scale data collection activity such as a census or a survey necessarily has to adopt a practical procedure and has to concern itself with households rather than families.

Census and NSS Definitions of a Household and the Head of Household

Both the 1961 and the 1971 Censuses defined a household as "the entire group of persons who commonly live together and

[2]Kumudini Dandekar, *Size and Composition of Households*, Census Monograph No. 9, Office of the Registrar General, New Delhi, 1971.

take their meals from a common mess unless the exigencies of work prevent them from doing so. "The head of the household was defined as "a person who is recognised as such in the household." Both the 1961 and the 1971 Censuses described the head as "generally the person who bears the chief responsibility for the maintenance of the household"; the 1971 Census instructions added that the head "(generally) . . . takes decisions on behalf of the household". Both added that the head "need not necessarily be the oldest male member but *may* even be a female or a younger member of either sex." However, the enumerators were asked not to make "any elaborate enquiry" (1961 Census) or to "enter into any long argument" (1971 Census) on the subject.

The NSS instructions on the definition of a household were rather brief. The NSS defines a household as "a group of persons living together and taking food from a common kitchen". If a person lives in one place and eats at another place, he is considered a normal resident of the place where he lives. Normal residents who were temporarily away were included as members of the sample household while temporary visitors to the sample household were excluded. However, in the 27th Round, no explicit instructions were given to define the head of the household, presumably because the NSS investigators have been conducting similar surveys for several years and know how to identify a household head. Of course, in the absence of a specific instruction, different interviewers may have used somewhat dissimilar criteria to identify a household head. Even more important, the information on the relationship of different members to the head of the household was not transferred to the punch cards or the tape. One has to rely on the assurance from persons in charge of the processing of the state sample data that the head of a household is always given the serial number one and can be identified from that information. The general absence of any obvious implausibility in the data obtained on this assumption seems to confirm it.

We shall first examine the Census data and then turn to the NSS data for Gujarat and Maharashtra.

Incidence of Famale-Headed Households in Different States

According to the data shown in Tables 1 and 2, in India as a whole, households headed by women formed slightly less than 10 per cent according to both 1961 and 1971 Censuses, but there were significant interstate variations. All the Southern states—

TABLE 1. PERCENTAGE OF FEMALES AMONG HEADS OF HOUSEHOLDS ACCORDING TO THE 1961 CENSUS

Areas	*All Areas*	*Rural Areas*	*Under Areas*
INDIA	9.91	10.02	9.51
STATES			
Andhra Pradesh	13.31	13.34	13.19
Assam	5.45	5.42	5.78
Bihar	10.13	10.41	6.98
Gujarat	8.86	8.26	10.49
Himachal Pradesh	9.92	9.97	9.10
Jammu & Kashmir	7.34	7.66	5.60
Karnataka	13.52	13.71	12.84
Kerala	16.44	16.23	17 87
Madhya Pradesh	7.82	7.84	7.74
Madras	14.17	14.61	12.91
Maharashtra	10.80	11.46	9.07
Manipur	12.28	11.67	19.21
Meghalaya	21.56	22.39	16.20
Nagaland	13.51	13.41	16.15
Orissa	9.35	9.37	9.43
Punjab	6.77	6.92	6.34
Rajasthan	6.42	5.98	8.66
Sikkim	6.30	6.21	8.00
Tripura	5.47	5.15	8.88
Uttar Pradesh	7.64	7.88	6.06
West Bengal	8.17	8.14	8.32
UNION TERRITORIES			
Andaman & Nicobar Is.	4.34	3.69	6.24
Delhi	4.26	4.34	4.26
Lakshadweep Is.	42.96	42.96	—
Dadra & Nagar Havali	5.07	5.07	—
Pondicherry	14 42	13.82	16.61

Note: Estimates are based on a 20 per cent sample of all households.
Source: Census of India, 1961, Vol. I, India Part IIC (i), *Social and Cultural Tables*, pp. 8-12.

Andhra Pradesh, Karnataka, Kerala, Tamil Nadu and Pondicherry—exhibited a higher incidence of female headed households. The proportion ranged between 13 and 16 per cent in 1961 and between 12 and 17 per cent in 1971.

Similarly, the proportion of female-headed households was greater than the national average in the North-East region consisting of Meghalaya (interestingly, very different from Assam), Manipur and Nagaland, which account for a very small proportion of the national population. However the highest incidence of female-headed households was reported for Lakshadweep islands situated off the coast of Kerala in the Arabian Sea—43 per cent according to the 1961 Census and 35 per cent in 1971.

At the other extreme, in Uttar Pradesh, Bihar (not in 1961), Rajasthan and Madhya Pradesh and in the North-Western region of the country consisting of Jammu and Kashmir, Punjab and Haryana, the percentage of female-headed households ranged between 6 and 8.

In order to understand these distinct regional patterns, socio-cultural history of the regions ought to be closely examined. However, some characteristics of the female-headed households help to understand the processes that lead to females being reported as heads of households.

Characteristics of Female-Headed Households

The 1971 Census shows a rise in the proportion of female-headed households with age in virtually every state or union territory (Table 2). This tendency is consistent with the information based on the NSS data for Gujarat and Maharashtra that a majority of the female-heads of households tend to be widows or divorced and separated.[3] Table 3 seeks to confirm this hypothesis through an examination of the proportion of female-headed households where the male spouse was resident in the household. This proportion varies inversely with the age group of the household heads in most states or union territories.

[3]See also K. Dandekar, *op. cit.*, The 1951 Census data for West Bengal, the only state for which information on age, sex, marital status of the heads of the households was tabulated, confirm this.

TABLE 2. PERCENTAGE OF FEMALES AMONG HEADS OF HOUSEHOLDS BY AGE GROUP OF HEADS, ACCORDING TO THE 1971 CENSUS

India/States	Age Group of Heads of Households											
	All Ages			Less than 30			30—49			50 +		
	All Areas	Rural Areas	Urban Areas	All Areas	Rural Areas	Urban Areas	All Areas	Rural Areas	Urban Areas	All Areas	Rural Areas	Urban Areas
INDIA	9.43	9.58	8.83	6.07	6.51	4.61	8.20	8.51	7.06	12.48	12.12	14.17
Andhra Pradesh	12.35	12.45	7.59	5.98	6.30	5.02	10.56	10.70	10.04	17.33	16.92	19.57
Assam	6.03	5.97	6.62	4.81	4.70	5.76	5.69	5.68	5.84	7.10	6.96	8.74
Bihar	7.98	8.27	5.49	6.20	6.54	3.47	7.68	8.09	4.51	9.15	9.21	8.51
Gujarat	8.52	8.08	9.59	3.67	4.16	5.15	6.64	6.54	6.89	13.52	11.99	17.62
Haryana	6.36	5.98	7,79	7.60	7.32	8.28	5.93	5.93	5.93	6.44	5.61	10.40
Himachal Pradesh	14.90	15.29	11.69	18.10	18.72	15.11	15.30	16.10	8.44	13.36	13.42	12.27
Jammu & Kashmir	5.92	5.86	6.21	10.96	10.95	11.00	5.09	5.10	3.51	5.42	5.28	6.23
Kerala	17.31	17.09	18.49	10.59	10.28	12.53	14·19	14.24	13.93	22.45	21.94	25.26
Madhya Pradesh	7.36	7 45	6.91	3.50	3.53	3.37	5.80	5.83	5.63	11.74	11.72	11.88
Maharashtra	10.32	11.17	8.46	6.65	8.38	3.79	9.43	10.54	7.21	13.19	13.03	13.64
Manipur	11.46	10.76	16.53	6.49	6.30	8.41	8.75	8.42	11.36	16.94	15.78	23.80
Meghalaya	21.06	21.31	19.56	24.27	25.33	19.22	18.33	18.81	15.46	23.99	23.34	28.57
Karnataka	12.81	13.13	11.83	7.95	8.64	6.43	11.10	11.69	9.39	16.53	16.09	18.20
Nagaland	12.95	12.92	13.22	12.95	12.92	13.22	12.95	12.92	13.24	12.95	12.95	13.04
Orissa	9.18	9.29	8.12	5.99	6.16	4.66	8.28	8.43	6.83	11.93	11.82	15-45
Punjab	7.46	7.24	8.08	6.44	5.72	7.89	6.82	7.06	6.21	8.43	7.78	10.94
Rajasthan	6.46	6.33	7.05	4.92	5.34	3.45	5.55	5.47	5.87	8.46	7.96	10.95
Sikkim	10.37	10.72	7 39	9.37	10.26	4 67	6.30	10.95	6.37	17.33	17.70	12.54
Tamil Nadu	13.78	14.57	11.80	6.50	7.09	5.28	11.23	12.17	9.06	19.80	20.00	19.20
Tripura	6.75	6.39	9.84	6.24	5.70	9.88	6.55	6.22	9.34	7.21	6.85	10.69
Uttar Pradesh	6.98	7.21	5.66	6.48	7.13	3.19	6.29	6.62	4.48	8.04	7.95	8 67
West Bengal	7.68	7 76	7·42	5.03	4 82	5.78	6.48	6.70	5.87	10.84	10.75	11.17
Andaman & Nicobar Islands	4.25	3.67	6.11	3.60	2.68	6.32	3.67	3.30	4.82	7.04	6.05	11.25
Arunachal Pradesh	7.02	7.06	5·96	7.12	7.03	8.33	5.86	5.91	4,66	4.47	9.51	6 16
Chandigarh	4.69	2.34	4.92	5.37	1.40	5.70	3.90	1.72	4.09	5.95	4.28	6.21
Dadra & Nagar Haveli	5.78	5.78	—	6.27	6.27	—	4.64	4.64	—	7.80	7.80	—
Dehli	4.81	4.50	4.84	2,08	3.33	1.96	3.82	4.23	3.79	8.84	5.63	9.21
Goa, Daman & Diu	25.61	28.17	17.88	15.49	18.38	9.14	21.14	23.56	14.33	34.59	36.43	27.66
Lakshadweep	35.39	35.39	—	34.69	34.69	—	35.26	35 26	—	36.27	36.27	—
Pondicherry	12.48	12.05	13.14	5.60	5.53	5.72	10.44	10.43	10.44	17.47	16.37	19.16

Source: Census of India, 1971, series I, India Part C (iii), Vol. I, *Social and Cultural Tables*, pp. 2-22.

TABLE 3. NUMBER OF HOUSEHOLDS WITH FEMALE-HEADS HAVING MALE SPOUSE PER 1000 FEMALE-HEADED HOUSEHOLDS, 1961 AND 1971 CENSUS DATA

Area	1961 Census		1971 Census							
	All Ages		All Ages		Less than 30		30—49		50+	
	Rural Areas	Urban Areas	Rural Areas	Urban Areas	Rural Areas	Urban Areas	Rural Areas	Urban Area	Rural Areas	Urban Areas
INDIA	26	38	23	35	49	80	31	46	11	16
STATES										
Andhra Pradesh	18	23	17	23	46	56	22	33	9	9
Assam	90	85	52	16	130	42	65	19	12	—
Bihar	21	41	12	54	22	76	14	69	6	33
Gujarat	32	40	22	33	43	120	36	50	8	16
Haryana	a	a	14	19	20	10	15	23	10	18
Himachal Pradesh	35	8	26	21	40	16	35	30	10	14
Jammu & Kashmir	66	27	44	34	51	43	63	43	17	14
Kerala	86	107	68	97	148	302	96	144	38	47
Madhya Pradesh	30	30	25	30	72	92	40	36	8	12
Maharashtra	23	40	27	41	57	100	36	54	11	18
Manipur	18	23	13	29	49	145	21	50	3	8
Meghalaya	b	b	286	280	420	437	328	324	136	132
Karnataka	30	44	35	46	82	112	45	64	21	20
Nagaland	9	83	5	15	5	13	4	24	3	—
Orissa	12	30	13	33	39	133	16	27	5	16
Punjab	22	20	22	25	29	28	26	35	17	15
Rajasthan	12	11	7	8	10	5	13	10	3	6
Sikkim	31	125	21	41	51	77	34	42	8	27
Tamil Nadu	11	15	5	6	16	18	7	8	3	3
Tripura	19	18	16	23	40	19	19	24	5	22
Uttar Pradesh	19	34	14	27	18	47	18	37	7	16
West Bengal	22	79	22	54	73	121	27	69	6	24
UNION TERRITORIES										
Andaman & Nicobar	50	19	65	22	100	13	71	20	37	36
Arunachal Pradesh	c	c	28	57	29	69	32	48	24	48
Chandigarh	a	a	16	28	—	22	23	34	16	23
Dadra & Nagar Haveli	27	—	25	—	28	—	35	—	11	—
Delhi	19	24	21	42	29	106	24	57	16	18
Goa, Daman & Diu	NA	NA	55	46	101	115	24	57	32	21
Lakshadweep	230	—	230	—	151	—	256	—	237	—
Pondicherry	30	32	30	22	57	51	37	26	22	15

Note: a Included in Punjab; b Included in Assam; c Only a simplified schedule/ship was canvassed in Arunachal Pradesh in the 1961 Census.

Source: Census of India, 1961, Volume I, India Part II C (*i*) *Social and Cultural Tables*, pp. 10-13.
Census of India, 1971, Series I, India, Part II C (*iii*) *Social and Cultural Tables*, pp. 2-22.

Neither the average size of the female or male-headed households nor the proportion of single-member households is known separately for rural and urban areas according to the 1971 Census. However, Table 2 shows that in India as a whole, the incidence of female-headed households was generally lower in urban areas than in rural areas. One can infer that the tradition of sex-selective out-migration from rural areas might be contributing to the reporting of females as households heads. However, in several states, the proportion of female-headed households was actually higher in urban areas that in rural areas. Also, as shown in Table 3, the male spouse was more often a member of the female-headed households in urban areas than was in rural areas.

We recalculated the average household size, on the basis of the 1971 Census data, by excluding the single-member households in order to understand the real burden experienced by those women who have the responsibility of other members of the households. The two sets of estimates of household size are given in Table 4. As expected, the difference in average household size, when the single-member households are excluded, between the male- and the female-headed households narrows down significantly and is equivalent to just a little over one person per household compared to over two persons otherwise. Since 97.5 per cent of the female headed households in the country do not have male spouses living in the households, as evident from Table 3, this implies that the smaller average size of female-headed households is to a great extent due to the absence of the traditional male head.

There are inter-state differences but the difference in the average household size norrows down once the single-member households are treated as a separate category. It thus appears that excluding those households where there are only single women, the burden of supporting the family on female heads is not any less compared to the male heads. In reality, it is likely to be even greater given their low literacy levels, low income less stable jobs, less remunerative occupations, etc.

In brief, the census data suggest that females tend to be reported as heads when they are rather old and/or widowed. While, many of them form single-member households and have

TABLE 4. AVERAGE SIZE OF MALE AND FEMALE HEADED HOUSEHOLDS AND THE PERCENTAGE OF SINGLE MEMBER HOUSEHOLDS AMONG HOUSEHOLDS WITH MALE AND FEMALE HEADS IN 1971

Area India/State/Union Territories	*Average Household Size*		*Average Households Size Excluding Single Member Households*		*Percentage of Single Member Households*	
	With Males as Heads	*With Females as Heads*	*With Males as Heads*	*With Females as Heads*	*Among Households with Male Heads*	*Among Households with Female Heads*
(1)	(2)	(3)	(4)	(5)	(6)	(7)
INDIA	5.70	3.45	5.89	4.60	4.77	26.54
STATES						
Andhra Pradesh	5.15	3.17	5.29	4.02	3.22	28.03
Assam	6.09	3.90	6.33	4.50	4.67	17.36
Bihar	5.84	3.45	6.05	4.22	4.15	24.00
Gujarat	5.92	3.34	6.11	4.33	3.68	31.81
Haryana	6.45	3.98	6.76	4.69	5.29	19.20
Himachal Pradesh	5.56	3.72	6.09	4.47	10.51	21.34
Jammu & Kashmir	a	a	a	a	3.95	21.84
Karnataka	5.98	3.82	6.17	4.57	3.62	21.12
Kerala	6.29	4.82	6.41	5.19	2.16	8.89
Madhya Pradesh	5.60	2.87	5.86	4.03	5.22	38.44
Maharashtra	5.66	3.45	5.87	4.28	4.27	25.36
Manipur	6.08	3.80	6.23	4.54	2.74	21.05

(1)	(2)	(3)	(4)	(4)	(6)	(7)
Meghalaya	5.01	4.51	5.31	4.88	7.05	9.51
Nagaland	5.07	3.11	5 40	3.92	7.48	27.60
Orissa	5.48	3.15	5.63	4.02	3.29	28.89
Punjab	6.11	3.89	6.43	4.68	5.85	21.64
Rajasthan	5.86	3.22	6.12	4.26	5.14	31.91
Sikkim	5.63	4.30	5.98	5.09	6.96	19.32
Tamil Nadu	5.05	3.06	5.16	3.95	2.76	29.26
Tripura	5.85	3.42	6.02	4.21	3.26	24.54
Uttar Pradesh	5.82	3.28	6.12	4.22	5.88	29.32
West Bengal	5.83	3·31	6.08	4.34	4.96	31.02
UNION TERRITORIES						
Andaman & Nicobar Is.	4.68	4 60	5.33	5.06	15.13	11.21
Arunachal Pradesh	4.99	3.26	5.25	3.81	6.11	19.49
Chandigarh	4.26	3.39	4.83	3.86	14.91	16.22
Dadra & Nagar Haveli	5.62	3.47	5.75	4.17	2.85	22.12
Delhi	5.16	4.11	5.63	4.92	10.22	20.61
Goa, Daman & Diu	5.60	3.64	5.89	4.40	5.80	22.49
Lakshadweep Is.	6.30	5.56	6 88	5.81	9.86	5.23
Pondicherry	5.35	3.96	5.47	4.70	2 76	20.19

Note: a Published figures are implausible and cannot be corrected. They have been excluded from the all India estimates for these columns.

Source: Census of India, 1971, Series 1, India, Part II—c(*iii*), Vol. 1, *Social and Cultural Tables*, pp. 2-29

a smaller average size than male-headed households, the burden on those women who have families is not any less. Except in Meghalaya, Lakshadweep, and Kerala, few of them have male spouses resident with them. (That is true even for Nagaland and Manipur which also have higher than average proportion of female-headed households.)

An exploration of the association between the proportion of females in the population (taken as suggestive of the status of women in a state) and the incidence of female headship shows a clear positive relationship, though the range of variation in the former variable is much smaller than that in the latter. In the Southern states of the country where the incidence of female headship is higher than the all India level, the status of women appears relatively high. There have been pockets within the southern region where matriliny was prevalent, and today even if patriliny has been accepted or adopted, women still continue to enjoy social and economic independence to a greater extent. However, we do not really know to what extent the higher incidence of female headship in the Southern region is due to their relatively higher status. If so, one would expect the female-headed households to be economically and socially at least as well off as the male-headed households. Unfortunately, we have very little data to test this. Only through detailed micro studies of the role of females reported as household heads in decision making and their social and economic activities would we understand the interactions between these phenomena.

On the whole, female-headed households appear to suffer from a serious handicap. Women who have lost their spouse have to encounter several problems in seeking to survive in our male-dominated society. Their seemingly smaller household size is really indicative of the absence of their spouses. The small household size might imply some diseconomies of scale, although the NSS data for Gujarat and Maharashtra examined below indicate that because of this factor, the difference in the monthly per capita expenditure of households with male and female heads was *not* really significant.

Unfortunately, the lack of interest in a study of the economic characteristics of households has resulted in the absence of any

tabulation of the data relating to their economic activities. However, 1961 Census had attempted to classify rural households into three categories of those engaged in (*a*) cultivation only, (*b*) household industry and (*c*) neither cultivation nor household industry. Households engaged in cultivation were further tabulated according to size of their landholding. Households in category (*c*) were likely to include households which had no economic activity whatsoever, i.e., households where everyone was altogether outside the labour force.

Table 5 summarises the distribution of households headed by males and females according to the reported main activity of the household and Table 6 shows the proportion of female-headed households engaged in the cultivation of landholdings of different sizes. Those familiar with the problems involved in the identification of main activity of households will recognize the limitations of these data, which were collected through the household economic schedule canvassed in the 1961 Census (which was dropped in 1971). Even the data on the size of cultivated landholding have to be interpreted with due caution. However, a few interesting factors stand out from the Tables. First, the proportion of female-headed households engaged in cultivation and household industry only (except in Manipur) was remarkedly lower than the corresponding figures for the male-headed households. Several of the female-headed households engaged neither in cultivation nor in household industry were probably without any main occupation.

Secondly, the proportion of female-headed households varied inversely with the size of landholding reported by the cultivating households. That is, large plots of land were cultivated by households headed by males. Females from a higher proportion of households with smaller landholding perhaps because they are gradually forced to sell a part of their landholdings or else got a small share relative to the brothers of the deceased spouse. Partly as a result, the female headed households might include a high proportion of rural labour households, a possibility that we shall evaluate in the course of our analysis of the NSS data for Gujarat and Maharashtra. We turn now to these latter data in our attempt to understand the characteristics of female-headed households in greater detail.

TABLE 5. DISTRIBUTION OF 1000 MALE AND FEMALE HEADS OF HOUSEHOLDS IN RURAL AREAS OF VARIOUS STATES BY REPORTED ACTIVITY, 1961 CENSUS

Area	*Male Heads of Households Enaged in*				*Female Heads of Households Enaged in*			
	Cultivation	*Household Industry*	*Other*	*All*	*Cultivation*	*Household Industry*	*Other*	*All*
INDIA	706	44	250	1000	494	40	466	1000
Andhra Pradesh	633	67	300	1000	398	58	544	1000
Assam	737	21	242	1000	462	75	463	1000
Bihar	761	23	216	1000	618	24	358	1000
Gujarat	668	56	276	1000	379	37	584	1000
Himachal Pradesh	899	26	75	1000	848	33	119	1000
Jammu & Kashmir	900	22	78	1000	850	25	125	1000
Kerala	411	60	529	1000	289	58	653	1000
Madhya Pradesh	760	41	199	1000	523	26	451	1000
Maharashtra	663	40	297	1000	539	20	441	1000
Manipur	828	76	96	1000	340	226	234	1000
Meghalaya	831	20	149	1000	737	18	245	1000
Karnataka	731	35	234	1000	512	30	458	1000
Orissa	744	36	220	1000	441	42	517	1000
Punjab	610	86	304	1000	332	62	606	1000
Rajasthan	831	37	132	1000	557	41	402	1000
Sikkim	894	2	104	1000	874	—	126	1000
Tamil Nadu	606	57	337	1000	399	43	558	1000
Uttar Pradesh	785	44	171	1000	687	36	277	1000
West Bengal	645	27	328	1000	352	42	609	1000

Source: Census of India, 1961, II C (*i*), *Social and Cultural Tables*, *Table* C—1 published in state volumes.

TABLE 6. PERCENTAGE OF HOUSEHOLDS WITH FEMALE HEADS AMONG CULTIVATORS ACCORDING TO SIZE OF LANDHOLDING, 1961 CENSUS

Area	*Size of Landholding (in Acres)*								
	1	*1.0—2.4*	*2.5—4.9*	*5.0—7.4*	*7.5—9.9*	*10.0—14.9*	*15.0—49.2*	*50+*	*All*
INDIA	14.5	9.8	6.4	5.1	4.4	4.2	3.7	3.4	7.2
Andhra Pradesh	14.5	10.8	7.9	7.1	6.5	6.3	5.9	5.7	8.8
Assam	8.0	5.0	2.7	2.0	1.6	1.5	1.3	5.5	3.5
Bihar	16.1	10.0	6.0	4.3	3.5	3.4	3.4	3.1	8.6
Gujarat	14.9	8.3	5 8	4.3	3.8	3.4	2.6	2.0	4.9
Himachal Pradesh	15.7	10.6	7.9	5.2	4.4	3.2	4.3	5.5	9.5
Jammu & Kashmir	10.9	7.3	6.0	7.4	6.9	6.4	7.5	—	7.3
Kerala	15.1	10.0	7.6	7.8	7.6	6.2	6.1	12.0	12.0
Madhya Pradesh	12.5	9.2	6.2	4.9	4.0	3.9	3.7	3.9	3.5
Maharashtra	27.1	16.4	10.9	8.4	6.9	6.1	4.5	3.3	9.5
Manipur	20.2	10.1	5.6	3.2	3.2	4.3	5.0	7.3	7.9
Meghalaya	29.2	24.8	16.1	18.0	17.8	17.1	22.1	32.8	20.4
Karnataka	20.1	14.4	11.0	9.1	8,9	7.8	6.1	4.8	10.0
Orissa	11.5	7.6	4.7	3 7	3.2	3.2	3.2	3.5	5.8
Punjab	20.6	11.4	6.3	3.2	2.1	1.7	1.5	1.5	3.9
Rajasthan	10.9	7.1	4.7	4.0	3.4	3.2	2.8	2.1	4.1
Sikkim	4.9	8.6	6.5	4.7	5.3	4.8	3.7	7.7	6.1
Tamil Nadu	14.7	11.7	8.9	7.5	6.5	6.2	5.4	6.5	10.1
Uttar Pradesh	14.3	9.3	5.6	4.0	3.4	3.0	2.9	3.3	6.9
West Bengal	8.5	5.8	3.1	2.4	2.1	2.2	2 8	5.0	4.6

Source: Census of India, 1961, Part IIC (*i*), *Social and Cultural Tables* of the various states.

The NSS Data for 1972-73

The 27th Round data for the two western states of Gujarat and Maharashtra are interesting because of the scope they provide for an understanding of the level of living of households according to the sex of the head. The Summary index of level of living is the monthly per capita expenditure of the household, collected through a lengthy schedule in which responses to questions on both the cash purchase and consumption out of home-grown stock during the month preceding the date of interview are recorded. Quite apart from the problems of recall, we have to take note of the fact that 1972-73 was a year of severe scarcity in both Gujarat and Maharashtra and the coverage of the 27th Round—from October 1972 to September 1973—might have mitigated the impact of scarcity but is unlikely to eliminate it altogether.

Table 7 shows the age distribution of male and female heads of households by rural-urban residence in the two states. As noted in Table 2 based on the 1971 Census, the female heads of households are elder. Their median age would be significantly higher than that of male heads.

The Table also shows the percentage of female heads among household heads of each age group. These percentages seem to form something like a U-shaped curve with respect to age group. The number of sample households with heads aged less than 20 is rather small and therefore the relevant percentages are subject to a relatively larger margin of errors. Yet, in three out of four data sets, the proportion of female heads is the lowest in the age group 25-29 and it rises almost steadily thereafter. This tendency is related partly to the increasing risk of widowhood (or divorce and separation) with age. As shown in Table 8, a large majority of female heads are indeed widows (or divorced and separated).

Results of Gujarat and Maharashtra data on the average size of households separately for male and female heads, shown in Table 9 are consistent with the census data discussed earlier. The single member households and two and three member households are much more numerous among these with female heads than among male-headed households. Our data do not and perhaps cannot report whether and to what extent these small households, particularly the single-member households,

TABLE 7. AGE DISTRIBUTION OF HEADS OF HOUSEHOLDS, GUJARAT AND MAHARASHTRA, 1972-73

State/Sex of Household Head	Age Group										
	Below 20	20-24	25-29	30-34	35-39	40-44	45-49	50-59	55-	60+	All
GUJARAT											
Rural Areas											
Male Heads	1.5	3.5	9.1	13.9	14.8	12.9	12.0	11.7	7.2	13.4	100.0
Female Heads	2.3	1.4	3.0	5.9	8.2	14.5	12.9	14.6	7.9	29.3	100.0
% Female*	8.2	2.5	1.9	2.4	3.2	6.3	6.1	7.0	6.1	11.6	5.7
Urban Areas											
Male Heads	1.2	4.7	9.6	14.8	16.0	14.7	12.5	10.5	6.0	9.9	100.0
Female Heads	2.5	0.5	2.4	6.8	8.1	9.0	17.7	17.1	7.5	28.4	100.0
% Female*	15.9	0.9	2.2	3.9	4.3	5.1	11.1	12.5	10.0	20.0	8.1
MAHARASHTRA											
Rural Areas											
Male Heads	1.1	3.9	9.3	12.1	15.0	13.1	12.4	9.6	7.8	15.8	100.0
Female Heads	3.1	4.1	4.5	9.7	14.8	11.2	11.0	10.6	9.9	21.1	100.0
% Female*	25.0	10.3	5.3	8.5	10.2	9.0	9.4	11.3	12.9	13·4	10.4
Urban Areas											
Male Heads	2.3	5.6	11.0	14.5	15.7	13.6	11.8	9.3	6.0	9.6	100.0
Female Heads	5.0	5.3	5.6	6 6	11.6	11.3	15.4	13.7	8.6	17.1	100.0
% Female*	13.4	7.7	4.2	3.0	6.0	6.7	10.1	11.3	11.0	13.3	8.0

*Figures in these rows show female heads of households in an age group as per cent of all heads of households in the same age group. Because of the rounding of the absolute numbers, these percentages are approximate.

Source: Special Tables compiled from the state samples of the 27th Round of the NSS.

TABLE 8. MARITAL STATUS DISTRIBUTION OF HEADS OF HOUSEHOLDS, GUJARAT AND MAHARASHTRA, 1972-73

States/Area	Male Heads of Households				Female Heads of Households			
	NM	CM	WDS	All	NM	CM	WDS	All
GUJARAT								
Rural	3.6	39.0	7.4	100.0	3.4	15.2	81.4	100.0
Urban	4.8	90.6	4,6	100.0	3.2	16.2	80.6	100.09
MAHARASHTRA								
Rural	2.8	90.9	6.2	100.0	3,6	28.5	67.8	100.0
Urban	9.6	86.4	3.9	100,0	14.1	20.5	65.1	100.0

NM Never-married; CM Currently married; WDS Widowed, Divorced or Separated.

Note: In Maharashtra, for a small percentage of heads of households, marital status was not known and, therefore, figures may not add up to 100.0.

Source: Special Tables compiled from the State samples of the 27th Round of the NSS.

TABLE 9. SIZE DISTRIBUTION OF HOUSEHOLDS, GUJARAT AND MAHARASHTRA, 1972-73

Households Size	*Rural Male Heads*	*Gujarat Female Heads*	*Urban Male Heads*	*Gujarat Female Heads*	*Rural Male Heads*	*Maharashtra Female Heads*	*Urban Male Heads*	*Mahorashtra Female Heads*
1	2.4	36.6	4.6	31.1	2.5	33.0	13.8	32.3
2	6.2	18.3	7.9	12.9	7.7	17.0	6.9	13.9
3	8.8	14.4	8.8	16.8	10.3	15.7	9.5	10.8
4	12.5	11.0	14.8	10.3	15.8	13.5	12.2	14.3
5	14.5	7.2	16.7	8.4	16.4	9.4	14.6	11.2
6	15.4	7.1	15.1	10.0	15.8	6.1	13,9	5.7
7	13.5	3.2	12.6	4.9	12.5	3.2	11.3	5.6
8	10.3	2.1	8.4	3.9	7.5	1.0	7.4	2.7
9	7.0	—	4.8	1.8	4.5	0.6	4.3	1,1
10+	9.4	—	6.3	1.7	7.2	0.5	6.7	2.4
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average Size	5.98	2.78	5.47	3.43	5.56	2.93	5.12	3.37
Excluding single member households	6.11	3.80	5.68	4.52	5.68	3.88	5.78	4.50

Source: Special Tables compiled from the State Samples of the 27th Round of the NSS.

might actually be linked to other households by such kinship ties which may even lead them to pool their income and/or other resources. One does not, therefore, know the extent to which their enumeration as separate households is a result of the survey constraints.

Turning finally to the level of living, Table 10 shows that households with female heads had so significantly lower monthly total expenditures than those with male heads; but the differences in household size largely offset the differences in total expenditure. As a result, the per capita expenditure of households with female heads was actually 7.3 per cent above that of households with male heads in rural Gujarat and only about 1.6 per cent below the latter in urban Maharashtra. In rural Maharashtra and urban Gujarat, however, the per capita expenditure of households with female heads was 9 to 12 per cent lower than that of households with male heads.

Table 11 shows the proportion of females among heads of households in different deciles ranked in ascending order of (*a*) per capita and (*b*) total expenditure. When households are ranked according to their per capita expenditure, one does not observe any marked over-representation of female heads of households in the bottom deciles. However, if the ranking is in terms of total households expenditure, the over-representation of females in bottom deciles is quite striking. An important explanation for these divergent results is the smaller average size of households with female heads. In our opinion the total household expenditure is a better indicator of the level of living compared to the per capita expenditure, because household implies certain basic establishment costs, formation of assets, etc., some of which are more or less independent of the size of the household. Table 11 clearly indicates that female-headed households tend to be concentrated in the lower expenditure groups, if we accept total household expenditure as a measurement of general well-being of the households.

A Multivariate Analysis of the per Capita Expenditure of Households with Female Heads

In the discussion so far, we have considered one or two characteristics of female-headed households. One might be able to learn more from a multivariate analysis that considers the

Table 10. Monthly Household and Per Capita Expenditure According to the Sex of the Household Heads, Gujarat and Maharashtra, 1972-73

Characteristics	*Gujarat*		*Maharashtra*	
	Rural	*Urban*	*Rural*	*Urban*
Characteristics				
(A) Percentage of households with female heads 1972-73	5.6	8.1	10.4	8.0
1971 Census	8.1	9.6	11.2	8.5
(*B*) Monthly household expenditure (Rs)	293.4	327.3	218.1	324.5
(*i*) Households with male heads	302.0	339.4	230.7	333.8
(*ii*) Households with female heads	150.7	189.3	109.8	217.8
(*iii*) Relative level, i.e., (*ii*) as % of (*i*)	49.9	55.8	47.6	65.3
(*C*) Average household size	5.8	5.3	5.3	5,0
(*i*) Households with male heads	6.0	5.5	5.6	5.0
(ii) Households with female heads	2.8	3.5	2.9	3.4
(*iii*) Relative level, i.e., (*ii*) as % of (*i*)	46.4	63.3	52.3	66.3
(*D*) Monthly per capita expenditure (Rs)	50.4	61.3	41.0	65.6
(*i*) Households with male heads	50.3	61.7	41 2	65.7
(*ii*) Households with female heads	54.0	54.4	37.5	64.6
(*iii*) Relative level, i.e., (*ii*) as % of (*i*)	107.3	88.2	90 9	98.4
(*E*) Number of sumple households	5,560	3,545	5,314	11,103
(*i*) Households with male heads	5,217	3,277	4,759	10,287
(ii) Households with female heads	343	268	555	816

Note: Figures have been rounded.

Table 11. Percentage of Females among Household Heads in Different Deciles with Alternative Ranking Criteria

Deccile of Households	*Households Ranked According to Their Per Capita Expenditure (PCE)*				*Households Ranked According to Their Total Expenditure (THE)*			
	Gujarat		*Maharashtra*		*Gujarat*		*Maharashtra*	
	Rural	*Urban*	*Rural*	*Urban*	*Rural*	*Urban*	*Rural*	*Urban*
	(*1972-73*)		(*1972-73*)		(*1972-73*)		(*1972-73*)	
1	4.8	10.6	10.2	10.4	27.3	37.0	46.3	22.5
2	4.5	9.2	13.6	9.4	8.2	11.8	17 2	12.3
3	3.5	7.7	10.5	9.0	5.0	7.2	10.9	9.6
4	4.7	9.3	9.0	5.9	4.8	4.0	8.4	9.1
5	6.0	6.3	9.0	5.6	5.3	5.2	6.2	5.3
6	5.3	5.5	11.5	7.0	1.7	4.3	4.1	5.3
7	5.5	8.2	9.2	7.0	1.4	3.4	3.8	4.2
8	5.9	9.5	11.6	6.9	1.5	2.2	3.2	5.0
9	6.7	8.0	10.3	7.8	0.6	4.4	2.6	2.8
10	9.5	6.3	9.1	10.7	0.6	1.9	1.5	3.8
All	5.6	8.1	10.4	8.0	5.6	8.1	10.4	8.0

Note: All deciles are decides of households and not of population.

characteristics of each individual household. For this purpose, we have attempted multiple classification analysis (MCA), which shows the relative importance of different variables for explaining the variance in per capita household expenditure.

One major advantage of MCA[4] is the facility of considering nominal variables which have several categories, that cannot be quantified. Of course, our analysis is limited by the fact that the number of sample households with female heads was relatively small. Also, our determination of appropriate categories for continuous variables was guided by the total sample rather than the sample of female-headed households only. Moreover in urban areas, female heads with economic characteristics such as usual activity, occupation and industry form a small proportion of the total and, therefore, our MCA

[4]The MCA assumes an additive model and the programme is "normally insensitive to interaction effects", unless the correlation between two or more predictors is extremely high. A key feature of the MCA technique is its ability to show the effect of each explanatory variable on the dependent variable both before and after the effects of all other explanatory variables are taken into account. (The variables are measured as sets of classes or categories.) In the case of correlated predictors, one could observe either an "overlap effect" (e.g., when the relationship between the two predictors is positive and they are both positively related to the dependent variable) or a "suppressor effect" (e.g., when the predictors are negatively related to each other and positively related to the dependent variable). In the former case, two variables considered together will explain less than the sum of the two, each considered separately whereas in the latter case, the variables together would explain more or the variation in the dependent variable than the sum of the two considered separately.

The rank order of the data coefficients, estimated for each predictor variable, indicates the *relative* importance of the various predictors in their explanation of the dependent variable if all other predictors were "held constant".

The MCA technique requires portioning of even continuous variables such as the dependency ratios, participation rates, and incidence of unemployment in categories. We have attempted to demarcate the groups in a manner that would minimize the problem of (*a*) too few sample households in a category and (*b*) too unequal a distribution of sample households. Because of the bunching of households around certain values of these continuous variables, the latter problem is very difficult to avoid. See: Frank M. Andrews, et al., *Multiple Classfication Analysis*, Second Edition (Ann Arber: Institute for Social Research, 1973).

has been limited to rural households with female heads.

MCA Variables

The variables taken into account in the MCA results discussed here can be grouped into (*i*) stratification categories (*ii*) characteristics of the household as a whole and (*iii*) charateristics of the head of the household. Some of the characteristics of the household were derived by an aggregation of the characteristics of individuals. The variables deserve a brief discussion.

Stratification Variables

(*a*) *Region.* Our data take account of the five regions of Gujarat and six regions in Maharashtra as demarcated by the NSS.

(*b*) *Sub-stratum.* In the 27th Round the means of livelihood or the major source of income of the household was used as a stratification variable during houselisting. The data on means of livelihood are not based on detailed questions about income from different sources and should, therefore, be viewed only as approximate. Nevertheless, three rural groups or substrata are distinguished:

(*i*) those for whom self-employment in non-agricultural activity was the major source of income,

(*ii*) rural labour households or those for whom wage or salaried employment was the major source of income; and

(*iii*) others (mainly cultivators).

Households Characteristics

Characteristics of the household considered in our analysis were as follows:

(*a*) *Household size* (with households having 11 or more members grouped into one category).

(*b*) *Child-dependency ratio* (i.e., the ratio of persons aged 0-14 to persons in the working of 15-59), with households for whom the ratio could not be defined (because of the absence of a member in the working ages) grouped together into a separate category.

(*c*) *Aged-dependency ratio*, (i.e., the ratio of persons aged 60 and over to those in working ages). A large proportion of

sample households did not have any elderly members and they were grouped into a separate category. Likewise, households for whom the aged-dependency ratio could not be defined were grouped into a separate category.

(*d*) *Labour force participation rate* for persons aged 10 and over (in terms of person days). For each household, an attempt was made to estimate the labour force participation rate to take account of the fact that some persons (particularly females) in the working ages do not actually participate in economic activity. The rate was estimated from the time disposition data for each day of the reference week or the week preceding the day of interview because we also wanted to consider the corresponding estimate of the incidence of unemployment in each household. The variables ranged between 0 and 1 but could not be defiined for three households because of the absence of necessary data.

(*e*) *Incidence of unemployment.* For each household, incidence of unemployment was estimated to take account of the fact that the labour force includes the unemployed and if a household suffers from a high incidence of unemployment, its high labour force participation rate would not contribute to a higher level of per capita income or expenditure. The variable ranges between 1 and 1, with a large proportion of households reporting no unemployment. The variable cannot be defined for households for whom the labour force participation rate cannot be estimated and for households having no member in the labour force (i.e. labour force participation rate equals to zero).

(*f*) *Per capita land.* The last household level variable was per capita land possessed by a household, estimated as owned land plus leased-in land minus leased-out land, i.e., an approximation to household operational holding. It seems that land put to non-agricultural use might also have been included in land possessed but given the importance of land as an asset of rural households, it was considered useful to include it among the explanatory variables.

Characteristics of the Head of the Household

Characteristics of the head of the household considered in the MCA include age (in five year age groups, with persons aged 60 and over included in one single category), educational attainment, usual activity (on approximation to the status of class of worker), usual occupation and usual industry.

In the course of analysis, the aged-dependency ratio variable seemed to give odd result for rural Maharashtra and was dropped from consideration. However, the total number of categories considered was 108 for rural Gujarat and 104 for rural Maharashtra, considerably smaller than the number of sample households, i.e., 341 and 551, respectively. Yet, the results suggest a case for regrouping of some categories to reduce their number.

Differences in the Characteristics of Male and Female Heads of Households

Before examining the MCA results summarized in Table 12, let us review the highlights of the data in terms of the difference between the characteristics of male and female heads of households.

Regional variations. In Gujarat, the proportion of female-headed households was relatively higher in the 'northern plains' than in other regions. In Maharashtra, the proportion of female-headed households was markedly higher in Konkan, which has a tradition of sex-selective out-migration (much of it to Bombay), and to a lesser extent in Poona division. The contribution of migration of males to an increase in the proportion of female-headed households can probably be identified through a district-level study.

Means of livelihood. The substratum in rural areas was identified on the basis of the reported means of livelihood. The distribution of male and female heads according to their means of livelihood shows larger differences in rural Gujarat than in rural Maharashtra. In both, the proportion of female-headed households reporting self-employment in non-agricultural activities was lower than that of male-headed households. In rural Gujarat, however, rural labour was a much more frequent means of livelihood for female-headed households than for male-headed households. One wonders whether outmigration of male members of rural labour households explains this feature or whether the limited assets of female-headed households force them to work as hired labourers. In view of the 1961 Census data on the proportion of female-headed households according

to size of cultivated holding, the latter explanation appears more likely. However, in rural Maharashtra, rural labour is only slightly more important for male-headed households than for female-headed households.

Dependency ratios. The size distribution of households with male and female heads has already been discussed earlier. But as a correlate of size as well as the age composition of female-headed households, a significant proportion of them included no child and another 6 to 7 per cent of them did not include any persons in the working ages 15-59 (so that the dependency ratio could not be estimated for them).

Interestingly, the proportion of households without any member aged 60 or above was also higher when the head was a female than when a male was the head of the household. This was particularly so in rural Maharashtra, probably because male out-migration was an important factor contributing to the female headship of households there.

Labour force participation. In rural Gujarat as well as Maharashtra, the proportion of female-headed households reporting no participation whatsoever as well as full participation in the labour force during the reference week was significantly higher than among households with male heads. This is not really surprising because of (*i*) the high proportion of the elderly and of the single-member households among those with female heads and also (*ii*) the high proportion of rural labour households among female-headed households in rural Gujarat. (Quite probably, the participation rates based on usual status would also show a similar pattern.)

Incidence of unemployment. For households reporting no participation in the labour force, there was no question of any unemployment. This fact is reflected in the high proportion of female-headed households for whom the unemployment variable could not be defined. However, even when allowance is made for this factor, the proportion of female-headed households reporting unemployment during the reference week was clearly higher than the corresponding figure for male-headed households. The proportion of those unable to find work on any day when they had sought or were available for it was also clearly higher among female-headed households.

Per capita land. As also suggested by the 1961 Census data examined above, the proportion of female-headed households with no land or nominal amount of per capita land was markedly higher than the corresponding figure for male-headed households.

Age and education. There was high illiteracy rate and the low level of educational attainment among the literate female-heads of households compared to that reported for the male-heads. This clearly reflects the handicap that women heads experience in terms of human capital although the age distribution of female-heads of households is likely to explain some of this differential.[5]

Economic activities. The high proportion of casual labour and economically not active (or outside the labour force) among female heads of households is consistent with other characteristics reviewed above. In rural Gujarat, these differences are large enough to depress the proportions of female-heads of households in all other usual activity categories; but the category of self-employed farm workers shows the largest absolute difference.[6]

The MCA Results

Table 12 shows the MCA results in terms of the variance and per capita expenditure explained by a variable without and with adjustment for other variables. These results are provisional, partly because of the inconsistency observed with respect to the age distribution of heads of households, noted above. Further, the interaction effects are strong, with a high degree of overlap between the contribution of several variables to the overall variance in per capita expenditure. Besides, the differences in the values of several coefficients are so small that the ranks shown in Table 12 cannot be taken too seriously. A regrouping of the catogeries is also necessary to evaluate the stability of the results presented here.

[5]For reasons yet to be identified, the age distribution of female heads of households used here is not consistent with that shown in Table 8. It illustrates some of the hazards of empirical research.

[6] The minor differences in the number and proportion of household heads outside the labour force acoerding to the usual activity, industry, and occupation are presumed to be due to punching/coding errors.

TABLE 12. RESULTS OF MULTIPLE CLASSIFICATION ANALYSIS OF MONTHLY PER CAPITA EXPENDITURE (MPCE) OF HOUSEHOLDS WITH FEMALE-HEADS IN RURAL AREAS OF GUJARAT AND MAHARASHTRA, 1972-73

Variables	*Categories (Number)*	*Rural Gujarat* — *Variance in MPCE Explained by the Variable*			*Rural Maharashtra* — *Variance in MPCE Explained by the Variable*		
		Without adjustment for other factors	*With adjustment for other factors*	*Rank*	*Without adjustment for other factors*	*With adjustment for other factors*	*Rank*
A. Stratification categories							
1. Region	(5/6)	.013°	.016°	13	.021+	.012°	9
2. Substration	(3)	.059	.021+	12	.016+	.027	8
B. Household Characteristics							
1. Household/size	(11)	.139	.121	3	.122	.083	5
2. Child dependency ratio	(9)	.233	.294	1	.151	.062	7
3. Aged dependency ratio	(5)	.014°	.068	6	—	—	—
4. Labour force participation Rate (Person days)	(11)	.075	.066	7	.058	.011°	10
5. Incidence of unemployment (Person days)	(5)	.069	.062	8	.016++	0.10°	11
6. Per capita land	(15)	.140	.137	2	.120	.067	6
C. Characteristics of the Household Head							
1. Age	(10)	.062+	.079	4	.046	.009°	12
2. Educational Attainment	(5)	.138	.076	5	.183	.136	3
3. Usual Activity	(7)	.056	.058	10	.095	.133	4
4. Usual Occupation	(10)	.051+	.044++	11	.070	.182	1
5. Usual Industry	(12)	.042	.059+	9	.172	.157	2
R^2		.397			.398		
Interaction Effect		—.704			—.421		
Sample Size		341			551		
Number of Variables		13			12		
Number of Categories		108			104		

+Not significant at the one per cent level
++Not significant at the five per cent level
°Not significant at the ten per cent level
All other variables are significant at the one per cent level.

Note: Figures in parenthesis after each variable indicate the number of categories.

The three most important explanatory variables for rural Gujarat are the household level characteristics of child-dependency ratio of the household and per capita land and household size; age and educational attainment of the head are the next in importance, with almost identical explanatory power. In rural Maharashtra, however, the four individual characteristics of household heads, namely, usual occupation, usual industry, educational attainment and usual activity are important with the latter two showing almost identical coefficients. The household level variables of size and per capita land are the next in importance as explanatory variables.

It is difficult to explain why the labour force participation rate and the incidence of unemployment turn out to be more important explanatory variables in rural Gujarat than in rural Maharashtra. One should probably undertake separate analysis for different regions and/or substrata to identify the factors at work, but then the sample size turns out to be a serious constraint.

Conclusion

To conclude this lengthy discussion, we must record here our sense of concern both about the existing data as well as about the inadequacy of micro-studies related to actual decision making in the families and the distribution of authority within the households, which should be the deciding factors in the determination of the heads of the households.

We have pointed out the limitations of the census and the National Sample Survey data at the outset and recognize that such large data gathering activities cannot apply elaborate tests and checks to decide the heads of the households. Nor can they easily collect data on the processes of household formation and various related as well as relevant issues. The community of social scientists has to take greater interest and undertake research studies to understand the processes of household formation which are related to life cycles of individuals. Also, equally important are the studies of social customs and traditions, demographic factors as well as economic forces at work in the community including the difficulties of acquiring house sites and dwelling units within the limited resources that the individuals can command. These issues are relevant to the incidence as well as the characteristics of male and female heads of households.

On the basis of the limited data available, we observed that there are distinct regional variations in the incidence of female-headed households, although the prevalent pattern in our society, as in most societies, is the male headship. In the Indian context, there appears a high correlation between the status of women and the proportion of households headed by women across region. There is need for in-depth research to study the distinct regional patterns as well as for its implications for the status of women in these societies.

While studying the characteristics of female-headed households, it was observed that they were small in size. However, to a great extent this was because of the preponderance of single-member households among those headed by women. The problems of single women maintaining households remain unexplored. Household size of other female-headed households is small essentially to the extent that the male member, who would otherwise be the head, is absent. The burden of maintaining a family for a woman head is not any less; it is, in fact, even greater because the women would have to combine household work and earning a livelihood when her resource base is small. Women heads have little or no literacy attainment, possess little or no land, and the households headed by them have significantly lower monthly expenditure than those with male heads.

Finally, there is no doubt that the Indian women face several handicaps relative to men not only in developing their potential but also with respect to physical survival. However, we must strive to understand whether and how far their handicaps can be identified through a study of their incomes and/or expenditure or activity pattern. The preponderance of unpaid family work by women and the jointness of household level production and consumption pose serious difficulties in a precise mapping of the true status of women. Also while considering the appropriate remedial policies to correct the intrahousehold inequalities, we must evaluate their feasibility in the overall framework of the limits of public policy of which one finds painful reminders in everyday life.

PART TWO

PUBLIC EFFORTS AND THE HOUSEHOLD

5

Women's Work and Employment belonging to Special Categories (SC and ST)*

KRISHNA DUTT

India is one of the few countries in the world which has made conscious efforts to protect the rights of the indigenous or tribal and socially depressed groups like Harijans through Constitutional provisions, and to integrate them into the national stream through development planning. A number of constitutional provisions exist which enjoins the State to protect and develop the lot of the weaker sections, especially the scheduled castes and scheduled tribes. A number of laws have been enacted to achieve these objectives and investments made in the successive Five-Year Plans and outside the Plans for their development. The weaker groups, i.e., scheduled castes and scheduled tribes form one-fifth of the total population. That this population is economically depressed is evident from the 32nd round of NSSO data which indicate that 45.7 per cent of the total population is below the poverty line while amongst these categories of population almost 60 per cent are scheduled castes and 70 per cent are scheduled tribes.[1] The magnitude of the problem of bringing this population of scheduled castes and scheduled tribes, who are 10 crores and 5 crores respectively as per the

*SC & ST stand for Scheduled Caste and Scheduled Tribes.

[1]These figures are based on the provisional tabulation of the 32nd round of the National Sample Survey Organisation (NSSO) on household consumer expenditure (July 1977 to June 1978).

1981 Census, above the poverty-line is a colossal task. Of the total scheduled castes and scheduled tribe population, women comprise 2.84 and 2.56 crores respectively. Both at the national and state levels Plan programmes exist for the economic and human resource development of scheduled castes and scheduled tribes. But women amongst them have not received any special mention as to their needs, their problems and how to relieve them of their hardship.

It has been taken for granted that whatever economic or welfare measures have been formulated for scheduled castes and tribes, they will automatically reach their women also. This unfortunately does not appear to have happened. In this paper, the problems faced by these women, the measures adequate or otherwise adopted by the Government and how best to solve their problems, will be discussed.

Indian women and their status in socio-economic sphere have been dealt by a number of scholars but very few studies are available which have analysed the status of scheduled caste and tribal women in any depth. These women are victims of Hindu caste structure on the one hand, and of abject poverty on the other. Except in rare cases, both these factors are hurdles to their socio-economic development. The problems of scheduled caste/tribes have been studied both by official agencies and academic circles. However, the problems peculiar to the women amongst them have not received sufficient official or academic attention.

It widely believed amongst the middle class—particularly among men—that women of the lower castes/tribes do not need any liberation since they are not too hamstrung with middle class morality. There is no study done yet to test this premise. However, believing this is convenient for the upper caste men who can exploit the scheduled castes and scheduled tribe women with impunity. For example Jana Everelt and Mira Savara while investigating "Bank Loans to the Poor in Bombay: Do Women Benefit?" observed that most of the women borrowers used at least some of the bank loan to repay moneylenders but interest rates prevented them from ever getting out of debt, as payment only covered interest and never reduced the principal, thus credit from a merchant or piling up debts with a moneylender was the expectation of sexual favours.

The scheduled caste women are considered so impure that they are not allowed to draw water from the same well or even hand-pumps, but the phenomenon of untouchability does not protect these women from being sexually used by upper caste men. The "Dais" (midwives) who generally belong to the scheduled caste may assist Brahmin women during delivery but once the babies are delivered, they are not to be allowed to hold the baby. Scheduled caste women are seldom treated any better by their own men. They are constantly beaten by their husbands who invariably direct their own frustrations towards their wives both in sober and drunken state. Even otherwise scheduled caste women can seldom keep their earnings to themselves, they must surrender their paltry earnings to men or else get thrashed by their husbands/brothers/sons.

For the scheduled caste women the drudgery begins even before they have even lost their milk teeth. It is they who are entrusted to look after their younger siblings, start working as child workers when they are 7 to 8 years old and continue to do so in addition to their burden of marriage, child birth, child rearing, cooking, cleaning and other chores for the family. The scheduled caste women are the victims of the practice of untouchability and all types of indignity attached to it. It is these women, who have the degrading job of cleaning dry latrines and carrying night-soil as head-loads. This practice still continues in many parts of the country. In any land dispute in the rural areas, anti-Harijan feelings often result in scheduled caste women being raped or burnt alive as and when the upper caste men want. The state of UP recorded 122 cases of rape of scheduled caste women amounting to 29 per cent of all such cases in that year. U.P., Madhya Pradesh and Bihar together accounted for over 70 per cent of such cases in the year 1979.[2]

In some tribal societies, however, tribal women have a slightly better status than scheduled castes since they have at least the right to select their husbands as well as divorce them and in matriarchal societies it is the women who are owners of property. However, tribal customs or the way tribal women dress, has given rise to the mythology that these women are of easy

[2]Annual Report on the Protection of Civil Rights Act, 1955, for the years 1981-82, Ministry of Home Affairs.

virtue and can be treated as such. It seldom occurs to the non-tribal men that often the tribal women who willingly or unwillingly co-habit with non-tribals, pay the price in their own society by total ostracion or are beaten by the villagers. The tribal women are very often victims of their own innocence and lack of inhibitions, due to which they are exploited by non-tribal men and often are sold into prostitution in urban areas.

In many a tribal society in India women are still purchased and sold, e.g., among the Somangas where polygamy is a status symbol and more the number of wives the man purchases, the higher is his prestige. This also happens in some of the Naga tribes. Among the Oraons or Feangs the women have inferior position and marriage is by parental choice. These women do not have the right to inherit property as stated by R. Dhan. In the matriarchal tribal societies where women's position has been higher the impact of modernisation has started to erode this status.[3]

Among such polyandrous tribe as Todas the position of women happens to be so low that when a women meets a Toda male on her way, irrespective of age she has to bend down to him and take his foot in her hand and touch it to her head. Although a Toda woman marries the elder brother in a simple ceremony, all his brothers and cousins as well, become her husbands. Not long ago, the Jaunsaris of Uttarakhand also practised polyandrous type of marriage. All those examples go to show that notwithstanding the tribal customs the position of women is low and they are not gaining in status by adopting non-tribal customs.

One of the problems of improving the lot of these women is that they are practically unaware of the programmes which exist to help them. Their understanding of the changes that are going around them are at best rudimentary. Being illiterate and steeped in tradition they seldom want to or dare make a move to change their own conditions. Even if these women have access to cinemas or TVs in the urban areas such media do not motivate in changing their views. They will need different techniques for creating an awareness in them of their own

[3]B. K. Roy Burman, *Changes in the Institution of Family Among the Tribes of North East India—Problems of Codification of Customary Laws.*

plight and made to understand that there are ways of improving their lot.

Coming to work and employment data of these women apart from the total female population figures of the SC/ST, occupational break-up for working population and literacy rates, there is not much information on other aspects like their per capita income, ownership of land and other assets, their contribution to the family income, etc. Whatever data is available in the Census Reports are note helpful in gauging the economic status of these women in their own society as well as in the general population.

The Census of 1981 shows that of broad category of occupation of main workers is the following:

TABLE 1

	General		*SC*		*ST*	
	M	*F*	*M*	*F*	*M*	*F*
Cultivators	43.77	33.03	32.17	12.12	59.60	43.36
Agri. Labourers	19.77	45.57	41.75	68.00	26.07	46.16
Other Workers	36.46	21.40	26.13	15.88	14.33	9.98

Note: Figures in percentage.

Among the cultivators a highp roportion of women are not counted who contribute to production but are recorded as housewives. The proportion of SC and ST women among the agricultural labourers category, is much higher than the general population and higher also to male agricultural labourers amongst SC and ST males.

The 1981 Census (Primary Census SC/ST Part II B(*ii*) and (*iii*)) figures for cultivators and agricultural labourers is an indication of the economic status of women among SC and ST. The percentage for tribal women is slightly better, i.e., 43.86 per cent cultivators and 46 per cent agricultural labourers as compared to 16.1 per cent and 68 per cent for scheduled castes, in the total working population of these categories. There appears to be slight improvement in these figures from the 1971 Census which were for ST women 43 per cent cultivators and 49 per cent agricultural labourers. A similar improvement is also noticed for

SC women as the 1971 figures were 14 per cent cultivators and 72 per cent agricultural labourers. Explanation for the change in percentage in 1981 Census may be due either because women were withdrawn from agricultural labour or else they became beneficiaries of surplus land. However, this needs investigation. In other occupations other than agriculture-based, i.e., in household industry, manufacturing, processing, etc., while percentage of SC males and females are more or less 3.20 per cent and 3.63 percent. Among tribals the per centages show 1.26 per cent and 1.75 per cent.

These figures are self-explanatory. All the back-breaking work in agriculture like weeding, hoeing, transplanting, harvesting, winnowing, etc., are done by women while men engaged in preparing the land and working of systems to irrigate it. In fact the amount of labour which these women put in, in agriculture is as much if not more than the men. This, however, does not entitle them for equal wages whether in cash or in kind. On top of this, the system of providing free domestic labour to landlords by these women is seldom counted in the wages. Therefore, their share of input in agricultural field cannot be computed correctly.

A study by K. Chakravarty and G.C. Tiwari in Bihar, West Bengal and Tamil Nadu villages show that, though women agricultural labourers contributed substantially to the family income, they exercised no control over their earnings. Also, the extent of unpaid female employment was substantial and in this group SC/ST and OBCs were in majority. Further, without exception, women earned at least 25 to 50 paise less and while men had on an average 120 days of employment women had 80 days.

Various studies show that women, many of whom are SC/ST perform some of the most vital and arduous jobs in rice cultivation under difficult climatic conditions. Further, landlords discriminate in payments and men are often paid more than women for doing exactly the same kinds of tasks.

Apart from agricultural labour, the next important occupation is animal husbandry. The participation of both men and women belonging to Scheduled Castes and Tribes is almost equal percentagewise as per the 1971 Census. The 1981 Census does not separately enumerate this category. However, what such figures do not show are actual quantum of work put in by men

and women. In tending cattle for example it is the women who go forraging for grass, caring for animals, collection of cowdung, preparation of cowdung cakes for fuel, milking animals, carrying milk to the market, etc. It is not that men are not engaged in these activities but it is often that women are required to do this job while men go to the fields for ploughing, etc. Similarly, in poultry-keeping women take a more active part. However, it is unlikely that income accruing from such activity is available to the women at their disposal unless they happen to be widows and heading the families. In case of household industries such as basket-making and mat-weaving, making leaf-plates (*pattals*) or weaving cloth, as the tribals of North-east do, women take it up as a subsidiary or primary occupation but sell their produce often at national price to the middlemen and the income they get goes for family maintenance.

In the tribal areas it is mostly the women who go to the forests for collection of minor forest produce and carry them to the "Hats" for selling. The Report on Tribal Labour (1969) which specially studied Bihar tribals states: "Whereas proportion of female workers per 1000 of total population is only 271 in case of total population in Bihar, that in case of scheduled tribes is 560. The tribal women, it appears, are not only free from the various inhibitions regarding the employment of female workers but find it necessary to work on account of acute poverty." The same Report states that, "tribal women were employed as forest labour in both exploitation of forest wealth and afforestation operations." Such forest labour is often migratory and the women form 30 per cent of such labour. Their wages ranged from Rs 1.50 (for unskilled work) to Rs 4 (for skilled work) per head per day. They got cash wages and often were allowed to collect firewood, fruits and flowers, tendu leaves, tubers, honey, gum, herbs, etc. Although types of exploitation have not been mentioned, the Report had recomended that "steps should be taken for the protection of female forest labour. Only women who are accompanied by their male husbands or parents should be given work." This clearly implies sexual harassment of these women by contractors and forest guards.

In the tobacco industry women are as high as 33·89 per cent and mostly these women are employed in bidi rolling (Dan-

dekar). Bidi making industry employs a large number of women. The work may involve bidi rolling at home or tobacco pounding in large godowns. A large number of SC/ST women get employment in this industry but they are either cheated on rolled bundles of bidis or if working in unhealthy conditions in godowns have to reckon with ill health due to tobacco dust and insecticide as well as sexual harassment by the boss.

In the organised industries although women participation was 9.43 per cent separate figures for SC/STs are not available. In mines and plantations, however, one may assume their considerable participation as these are mostly manual work and rural based.

For tea plantations in the north and north-east regions, labour was recruited from the tribal population of Bihar, Madhya Pradesh, Orissa and West Bengal. These tribals took their families and in due course women came to be employed in the tea estates because of their skilful fingers in plucking leaves. In 1956 employment of women workers represented 43.33 per cent of total permanent labour force according to an estimate of Indian Tea Association among its membership. According to the Labour Bureau's Report 1974-75 on Plantations, industries in its first survey, the women labour in tea plantation were 51.3 per cent which came down to 49.9 per cent in the second survey and later it was 49.1 per cent. Coffee and rubber plantations also employ considerable women labour although it is not known how many of these are tribal or scheeuled caste women.

Survey results of Labour Bureau show that average minimum wage rates of women were less than men in coffee and tea plantations as per Table 2:

TABLE 2. AVERAGE MINIMUM WAGE RATIO

	Men		*Women*	
	Maximum	*Minimum*	*Maximum*	*Minimum*
Coffee	4.29	4.20	3.57	3.53
Tea	6.33	3.14	7.14	2.85

Though the average minimum daily wage rate of women in plantations was lower than male, average maximum wage rate for them was higher than men at least in the tea industry.

According to Dandekar's study an integration of women in economic development (Economic and Political Weekly, Vol. XVII, No. 44, 30 Oct. 1982), women's participation in industry and quarrying other than coal and petroleum is 27.07 per cent and the high ratio of women is mainly on account of stone quarrying. One may infer that out of this the percentage SC/ST women would be again very high. One-fifth of the labour force in the coal-mines comprise women. Towards the end of nineteenth century tribal workers found employment in coal mines and their women were employed for head-load work. In early days before women were prohibited to work underground, women worked with their men. 1919, 28 per cent of the labour force was of women. However by 1939 they were allowed to work on surface only.

In the jute industry, the labour force is drawn from the landless, agriculturists from West Bengal, Uttar Pradesh, Madhya Pradesh, Orissa, Andhra Pradesh and Bihar. As majority of landless agriculturists are from the scheduled castes and scheduled tribes, one may presume workers in the jute industry also are from amongst these categories. They work in batching, preparing warp-winding and hand or sack-sawing departments all back-breaking manual work.

Among the unorganised sectors, construction industry absorbs a significant number of women. The percentage of SC/ST women (1971 Census) to the total number of female workers in this sector. In the 1981 Census separate figures for this category of workers has not been enumerated. The 1971 figures are:

General Population		*Scheduled Castes*		*Scheduled Tribes*	
Men	Women	Men	Women	Men	Women
3.57%	2.88%	5.84%	4.32%	1.92%	5.06%

Women in this industry are employed in specific jobs only and since wages are lower for them and women are generally submissive, employers are willing to employ them. Though the industry does not guarantee permanent work, thousands of women have contributed towards major projects like dams, buildings, roads and other construction work. The labour for

this industry is generally migratory, although casual local labour is also used. The contract labour is attached to the contractor and move as per requirement while casuals are required locally and their jobs terminated with the completion of a project. A study done on women construction workers by K. Murli Manohar, V. Shobha and B. Janardhan Rao in Warangal, showed that, among women labour in construction industry only 2 per cent were from the upper caste. Of the rest, 46 per cent were scheduled castes, 21 per cent tribals and 31 per cent from backward castes. Their wages are lower than men and hardly any contractor observes the labour laws to provide such amenities as drinking water, creches, medical aid, etc., for these women.

Modern industries have lesser proportion of women workers. Food manufacturer has 19.77 per cent and textile 20.45 per cent. In pharmaceutical, telephone and other industries which employ a large number of women workers, it is not known if SC/ST women are employed at all. Even if these industries do employ these women their number is likely to be negligible since most of the SC/ST women are in the rural area and also because they lack minimum educational qualifications to get employment. There is no data at all as to the number of scheduled caste/tribal women who are working in factories in various industries in urban areas.

There are two essential health service workers amongst the scheduled castes—the sweepers or scavengers and the traditional "dais". The plight of the Harijan scavenger women who belong to the lowest caste amongst the untouchable groups, is far worse than those who are among the landless agricultural labour or construction workers. The Report of the Working Group on the Development of Scheduled Castes 1980-85[4] states:

> In the urban areas enlightenment and education has nearly eliminated the overt forms of social discrimination. Yet in the cities the number of those engaged in the unclean occupations like scavenging to dry latrines has substantially increased. Most of those actually engaged in this work are

[4]Published by Ministry of Home Affairs, 1984, Govt of India.

> women and children adding another dimension to this picture of human misery.

The services of scavengers and sweepers are mostly required in urban and semi-urban areas. The total population involved in scavenging is 6.5 lakhs of which women form a little less than half. As workers they are not separately enumerated but at a rough estimate there are 1.3 lakh sweepers and scavenging families. Among these families each member, both male and female is employed, from the age of 6 and above. However, there is a distinct division of labour under which men are usually employed by municipalities to clean streets and clear garbage dumps partly by mechanical means or in hand-pulled or animal drawn carriages; while women and children are actually engaged in cleaning dry latrines manually and carry human and kitchen refuse as head-loads. To their lot has fallen not only the most degarding of jobs but also the most unhygienic. These women apart from being engaged in this obnoxious occupation have repeated child-births which naturally take a tool of their health. But they, themselves, are averse to family planning because the larger the number of children the more the hands to add to the family income and also assist them in their work. Their men often drink and gamble away their wages and belabour their wives if sufficient food is not there for them at the end of the day. Women and children often make do with stale food given by the housewies they serve. In many parts of India it is their customary right or 'Jajmans' to clean certain number of houses and be given some leftover food.

Karlekar in her study of sweeper women of Delhi states: "In addition to cleaning the privies of high caste families the Bhangi women also cleaned the village drains and cess pools once or twice a week." Often, among families where women were permitted to go to the fields, they were nonetheless "glad to pay a couple of unleavened cakes weekly to spare themselves the need of getting their hands into the slime of the drain" in their homes. She also observed, "Rural-urban migration had started and a number of Balmikis were moving to the cities in search of jobs. In the 1971 Census there were 107,680 Balmikis in Delhi of whom 59,434 were men and 48,246 were women."

By 1930 the male sweepers movement out of the scavenging profession had started. "Some Bhangi men had become night watchmen and messengers for their jajmans. Others had left for the cities to work for Europeans while their wives, mothers and widowed sisters stay home to retain their jajmans. This trend has not been reserved. Women tend to remain scavengers while their menfolk move out into less defiling kinds of employment." Further "While male Balmikis still dominate the profession, the official felt that it was significant that an increasing number were being attracted to jobs in shops, commercial establishments and factories. This was rarely the case with women." These women were dissatisfied with their jobs, but none of them evinced much hope for a movement out of the caste-based occupation.

Modernising the sanitation system throughout India is still a couple of decades away. However, as cities and towns gradually convert dry latrines into water borne ones, these women will be directly affected. Although thanks to Hindus' sensitivity regarding untouchability, these women are still required to clean even flush toilets and carry out household refuse. However, with modernisation, their wages decrease if they are not thrown out of employment altogether without any alternative employment in sight. Malavika Karlekar has observed:

> Today, sweepers in northern India are substantially affected by the urban process. The majority of both men and women are employed in traditional jobs, though men are increasingly looking for opportunities away from the defiling caste occupation. The introduction of the flush system has made the job less time-consuming and unclean, yet the stigma of pollution due to the handling of waste matter remains.

The traditional 'Dais' or mid-wives often belong to the scheduled castes as stated earlier and attend to the actual delivery. This most essential of service is paid in cash or kind. In the urban areas the traditional 'Dais' have almost lost their vocation since deliveries take place in hospitals but in rural areas their services are still needed and there are efforts at giving them some training on hygiene, etc., and provide them with proper kits.

The other degrading and humiliating profession namely prostitution, engages large number of SC/ST women, who because of poverty are often sold to the white slave trade by their own families or enticed away by procedures. There is no study in this area of social problem as to what percentage of prostitutes are from the scheduled castes and scheduled tribes.

Coming to educational levels, available statistics on these women are as follows:

TABLE 3

	Scheduled Castes			*Scheduled Tribes*		
	Male	*Female*	*Total*	*Male*	*Female*	*Total*
Population '81 Census (in lakhs)	542	505	1047	260	256	516
Literacy rate '81	31.12	10.93	21.38	24.52	8.04	18.35
Census incl. 0-4 age group	(47.7)	(24.88)	(36.2)			
Enrolment ratio '80-'81 primary stage (classes I to V)	109.2 (99.0)	61.4 (66.2)	86.0 (83.1)	95.8	50.2	73.7

Note: Figures in brackets are general population rates.

The female literacy rate of scheduled castes/tribes continued to be miserably low as compared to the general female literacy rate which was 24.88 per cent in 1981. The scheduled caste female literacy rate was lowest in Bihar 2.51 per cent, followed by Rajasthan 2.69 per cent, U.P. 3.90 per cent and M.P. 6.87 per cent. Among the tribal women, the lowest literacy rates are for the states of Rajasthan 1.20 per cent, Andhra Pradesh 3.46 per cent, Madhya Pradesh 3.60 per cent, Orissa 4.76 per cent and West Bengal 5.01 per cent. In the north-eastern region, however, literacy rates of tribal women are as high as 55 per cent, among Mizo 42.9 per cent, Lakshadweep 32.9 per cent, Nagaland and Manipur 30 per cent and 28.9 per cent in Meghalaya. Andaman and Nicobar Islands show a female tribal literacy rate of 23 per cent where the most primitive tribes dwell. However, the figure perhaps refers to only Nicobarese tribe.

While in Assam, difference in scheduled caste and scheduled

tribe literacy rate is not much, Gujarat, Kerala, Himachal Pradesh and Goa show a very low literacy rate among scheduled tribe women as compared to the scheduled caste women. In Assam, the literacy rate for scheduled caste women is 15.74 per cent and scheduled tribe women 17.16 per cent. While in Gujarat female literacy rates are 14.95 per cent for scheduled castes and 6.15 per cent for scheduledtribes, in Arunachal Pradeshit is18.01 per cent for scheduled castes and 1.70 per cent for scheduled tribes. The figures for Haryana, Jammu & Kashmir, Punjab, Chandigarh on the one hand and Dadra and Nagar Haveli, Mizoram, Nagaland, on the other hand are not comparable since there are no scheduled tribes in the former groups of states and no scheduled castes in the latter two UTs and one state. On the enrolment ratio, enrolment of girls of scheduled castes/tribes in Classes I to V is much lower than the boys of these communities. While at the Middle School ratio plunges further down as compared to their male peers in these communities. At High School level scheduled caste girls enrolment is 1.4 per cent and at graduate level it is only 0.40 per cent. The percentage of tribal enrolment for girls at High School and Graduate level are 0.48 per cent and 0.13 per cent only. The wastage rates for girls of these communities has not been worked out. These figures are an eloquent indication of their educational status notwithstanding a handful of women politicians or a few women holding white coller jobs.

According to the Ministry of Education publication "Progress of Education of Scheduled Caste/Scheduled Tribe 1978-79", out of total of 138 lakh scheduled caste students senrolled in all educational institutes the scheduled caste girls were only 44 lakhs. Similarly among total scheduled tribe students enrolled in all educational institutes 51.25 lakhs, the tribal girls were 16 lakhs. Thus scheduled caste/scheduled tribe girls in the educational institutes were only 32 to 31 per cent respectively. In absolute figures a comparison in increase in enrolment from 1977-78 to 1978-79 show that while for scheduled caste/scheduled tribe boys there was an increase of 8 lakhs and 2 lakhs respectively, corresponding figures for girls was only 5 lakhs and 1 lakh respectively.

There are a number of plan schemes for educational development of scheduled caste and scheduled tribe women like, scholarships, stipends, uniform, books, stationery, hostel facilities, etc., but the major problem is that girls of these communities have often to terminate their education at lower primary or primary level, because they are required at home to assist their mothers in their chores, also because generally far less importance is given to the education of girls. Some states have started to provide cash compensation to parents to ensure that girls are sent to school.

The above indicates the type of work scheduled castes and tribal women are employed in, their economic, educational and social status. One would expect that all these factors would have been taken care of while framing the plan policy for the development of scheduled castes and scheduled tribes and exclusive programmes framed for their women. A scrutiny of the Five-Year Plans documents would show that except for a few welfare schemes for all women under Social Welfare Sector, there are no specific schemes which fulfil the economic necessities of women and nothing at all for these special category women. For the first time in the history of Indian planning a separate chapter on women has been included in the Sixth Plan document. This lays down certain policy guidelines for the development of women but does not mention specific programmes. The only programmes for women in general are; Integrated Child Development Scheme (ICDS), Functional Literacy for Adult Women, Condensed Courses for Adult Women, Socio-Economic Programmes, Hostels for Working Women, Creches for Children of Working Mothers and Social Defence Schemes. For the scheduled caste and scheduled tribe women there is one hostel scheme to encourage them to continue their education. The scheduled caste and scheduled tribe girls are given higher rates (an additional Rs 10 per scholarship) of post-matric scholarship as an incentive to continue their higher education.

Coming to Plan policies, the Plan framework document states, "Past experience has shown that by lumping the very poor along with the relatively better off sections of the communities in development projects, the percolation of benefit to the most deprived sections of the community is hampered." This observation is not only true of scheduled castes and tribes but more so of their women who are the most deprived section of the community.

To reach the poor directly through development plans, the single most important programme formulated in the Sixth Plan

period is the Integrated Rural Development Programme The laudable objective of this programme is to enable the poorest families to acquire productive assets, technology and skills as would make their economic activities viable, support for social services like health, education and housing, to link these with applied nutrition, compulsory education, adult education, family welfare, children and women's welfare, The household centered poverty—alleviation strategy will thus come to consist of steps not only for the economic emancipation of the family but also education of child health and welfare of the vulnerable members, adoption of small family worm, etc. There has been no assessment of the impact of these programmes on the condition of rural women. However, among these schemes there are none which exclusively cater to the specific needs of women of the scheduled castes and scheduled tribes.

Under the Special Sector in the Sixth Plan Document, Chapter 26 on the development of the backward classes (which include SC/ST and OBCs) delineates two specific recommendations among the objectives and strategy for the Sixth Plan for these people.

(*i*) The main thrust of the policy thus for development of SC/STs during the Sixth Plan is fourfold, namely, (*a*) integration of services at the delivery point to the beneficiary with a view to develop self-reliance in him, (*b*) development of services from the bottom-upwards instead to top-downwards, (*c*) development of skills of diversify the occupations, specially in the case of scheduled caste, and (*d*) introduction of latest technology based on local materials and local skills to reduce drudgery of workers and also to remove the social stigma attached to their present profession.

(*ii*) A creche, processing centre of kitchen run by women, health centre, adult education, health and nutrition, education, etc., would be integrtaed with these programmes. The community facilities and assets like the water supply sources, community centres, street-lighting, other M.N.P., etc., would preferably be located in the colonies inhabited by the scheduled castes and other backward classes. A study of Aanganwadis in the ICDS projects, which are modified version of the Balwadis, for pre-school education for the age-group of 3-6 years, located in the predominantly scheduled caste/scheduled tribe areas has shown benefits accruing to the children belonging to those communities. But, by and large, it has been observed that Balwadis seldom reach the most backward. The style and pattern of Balwadis may have to be changed to provide simple management through village women and attaching them, if possible, to the schools so that the girls who have to attend to their younger brothers and children could attend the school while looking after them in the creche-cum-balwadis attached to the school. In order to support a massive nutrition programme each family may be required to bring a handful of uncooked food for each child and some elderly women from the village may look after the provision of nutrition.

Although no specific programmes are envisaged for the women of scheduled castes and scheduled tribes but nevertheless the social services programmes and basic amenities to be provided are focused on these women. No definite assessment of the impact of these programmes on the women from the scheduled castes/tribes have been done so far, but taking only one item, namely accelerated rural drinking water supply, it can be categorically stated that many of Harijan bastis and tribal hamlets are still without potable drinking water supply within a reasonable distance. So far as Harijans are concerned, in spite of piped water supply in villages, because of the practice of untouchability they generally have no access to it and have to go far to fetch water or make do with whatever wells they have in their own bastis. The tribal hamlets most often do not qualify for the programme because density of their population, in their villages is less than the national norms.

It is usually as a group or as a family that development schemes are being formulated. Even under the Integrated Rural Development which is beneficiary-oriented programme, information is not available as to how many women of the scheduled caste and scheduled tribe got assistance. It is seldom that development programmes are formulated with any imagination and innovation for the scheduled caste/tribe women.

Since institutional finance has been given much emphasis for rural development programmes and programmes for urban poor, loans from banks are crucial for income generating viable schemes. A study by Everett and Svara showed that it was very difficult to determine conclusively whether bank loans lead to increased incomes among self-employed poor women, let alone to tell whether any increases are translated into improvements in women's and material welfare. A few Indian studies on this subject indicate that there are small increases in income, but most of the borrowers remain below the poverty line. They further found that the relationship between the banks and the borrowers from the weaker sections was usually indirect, arranged by an intermediary. This seemed to be the case more often for women than for men. Women more often turned to someone they knew and trusted, someone from their community who could help them get a loan.

The findings of the Programme Evaluation Organisation of the Planning Commission on Antyodaya programme[5] highlights how Plan programmes often do not reach women and the weakest among the population. An evaluation study was done of the Antyodaya Programme of 6 States, namely, Bihar, Himachal Pradesh, Manipur, Orissa, Rajasthan and U.P., consisting of 29 districts, 57 blocks, 137 villages and 674 selected beneficiaries. The study shows that out of the total number of beneficiaries of the most poor from the bottom rung, 45 per cent were scheduled castes, 15 per cent scheduled tribes and 40 per cent other poor families. However, distribution among the beneficiaries, sex-wise shows that against the total number of beneficiaries only 14 per cent were women and the rest men. Tables 1 and 2 illustrate the statewise figures.

Interestingly, in the States of U.P. and Bihar conservatism in the society is reflected in the number of female beneficiaries which were only 3 and 5 respectively out of 91 and 137 total beneficiaries. As a contrast, of 9 beneficiaries in Manipur, 6 were women and 3 men. However, the selection of beneficiaries in Manipur was done mostly for the age-group of 55 years and above and not capable of any economic activity, and handi-

[5]Evaluation Report on Antyodaya Programme (1971-81) by Plannin Commission, 1982.

TABLE 1

	Total No. of Families Selected for Investigation	*SC*	*ST*	*Others*
Bihar	91	35	11	45
Himachal Pradesh	112	64	4	44
Manipur	9	—	9	—
Orissa	107	31	45	31
Rajasthan	218	101	31	86
U.P.	137	71	6	60
	674	302 (45%)	106 (15%)	266 (40%)

TABLE 2

	Total No. of Beneficiaries	*Male*	*Female*
Bihar	91	88	3
Himachal Pradesh	112	71	41
Manipur	9	3	6
Orissa	107	96	11
Rajasthan	218	190	28
U.P.	137	132	5
	674	580 (86%)	49 (14%)

capped persons. Also, the Government gave only cash grants ranging from Rs. 600 to Rs 2,000 while in other States both subsidy and loan schemes were given to male and female beneficiaries for getting income out of the schemes.

The PED study, however, is silent over such small number of women beneficiaries (i.e., 14 per cent), under the scheme as well as to the type of schemes given to such beneficiaries. This has happened perhaps because under the terms of reference there is no mention of women beneficiaries at all. This may not be intentional and since economic programmes are not specifically focussed towards women it is taken for granted that if men are assisted the benefits will automatically flow to women.

Most of the beneficiary-oriented schemes are formulated without taking into consideration the special handicaps these women have. For example while educational incentives like scholarships, stipends, books, uniforms, stationery, etc., are given to

both boys and girls of these communities, the parents often hold back the girls from going to school as they are required at home to attend to the smaller children and attend to their household chores. Therefore, in spite of educational incentives, the drop-out rates amongst girls are higher at every educational level. To check this at the very beginning of schooling, attaching a creche with primary schools could have been thought of where girls could keep an eye on the smaller siblings as well as attend to their classes. Discrimination against women takes place intentionally sometimes because of women themselves. Under nutrition programmes which provide supplementary food to pregnant and lactating women as well as children, it often happens that instead of supplementing the food at home, food given to ICDS centres becomes the women's only meal while her legitimate share goes to the men in the family. Or when milk is distributed the daughters are denied milk and sons are given their share.

The very development programmes for poorer people often add to the problems of women of these communitie as has been observed in the article, "Women's Drudgery in Firewood Collection" (By D. Nagbrahman and Shreekant Sambrani, E.P.W., Vol. XVIII, nos. 1 and 2, 1-8 Jan. 1983). Thus:

> The typical small rural household is subject to two diverse pulls. On the one hand, due to the sheer growth in numbers of peoples and animals to be supported by the same scarce resources of land and water, the availability of essentials of life has been reduced.
>
> On the other hand, the very developmental process which causes a modicum of progress that is visible, also causes, in its wake, the emergence of forces which adversely affect the smaller households. For example, material and resources once considered useless and available in plenty have found alternative uses as a result of the developmental process and are no longer available to the poorer segment of the population free of cost.
>
> Similarly, animal husbandry in the rural areas may be considered extremely desirable from the point of view of augmenting meagre income. As a result of the necessity to feed the animals, however, crop residue is no longer easily available for fuel purposes. Once again, those who derived some use out of its free supply are the sufferers.
>
> The women of a poorer household who is responsible for continuously providing the family's fuel requirements is now squeezed between these two interacting processes with the diminishing food supplies for her family as well as herself, she must now undertake a much more arduous job to fend for the family.

In the foregoing account an effort has been made to delineate the problems of scheduled caste and scheduled tribe women, their status in the family and society in general, Plan policy and the provisions for them in the Five-Year Plans and lastly, some idea as to the impact of the developmental process on their lives. One is thus forced to conclude that although there has been no intention to ignore their problems, but there also has not been any conscious effort to acknowledge the fact that the scheduled caste/tribe women have specific problems and these require a solution. Such being the case it is necessary to —

(*a*) conduct in-depth studies on various aspects of the lives of these women by various agencies; and
(*b*) to suggest remedial programmes to be taken up in the next Plan.

Some of the schemes which need urgent attention in this context are under Minimum Needs Programme which provide some of the basic amenities to people and which will give direct relief to their drudgery like drinking water supply within easy reach, supply of fuel made easy, health care within each reach, and Balwadi-cum-creches near their habitation. For providing them with economic relief, by ensuring equal wages for work, assisting them in self-employment schemes, giving credit for small schemes like kitchen gardens, handicrafts, marketing facilities for sale of minor forest or vegetable produce, etc. As scheduled caste/scheduled tribe women of subsistence economy usually not only lack time but also organisational skills, special efforts would be required to train them. Voluntary organisations should actively get involved in organising these women in such movements as SEWA in urban areas and try to set up cooperatives

of rural scheduled caste/tribe women who are mostly agricultural labourers. The articulate among these women who have a potential for leadership should be selected to discuss their common problems with other women and become the mouthpiece to voice their grievances and lay their demands. This appears absolutely necessary if these women have to be brought out of their shackles.

The scheduled caste/scheduled tribe Financial Development Corporations could prepare special schemes to assist these women with margin money and help them obtain loans from institutional finance. On the educational side non-formal education should be brought near their habitation and encourage them to discuss their problems with local administrative personnel, give them information on their rights along with healthcare and nutrition and how to protect themselves from exploitation.

Last but not the least, it is essential that the lot of the scheduled caste women in degrading jobs like scavenging is radically changed by providing them with alternative economic schemes under self-employment or wage employment.

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6

Women in Employment: A Micro Study in Karnataka[1]

K S. KRISHNASWAMY & SHASHI RAJAGOPAL

I

In all of our Plans women have been viewed principally as wives and mothers with certain specific requirements as consumers. As regards productive employment, their role has been conceived mostly as providing unrequired labour on family farms, or casual or part time labour in local works or traditional home industries. Specific plan allocations for the benefit of women have consequently been for maternity benefits, general education, Mahila and Youvathi Mandals, part-time employment in the slack season for agriculture, etc. They have, in other words, been no more than a thin garnish on the loaf.

Biological, cultural or economic reasons have often been adduced to discriminate against women. When men and women are equally eligible and equally competent to perform certain tasks in society, men are preferred as a rule; and again as a rule equal work has not always been reflected in equal pay for women. There is in the Sixth Plan some appreciation of the need for sex-based identification of both programmes and policies affecting employment, so as to reduce progressively the iniquitous treatment of women, socially as well as economically. But

[1]Based on the Institute of Social Studies Trust Bangalore Report, "Integrating Women's Interests into State Five-Year Plan," Submitted to the Ministry of Social Welfare, Govt. of India in September 1984.

this has not been reflected operationally in the Sixth Plan as it finally emerged. At both Central and State levels, schemes and programmes for women continue to be in the nature of marginal additions to a basic plan rather than an integral part of the planning process. The immensely relevant task of providing specially for utilisation of the productive capabilities of women through appropriate job-categorisation, choice of technology and organisational patterns has remained largely undone. And in consequence the broad awareness and appreciation of the need to take cognisance of women's interests in overall planning actively is not reflected in the guidelines and administrative instructions issued for plan-implementation.

With this background in mind and using the criteria of relative development and bunching of schemes in operation, two districts—Dakshina Kannada and Gulbarga—were chosen for study. According to the development index used by the State's Planning Department, Dakshina Kannada is ranked second and Gulbarga nineteenth, among the 19 districts constituting the State. Based on the situational factors, data availability, schemes in operation and special characteristics of different subareas taluk in the two districts, 12 villages which formed 11 per cent of the total villages in Udupi Taluk and 7 per cent in Gulbarga Taluk were chosen.

Both these taluks offered reasonable facilities for field study, were sufficiently far from metropolitan centres, included pockets of scheduled tribes and according to official sources had enough women and child benefit shemes in operation. A stratified random sample of 606 households or 10 per cent of total households in the villages in Udupi taluk was studied. Households were stratified on the basis of assets and the sample was drawn on a random basis from each stratum. In Gulbarga, a purposive sample of 427 households which constituted about 12.5 per cent of the total households in the selected villages was studied. The beneficiary households were selected purposively from the list of households covered by schemes and constituted approximately half of the sample. About an equal number was chosen from non-beneficiary households on a random basis.

Since the blocks were specially selected on the basis of their development level, the quantitative information for the sample

households in respect of census or National Sample Survey (NSS) categories is of limited comparability with the district or state averages. Nevertheless, these data are useful in gauging the distance from macro-averages, and for attempting an interpretation of the causes for such variation – in terms of asset, occupational or educational status. More importantly, the field surveys are significant in respect of the qualitative aspects of the life-standards of women in the weaker sections, as well as the effectiveness of plan schemes, their delivery systems, etc.

II

Prior to dealing with specific questions relating to women in employment, it may be useful to describe the principal characteristics of the sample households. In the ensuing paragraphs, the main characteristics of the households in terms of asset categories, income levels, occupational patterns and educational attainments have been summarised. Some correlation and regression analysis of these data was also attempted, but because of the limited number of observations for relevant variables, the results were subject to large margins of error and were not statistically significant.

In both Udupi and Gulbarga samples, the largest proportion of households was those of marginal farmers. Many of these households possessed other assets besides land, principally livestock. In terms of income level, households with annual income over Rs 4,000, that is to say, above the commonly used poverty line predominated. Those below the poverty line consisted largely of agricultural labour or construction worker households, belonging to scheduled castes or scheduled tribes. Whlie relatively high level of households income in the more developed Udipi area was not unexpected, the Gulbarga results was somewhat surprising. Apart from the compensating factor of larger holdings and high prices of jowar and sugarcane, it is possible that the higher work participation rates for both male and female adults contributed to this. Comparative analysis of available census data for 1961 and 1981 show that trends in the female worker rate were different in Dakshina Kannada and Gulbarga districts. In 1961, the female worker rate for the Karnataka State was higher than the all-India level and the

rates for Dakshina Kannada and Gulbarga districts higher than the State average. At the State level, both rural and urban

TABLE 1. DISTRIBUTION OF HOUSEHOLDS BY ANNUAL INCOME CATEGORIES (IN PERCENTAGES)

Annual Income	*Udupi Taluk*	*Gulbarga Taluk*
Up to Rs 2,000	5.78	9.60
Rs 2,001 to Rs 3,000	10.40	15.46
Rs 3,001 to Rs 4,000	10.10	16.16
Rs 4,001 to Rs 5,000	10.10	11.94
Rs 5,001 Rs 10,000	37.46	32.32
Rs 10,001 and above	26.24	14.52

Note: The numbers indicate proportion of households in each annual income of the household category to total sample households.

female worker rates fell between 1961 and 1981, the decline in the former being sharper. But in Dakshina Kannada/Udupi taluk the rural and total rates fell, whereas the urban rate increased in Gulbarga district, on the other hand, the urban female worker rate fell, while the rural rate increased and the total remained unchanged. Gulbarga taluk, however, experienced a decline in both rural and urban rates.

Linking these changes to the pattern of economic activity in the two areas it would seem that factors such as landlessness and/or the availability of household industry have a greater impact than factors such as schooling. The higher inequality of landholding in Dakshina Kannada/Udupi probably had some effect on the higher (rural and urban) rates there in 1961. However, the growing importance of households industry in that district apparently created more urban jobs for women both directly and in the services sector. General economic prosperity, together with growth of remittances from migrants, might also

have reduced the desire of women to seek work. Such factors were less evident in Gurbarga and this has probably led to increasing work participation by women in the rural areas.

TABLE 2. DISTRIBUTION OF GAINFULLY EMPLOYED ADULTS OVER THE ANNUAL INCOME OF THE HOUSEHOLDS

Annual Income of the Households	*UDUPI*		*GULBARGA*	
	No. of Goinfully Employed Adults		*No. of Gainfully Employed Adults*	
	Male	*Female*	*Male*	*Female*
Up to Rs 2,000	38 (66.66)	30 (42.25)	35 (79.54)	38 (67.85)
Rs 2001-Rs 3,000	67 (74.44)	76 (63.86)	78 (86.66)	66 (70 96)
Rs 3,001-Rs 4,000	66 (73.33)	57 (45.96)	96 (84.21)	71 (68.26)
Rs 4001-Rs 5,000	69 (70.40)	69 (47.58)	61 (65.59)	61 (62.88)
Rs 5001-Rs 10,000	317 (76.38)	281 (50.00)	262 (77.97)	164 (54 54)
Rs 10,001 & above	362 (81.53)	232 (46.89)	135 (73.77)	80 (53.69)
Total	919 (76.96)	746 (49.14)	667 (77.55)	480 (61.22)

Note: 1. Figures in brackets indicate the proportion of gainfully employed male/female to the total male/female population, in each category.
2. Gainfully employed adult—Age 15 years and above.

The field data, though derived from rural households broadly accord with these hypotheses. Total work participation rates for both men and women are much higher than the district average in both the taluks. Male rates are higher than female work rates in all categories except agricultural labour and beedi rolling. In both Udupi and Gulbarga taluks, the large part of female workers were in the agricultural sector. But the proportion of such workers in Gulbarga was more than twice that in Udupi. Parallelly, female workers in activities other than agriculture were proportionally greater in Udupi. The influence of factors such as those mentioned in the previous

paragraphs is clearly evident here though the rural participation rate might have been magnified by the nature of sample households.

Occupational diversity is greater in Udupi and more marked for men than women in both taluks. Apart from differences in general education, many other elements seem to have contributed to this divergence. Much of the additional employment opprotunities in both taluks is attributable to programmes and projects which being gender-neutral, tend to be better utilised by men. This again derives from a multiplicity of reasons. Men have used the training programmes better, having better access to the functionaries and also being less bound to the house. Their title to property is usually adequate to make them eligible for loans and grants under Integrated Rural Developments Programmes (IRDP) and such other programmes, whereas women have often to provide co-guarantors. Because men predominate in Panchayats, co-operative societies, zilla parishads, developmennt councils, etc., their awareness of opportunities and possible benefits is usually much greater than thoseof women. The latter usually get to know about only those schemes which the men of the households care to pass on to them. Except when there are active Mahila Mandals or other non-governmental agencies devoted to the walfare of women, or when special effort is made by functionaries such as ANM and LHV, beneficiary awareness of schemes specifically meant for women is very little. In consequence, the extent of benefit derived by women as wage earners under the Employment Affirmation Schemes (EAS) or by women as self-employed workers under Integrated Rural Development Programme (IRDP) etc., is quite incommensurate with their need.

Nor is there any general appreciation of the burden which adult women and grown-up girls have to bear in respect of household work. Intra-family distribution of this work-load is exceedingly uneven, falling heavily on precisely those female adults who could benefit from gainful employment outside of home. Communal facilities for supply of drinking water, fuel and fodder, daily provisions, schools for children, balwadis or anganwadis, mobile creches as well as properly dovetailed adult education programmes, easy and reliable access to health and family welfare facilities—all these are recognised as effective

means of enabling women to utilise available opportunities for outside employment more effectively. While these are, and have been, part of the State's development plans for a considerable period, thier impact in terms of reduced household work for employable women has not been much in evidence in either Udupi or Gulbarga. Many of the working women continue to spend six to eight hours a day on household work, with consequential ill-effects on their health and their productivity.

Despite the high work-participation rates for women, the proportion of their contribution to total family income is not high. In all of the main occupational categories – cultivators, agricultural labourers, fishing, beedi making or other activities— the coutribution of working women amounted in most cases to less than 40 per cent of household income. This was regardless of whether they worked for part of the year or throughout the year. This, together with the prepondereance of male headed households, greatly limits their authority in the disposition of their earnings. However, female heads of households, as well as older women in male headed households often have some say in decisions regarding household expenditure—more as customary practice than as a recognition of equal rights of women within the households.

The Government machinery has proliferated and spread out to villages in many forms, but this has not been reflected in any corresponding increase in its reach of the poor, more especially of poor women, lack of proper roads and public transport facilities in Gulbarga is also partly responsible for this. Even allowing for the many obstacles that local functionaries may have, there is little doubt that they have tended generally to approach their tasks mechanistically, in terms of set procedures and targets which may not always be relevant to the individual beneficiary. Local caste and power groups often limit their interest and activities; and coupled with the disarray or absence of basic factual information on household assets, incomes, etc., at the village level, actual beneficiaries of government programmes have many times turned out to be not the neediest or the most eligible on objective grounds, but those who were economically better-off and socially or politically better connected. Instances of such misapplication were cited in both Udupi and

Gulbarga, in respect of sanctions of both bank loans and government grants.

In general, women beneficiaries in both the areas found it easier to deal with women functionaries, such as, Auxiliary Nurse-Midwife (ANM), Lady Health Visitor (LHV), anganwadi workers and agricutural extension workers when available. Efforts by women to organise cooperative societies of their own, as by fishermen in the Udupi Taluk, found them going hard, due partly to the cumbersome procedures but mostly to lack of official and technical support. It was the commonly expressed view in both the areas that with more women functionaries at all levels of government departments, they would find it much easier to deal with the administrative system and would be better able to utilise opportunities for economic and social improvement.

Whether the position would have been much better with non-governmental agencies actively implementing or monitoring development and welfare schemes, it is difficult to say. While in Udupi, there were Mahila Mandals in some villages, very few of them existed in Gulbarga. Even the functioning of those that were in existence was not very impressive. They were, for the most part, confined to upper caste women, often reflecting the power structure in the village; and apart from providing some opportunity for women to learn tailoring, embroidery or such crafts, they had little impact on the overall work-situation for women. However, this does not establish any positive or negative argument in respect of non-governmental agencies.

A feature of the Udupi sample is the frequency of female headed households, in which women held title to land and other family properties and formally at any rate, functioned as the final decision makers. However, in many such households, *de facto* authority was exercised by an adult male, who often cultivated the family lands and enjoyed many of the benefits that the actual cultivator was entitled to under government programmes. Where such families were non-agricultural households, the women usually lived on the remittances that flowed in, supplemented to some extent by home-based industrial activity.

In regard to utilisation of schemes, the position of women belonging to such households was only a little better than that of other women. They had slightly better access to IRDP, bank

loans and Janata Housing schemes; but invariably, they could avail of these benefits only with the guarantee or support of a male family member. Their status as heads of households was apparently, more important authropologically than socially or economically.

What emerges from this limited survey in Karnataka is that planning as now conceived and practised, benefits women only incidentally and residually, rather than as a equal claimant with man. Their special requirements and problems are virtually by-passed by the planning process; and if this is to be remedied, the concern for women as a major component of Indian society has to inform all aspects of planning concepts, processes, programmes and policies. We turn to some of the issues regarding these aspects, which were thrown up by this exercise.

III

At the very basic level, concepts of measurement and records of achievement (or change) relating to the human factor have to go beyond persons to men and women. Without such a break-down, it is virtually impossible to see if the gender-neutral policies and programmes are in reality so. It is only when the differential effects of these on men and women beneficiaries are known that the extent of variation between them can be observed and the underlying reasons examined for any remedial action that may be necessary.

Obviously, such data should be available at all levels from the village upwards. Indeed, for any effective administration, full lists of persons, their sex, occupation, assets, income and such other characteristics are presumed to be indiscensible; and organising this is not just a matter of protecting women's interests. In both Udupi and Gulbarga, the state of statistics at the local level was quite unsatisfactory. It was not possible to obtain a full or up-to-date list of households from villages or block levels—though a number of house-lists existed. Similarly, there are no lists of beneficiaries which can serve as a proxy for a household list.

These illustrate the point about the need to establish basic statistics for a rational programme of planning. In establishing

such an information system for plan purposes, it is vital that in respect of all entries relating to persons, men and women, should be identified separately, so that changes in the economic and social status of each of them can be clearly assessed. Any additional effort or expenditure notwithstanding, this is an issue to which both statisticians and administrators should give attention. Such a reformation will go a long way in curbing the tendency to treat women as some kind of a minority group, to be taken into account only for maternity and such other welfare schemes.

Redefinition of Categories

A reformation of the information system will necessarily imply a redefinition of categories and concepts, so that they incorporate elements of special relevance to women. While it is not possible to list all of the concepts or categories that may have to be so adjusted the following illustrations may help clarify what is involved in this kind of exercise.

Taking the category of occupation, the present listing is essentially gender-neutral in the sense that it does not ask the question whether particular tasks, or particular operations under a listed heading, are better suited to men than women for technical or other reasons; or which of these tasks could continue to be or develop into female labour intensive activities with improved technology and training. Admittedly, job classification of this type is not easy, and will require careful study. But a start can be made with identifying specific operations—like sowing, transplanting or winnowing in agriculture, or spinning in textile industry, which are (could be) female-labour intensive—in the standard job classifications used for data-collection and analysis of employment and unemployment.

Similarly, in the classification of Industries both large-scale and small-scale, it should be possible to identify those which are capable of being spatially dispersed with little or no additional social cost (under existing or imminent technology). And of these, it should be possible to have sub-classifications for those in which individual operations can be put-out—in the manner, for instance, of the beedi industry. Such industries are parently more productive of employment at home for women and could greatly reduce the under-employment of rural women.

A major question in this context would be the classification and accounting of household work of women. There are, admittedly, serious difficulties of measurement and evaluation of this kind of work and its output is not part of the national output as now computed. But sooner or later, some satisfactory convention has to be developed to take proper account of this type of work in assessing the contribution of women to the social product. Pending this, it is important at least to devise a means of taking note of this input of female labour in resource allocation exercises. Without such conscious budgeting of the working time of women, the net impact of schemes like EAS and NREP cannot be properly assessed. Nor would it be easy to synchronise the generation of additional employment in agriculture and industry with the seasonal changes in the unemployment or underemployment of women in rural areas.

Area-wise Planning

In like manner, recognising the relative immobility of female labour—especially female labour belonging to the marginal and small farmer households—it is necessary to articulate more clearly than so far the area-impact of plan projects and schemes, and categorise them accordingly. When as, for instance, in the case of the Karnataka State Plan, over 80 per cent of plan investment, decisions are taken at State headquarters, chances are that attention will be focussed more on total project impact and its distribution over time than on its area-wise effects. There is little doubt that large investments in infrastructure facilities will be needed in future five-year plans also; and it might well be difficult to identify the area-wise profile of major projects with any precision. But there will also be a variety of medium and small-sized projects, for which area specification should not only be possible, but more beneficial in terms of conformity with local resources and needs. Such projects can more explicitly accommodate the needs of women workers, once it is recognised that this resource has also to be fully utilised for accelerated development.

Decentralisation

Area-wise planning and decentralisation of decision making processes are matters of vital importance for many more purposes than that of intergrating women's interests into development planning. That apart, the many obstacles to safeguarding women's interests cannot be easily removed without reducing the distance between plan beneficiaries and plan-formulators or implementators. Even to ensure that there is a wide enough recognisation of women's problems, it is necessary to bring decision-makers closer to where the majority of Indian women live and work—viz., their homes and villages. And without this kind of spatial dispersal, effective coordination among government agencies as well as between them and local voluntary organisations or groups of women, becomes exceedingly difficult.

The major reasons for poor utilisation of plan schemes by women such as their lack of awareness of schemes and their benefits or the absence of proper training facilities, or adaptability to local conditions are also likely to be better dealt with by local organisations having sufficient authority and being directly accountable to the community they serve. Other problems such as unfilled staff positions paucity of technical personnel, scarcity of women functionaries, etc., can all be handled more easily and more effectively when the distance between the beneficiaries and the implementing agencies is reduced and the communication between them improved.

Voluntary Organisations

Since not all the burden of development can be borne by government department and agencies, voluntary or non-governmental organisations of women at the local level have to be systematically developed. Voluntary agencies performing or monitoring community services connected with water supply and sanitation, etc., are badly needed. Efforts to set them up and assist them should go a long way in making plans and planning more meaningful to the rural communities.

PART THREE

LABOUR MARKET AND THE HOUSEHOLD

7

Women Agricultural Labourers – Regional Variations in Incidents and Employment*

GITA SEN

Although it is well known that women agricultural labourers are among the poorest members of the rural population in the country, the relationship between regional impoverishment and the incidence of female agricultural labourers is neither simple nor straightforward. The presence of an impoverished rural population in a region may be the result of agroclimatic factors such as poor rainfall, irrigation or soil quality; it may also be due to a high degree of land inequality and landlessness in a region where agricultural productivity is fairly high. Whether women agricultural labourers (as a proportion of the female population, or as a ratio to male agricultural labourers) are likely to be more numerous in the former or the latter case, is not an easy question to answer a priori. Indeed, to the extent that both the poverty of the household and its low capacity to absorb female labour on a family farm work in the same direction in the two situations cited above, a high incidence of female agricultural labourers may occur in *both* cases.

Thus, for example, the incidence of women agricultural labourers in the female population is fairly high in the paddy growing, high productivity coastal districts of Andhra Pradesh

*A first draft of this paper was presented at the ICSSR/CSSS Workshop on "Women and Poverty" Centre for Studies in Social Science, Calcutta, March 17-18, 1983. I am grateful to A. Vaidyanathan, N. Krishanji, and the participants of the workshop for detailed comments and suggestions.

and Tamil Nadu, where land inequality is also high. But the incidence is, if anything, even higher in the dry, low productivity, internal districts of Maharashtra where land inequality is lower. Of course, where both agroclimatic factors are unfavourable and land inequality is high, as in the internal districts of Andhra Pradesh, the incidence of women agricultural labourers is also likely to be high.[1]

I do not wish to infer from this that land inequality and unfavourable agro-climatic conditions together exhaust the factors affecting the regional incidence of women agricultural labourers. In an earlier paper, I had discussed the possibility that the presence of migrant tribal labourers may reduce the participation of local women as agricultural labourers, and that this phenomenon may be particularly important in the north-eastern states.[2] But even in such cases, land inequality may continue to be an important factor. For example, West Bengal's paddy districts have lower Gini coefficients of land owned than those of Andhra or Tamil Nadu, and this may be an important factor in the lower incidence of women agricultural labourers in the former.

The previous paper had suggested a correlation at the state level, between the incidence of women agricultural labourers and (*i*) low agricultural growth, (*ii*) importance of coarse grains in gross cropped area (excluding Rajasthan), (*iii*) low incomes of agricultural labour households, and (*iv*) male inter-and intra-district migration (excluding Assam). This paper looks more closely at the relationship between incidence and agricultural growth, productivity, land inequality, and the cultivation of

[1]A simple schematic representation may be a helpful starting point for thinking for this—

INCIDENCE OF WOMEN AGRICULTURAL LABOURERS

Agroclimate Factors	*High Inequality*	*Low Inequality*
Favourable	High	Low
Unfavourable	High	High

The relative ranks of the three "High" cases cannot be specified *a priori*

[2]See G. Sen, 'Women's Work and Women Agricultural Labourers: A Study of the Indian Census," Centre for Development Studies, Working Paper No. 159, February 1983, pp. 19-20.

coarse grains at the *district* level. It also examines some of the regional features of unemployment and differential earnings among women agricultural labourers. The penultimate section of the paper also makes some comments on data collection and compilation. Our main data sources are the Census, the Rural Labour Enquiries, and the 32nd round on employment and unemployment of the NSS.

Regional Incidence of Women Agricultural Labourers

District level analysis of the relationship between incidence, i.e., the proportion of agricultural labourers in the female rural population, and variables such as the agricultural growth rate was undertaken for 1971 principally because of the availability of data in this year. The 1971 Census tended to undercount women workers, but this problem was probably more serious for female cultivators than for agricultural labourers.[3] As a precaution, however, we compared incidence in 1971 against 1961, a year when the census definitions and procedures were more inclusive than exclusive. The correlation coefficient for 291 districts was positive and high at 0.946 (significant at the 0.1 per cent level).[4]

While there was a decline in incidence in many districts between 1961 and 1971, Maps I and II indicate that the regional distribution does not appear to have undergone dramatic changes. Maps III and IV indicate the districts in which there were as many or more women agricultural labourers than men.

Despite the many known problems with the census data on women, I believe that for the study of the regional dispersion of women agricultural labourers, the data are not altogether unreliable.[5] Indeed, the state level rankings of the proportion of female to male agricultural labourers obtained from the 1961 Census and the 1963-65 Rural Labour Enquiry are highly correlated.[6] The data on agricultural productivity, agricultural

[3]Ibid., pp. 10-12.

[4]The 291 districts cover all the major States excluding the hill districts of Assam and Uttar Pradesh, Jammu and Kashmir and the minor hill States and Union Territories.

[5]See Sen, *op. cit.*

[6]The rank correlation coffiecient for 15 States is 0,893, significant in 0.1 per cent level.

growth, and the Gini coefficient of owned land are from the published results of the JNU/ICSSR study, while the data on the proportion of gross cropped area under rice/wheat were calculated from the *Indian Agricultural Statistics*.[7]

Our hypothesis is that regional impoverishment as manifested in a high proportion of coarse grains in gross cropped area, in low agricultural productivity and in poor growth performance, as well as inequality as measured by a high Gini coefficient of owned land, are all positively associated with a high incidence of women agricultural labourers in the female population.

Some points about the specification of the variables and about the data used in the analysis need to be raised at the outset. The first question is whether census data on the proportion of agricultural labourers in the female rural population measure the supply of female labour (i.e. a "true" participation rate inclusive of employed, underemployed and unemployed)? Or do they measure post factor only those who have been able to find work, i.e., the demand for labour? Of course, if the female labour market were in equilibrium with no involuntary unemployment, the two measures would be the same. However, we do know from the Rural Labour Enquiries and the National Sample Surveys on employment—unemployment (27th and 32nd Rounds) that there exist both unemployment and underemployment, i.e., the markets are not in equilibrium. Rather, they seem to be in a condition of excess supply.

It would therefore appear that the observed data represent variations in the factors influencing the demand for female labour. I would, however, argue that such an inference is unjustified. In labour markets that are highly "casualized" (over 90 per cent of women agricultural labourers are casual labourers), the appropriate measure of labour demand and supply should be in labour days/hours, not in terms of the number of labourers. The presence of underemployment indicates an excess supply of labour days/hours.

However, one may argue that, in a casualized labour market, most women who are impelled to work as agricultural labourers,

[7]Asok Mitra and Shekhar Mukherji, *Populotion, Food and Land Inequality in India, 1971*, Allied Publishers, 1980; *Indian Agricultural Statistics, 1967-68 to 1969-70*, Volume II.

would probably find some work at least during the peak seasons though they may by no means find as much work as they want. Depending on the strictness of the census definition of an economically active person, the counted number of labourers would include a number of such underemployed workers. Hence, the proportion of women labourers in the female rural population would tend to represent the supply of labourers. The less strict the census definition of a "worker", the more valid is the above likely to be.

A second point relates to the use of the Gini coefficient as a measure of land inequality. Being a summary measure, it does not tell us which tail of the distribution is more prominent in overall inequality. For example, two districts may have the same Gini cefficient, with one having a much greater degree of inequality towards the lower end of the distribution than the other. In this case, ceteris paribus, we would expect the former to have a higher participation of women as agricultural labourers than the latter. The Gini coefficient would not, however, be sensitive to such variations.[8]

A third point has to do with the hypothesized relationship between agricultural growth and the level of incidence of agricultural labourers in the female rural population. We expect that the level of agricultural productivity itself would be highly correlated with the cropping pattern, i.e., the proportion of coarse grains in the gross cropped area. To get around the multicollinearity problem, we tried the growth rate as a proxy for agricultural productivity since it is likely to be correlated with the latter but not quite so strongly with the cropping pattern. The regression results should therefore be interpreted with this in mind. The effect of agricultural growth on the *growth* of the incidence of agricultrual labourers in the female rural population is analysed separately after the regression analysis.

Simple regressions of incidence in 1971 against each of the other variables taken singly, all have the expected signs and significant t-ratios. See Table I in the Appendix. Since, how-

[8]I am particularly grateful to Professor N. Krishnaji for having raised both the question about the Gini coefficient and about the underlying demand-supply relationships. In further work, these issues will be treated in greater depth. So also the question of the effect of population density on the incidence of agricultural labourers in the female rural population.

ever, we expected at least some of the 'independent' variables to be correlated with each other, multivariate analysis was also used to determine this. The correlation matrix is given in Table II (See Appendix).

From Table II it appears that as expected, agricultural productivity is highly correlated with the proportion of foodgrain GCA under rice and wheat as well as with the agricultural growth rate. The coefficient of agricultural productivity was not significant in a multiple regression that included all four variables. Accordingly, multiple regressions were run after excluding agricultural productivity. Despite the correlation between rice/wheat area and land inequality, both were highly significant in the regression. The proportion of area under rice and wheat is also correlated with agricultural growth rate but at the 5 per cent significance level. We retained both variables in the multiple regression since both are highly significant. The results are given in Table III in the Appendix.

Again, all the signs are as expected, and the coefficients are significant. The strongest relationship is between the incidence of women agricultural labourers in 1971 and low agricultural growth rates (for 19 crops as a composite) for the period 1962-65 to 1970-73. Inequality in landownership also bears a positive relationship to the incidence of women agricultural labourers, as does the proportion of coarse grains.

Unfortunately it is difficult to obtain reliable estimates of the district-wise growth in the incidence of women agricultural labourers between 1961 and 1971, because of the changes in the definitions between the two census years. However, if we assume that the 1971 data on the number of women agricultural labourers are, if anything, underestimates, we can obtain a *minimal* set of 91 districts in which the incidence of women agricultural labourers in the female rural population increased between 1961 and 1971. Map IX in the Appendix presents these districts, but it must be remembered that due to undercounting in 1971, there may have been other districts also in which incidence increased during this period. Districts where peak-season demand for female *casual* labour increased, as has been claimed for Punjab-Haryana, but where the work was not of sufficient duration for the workers to be counted as agricultural labourers, would have been particularly affected by this.

From the minimal set of 91 districts, we excluded 17 where the incidence was still below me per cent of the female rural population in 1971. The remaining 74 districts were classified according to agricultural growth performance in the period 1962-65 and 1970-73. This classification is presented in Table V. It appears from the table that the incidence of women agricultural labourers increased in both high and low (even negative) growth districts. There appears, nevertheless, a concentration in the low to moderate growth range; 60 per cent of the districts fall in the agricultural growth range of 0 to 2.99 per cent.

These districts are largely in the states of Gujarat, Rajasthan, West Bengal, Madhya Pradesh and Tamil Nadu. Of these, the first three are in the low incidence range while the latter two have a higher incidence of women agricultural labourers. We may conclude tentatively from this (with all the already mentioned caveats about the data) that the incidence of women agricultural labourers appears not to have increased as much in districts that have experienced either very high or very negative agricultural growth rates, as it has in low to moderate growth districts. This result appears to have some intuitive appeal in that potential women labourers may be more 'discouraged' from seeking work in the negative growth districts; on the other hand, the rise in household incomes in high growth districts may reduce the necessity for women in such districts to combine agricultural labour with the domestic work that they have, in any case, to perform.[9]

This section may be summed up as corroborating at the district level for 1971 some of our earlier results based on state level analysis. The incidence of women agricultural labourers

[9]Professor A. Vaidyanathan suggests that the extent of male unemployment may be an important causal factor affecting female participation in agricultural wage labour. Testing this hypothesis would require regression analysis at the level of KSS regions; this has not been attempted here, but is part of ongoing work. It should be noted. however, that the extent of household income pooling in low income households has been questioned by a number of authors; thus the extent to which a woman is held socially responsible for her own maintenance and that of her children may reduce the relative dependence on the man, and therefore dampen the possible impact of male employment on female participation in agricultural labour. These hypotheses need deeper examination.

appears to be higher in districts with low agricultural growth rates, a low proportion of rice and wheat in GCA, and high inequality in landownership. The state level incidence also seems to bear a stronger negative relationship to the income of landless households in the 1970s. Finally, the minimal set of 74 districts in which incidence increased between 1961 and 1971 are concentrated in the low to moderate growth ranges.

Unemployment

This section uses the Rural Labour Enquiry, 1964-65, and the published results of the 32nd round of the NSS conducted in 1977-78.[10] The analysis is therefore confined to the state level, and focuses on the extent of unemployment among women agricultural labourers, the type of work and the agricultural operations in which they are concentrated.

The RLE and the 32nd round of the NSS provided distinct sets of information on employment and unemployment. The RLE classifies agricultural labour households on the basis of an income criterion. It then quantifies the number of 'full intensity' days of labour worked by women from these households in agricultural and non-agricultural operations, self-employment as well as the number of days not worked due to a variety of reasons, including non-availability of work. It was the ratio between these days not worked due to lack of work and the sum of such days plus the days of wage labour plus self-employment, that was used to measure unemployment as analysed previously by Gulati.[11]

A measure of unemployment based on the number of *days* rather than the number of *persons* is probably more useful in a context where there is considerable *underemployment* but little open unemployment. However, the unemployment measure that can be obtained from the RLE is, as noted by Gulati, questionable because 18 per cent of the days are listed as either 'unaccounted' (because of the way in which 'full intensity' is

[10]Rural Labour Enquiry, 1963-65, 'Final Report', and *Sarvekshana*, January-April 1981 and July-October 1981.

[11]See L. Gulati, 'Unemployment among Female Agricultural Labourers,' *Economic and Political Weekly*, Review of Agriculture, 27 March, 1976, pp, A31-A39.

measured) or 'unclassified', at the all-India level. Further, this varies widely between states, from 31 per cent in Karnataka to 6 per cent in West Bengal. This variation may vitiate inter-state comparisons of unemployment based on these data and may account for the lack of any significant correlations in the earlier study.[12]

Our hypothesis is that, in a context where women are in agricultural labour as a response to impoverishment, and where there is a pent-up inadequacy of work (as much as 96 days at the all-India level[13], there would be a positive correlation between underemployment and the incidence of women agricultural labourers in the rural population. No such relationship can be found, however, between the RLE unemployment data for 1964-65 and the incidence of women agricultural labourers as obtained from the 1961 Census. Three states—Uttar Pradesh with a high number of unemployed days despite a low incidence of women agricultural labourers, and Maharashtra and Karnataka where the reverse is true—do not match the hypothesized relationship (see Table VI in the Appendix). What arouses suspicion that the data are not innocent is the fact that all three states, especially Karnataka, have a high number of unclassified plus unaccounted days. Indeed, if these three states are excluded from the analysis, there is a strong positive correlation between unemployment and the incidence of women agricultural labourers.[14] We do not, nevertheless, wish to place any great faith in this result, and shift our focus instead to the 32nd round of the NSS.

It is not possible, from the NSS data to obtain the number of unemployed days for a woman agricultural labourer as such. Rather, a woman is classified as employed or unemployed by current daily, current weekly, or usual status A person is

[12]Gulati could find no significant relationship between female unemployment obtained from the 1964-65 RLE and any of a number of variables, except for male unemployment. In partial support of the argument that 'unclassified' days may be a culprit in this, we found that there is a positive correlation of 0.549 (5 per cent significance level) for 14 States between the ranking of 'unclassified' days and "self-employed" days.

[13]See Table VI in the Appendix.

[14]The rank correlation is 0.768 for 11 States, significant at the 1 per cent level.

counted as employed by *daily status* if she worked for four or more hours in a day, by *weekly status* if she was employed in a gainful activity for at least one hour on any one day in the reference week, and by *usual status* if she was employed for the 'major' part of the year. These definitions affect both the numerator and denominator since the usual status criterion included as part of the labour force those who are in it for the 'major time' in the year, while the weekly status refers to the reference week. The daily status criterion is applied to those who are counted as part of the labour force according to the weekly status.

Since the weekly status unemployment measure was intended to capture the effect of seasonal fluctutions, it cannot really be used as an overall measure. For this, we have to rely on the usual and daily status rates. We see from Table VII in the Appendix that there is no uniform relationship across states between the usual and daily status rates. While for India as a whole and for a number of states, the daily status unemployment rate is higher than the usual status rate, the reverse is true in Assam, Haryana, Kerala, Punjab, Rajasthan, Uttar Pradesh and West Bengal.

The daily status unemployment rate would be *higher* than the usual status rate in those states where the average woman agricultural labourer works for a large part of the year (so that she is counted as employed by usual status), but is still seeking or available for work for a considerable amount of the rest of the time. The daily status rate would be *lower* than usual status rate in those states where the average woman labourer works on some days (implying some employment by daily status) but not enough to be counted as employed or as part of the labour force by usual status. While both numerator and denominator of the usual status unemployment rate would be affected in this case, the rate would tend to be higher than the daily rate.

It is interesting that the usual status rate is higher than the daily rate in the states, noted above, where (with the exception of Kerala) the incidence of agricultural labourer in the female rural population is low. Kerala is a unique case where both the usual status and the daily status rates are very high, with the former having a slight edge over the latter. It appears

therefore that the usual status unemployment rate probably underestimates the extent of unemployment in states where there is a high incidence of women agricultural labourers, and grossly overestimates it in states which have low incidence. For this reason, I would argue that the daily status unemployment rate probably gives the most accurate composite picture of both unemployment and underemployment. The hypothesized positive relationship between the incidence of women agricultural labourers in the rural population, and female unemployment was tested using the daily status unemployment rate for rural women. The correlation was found to be positive and strong, i.e., the higher the incidence of women agricultural labourers, the higher the unemployment rate among rural women.[15]

Two additional relationships appear to support our belief that the daily status rate is not only the best available measure of unemployment among rural women, but that it reasonably reflects the regional dispersion of unemployment among women agricultural labourers as well. The first is a significant positive relationship between the daily status unemployment rate and the per cent of rural women (above 5 years of age) whose usual activity is domestic work *due to non-availability of gainful* employment.[16] The second is a strong positive relationship of the per cent of rural women (above 5 years of age) whose usual activity is *casual agricultural wage labour* and who are available for additional work, to both the daily status unemployment rate, and directly to the incidence of women agricultural labourers in the the rural female population.[17] (See Table VII in the Appendix) That is, states with a high incidence of women agricultural labourers, and with a high daily status unemployment rate among rural women, have a high proportion of casual women agricultural labourers who want more gainful work.

It should be pointed out here that the relation between the

[15]The rank correlation for 15 states is 0.698, significant at the per cent level.

[16]The rank correlation for 15 states is 0.596, significant at the 5 per cent level.

[17]The first rank correlation for 15 states is 0 855 (0.1 per cent signifibance) and the second is 0.676 (1 per cent significance level).

unemployment rate for *rural women taken as a whole* and the need for work among women *agricultural labourers* is not self-evident, since as many as 42 per cent of usually employed rural women (above 5 years of age) are cultivators while only 37 per cent are agricultural labourers at the all-India level, according to the NSS 32nd round.[18]

Thus the variation in the rates for rural women as a whole would not automatically reflect the variation for women agricultural labourers.

Turning from unemployment to the type of work, we find that the 32nd round of the NSS also confirms that among women labourers in agriculture, even more so than among men, it is casual labourers who predominate, and they account for 96.37 per cent at the all India level. Magnitudes of this range are true in all states except Assam and Punjab, and hence the inter-state variations are quite small (see Table VIII in the Appendix). Despite this low level of regional variation, there is a strong positive correlation between this ratio and the incidence of women agricultural labourers in the rural female population, indicating that the states which have a high incidence of women agricultural labourers also have a proportion of casual labourers among all labourers that is higher than the average.[19]

Both the 32nd round of the NSS and the earlier RLE indicate the presence of a sexual division of labour in agricultural operations. According to the RLE of 1964-65, the distribution of the total number of days worked by a usually occupied woman from an agricultural labour household was as follows. If we exclude the category 'unclassified', the category of 'others' usually tends to be the highest, followed by either harvesting or weeding. Transplanting is also an important absorber of female labour, especially in the paddy growing states. Ploughing and sowing account for very little female labour. For men, on the other hand, while 'others' is again the largest single category ploughing followed by harevsting is next in importance (see Table IX in the Appendix). Weeding, transplanting and

[18]See *Sarvekshana*, January-April 1981, p.34.

[19]The rank correlation for 15 states is 0.670, significant at the 1 per cent level.

sowing absorb very little male wage labour. This pattern is largely true in most of the states, and is corroborated by the 32nd round of the NSS.

Of the five main categories, ploughing, harvesting and transplanting are all peak-season, often time-bound activities that absorb a considerable amount of agricultural labour. Sowing absorbs very little labour as such, while weeding, a predominantly female task, is largely an off-peak activity. This distinction between peak and off-peak activities may have an impact on women's earnings and on the earnings differentials between women and men.

Earnings and Differentials

It can be seen in Table IV that RLE data on the average daily earnings in agriculture of women from agricultural labour households are negatively correlated with the incidence of women agricultural labourers (1964-65) against incidence in 1961, and 1974-75 against incidence in 1971) at the state level.[20] Average daily earnings are lower in state that have a higher incidence of women agricultural labourers.

When examined by agricultural operation, it appears that relative to other agricultural operations the average daily earnings for women agricultural labourers tend to be higher in harvesting and transplanting (peak-season activities) and lower in weeding and 'others' (off-peak season activities) in the majority of states. Certainly, with the exception of Maharashtra and Karnataka which have relatively low earnings for women in harvesting, and Karnataka which has relatively high earnings in other operations in 1964-65, the observed pattern is true in all states which have an above average incidence of women agricultural labourers. This is evidenced by the RLE of 1964-65 and 1974-75, as well as the NSS 32nd round for 1977-78.[21]

The differentials between the average daily earnings of

[20]Between the average daily agricultural earnings of women agricultural labourers in 1964-65 and the incidence of women agricultural labourers in 1961 for 14 states, there was a negative rank correlation coefficient of 0.813, significant at the 0.1 per cent level. Between earnings in 1974-75 and incidence in 1971, the rank correlation was 0.536, significant at the 5 per cent level.

[21]See *Sarvekshana*, January-April 1981, p. 37.

women and men agricultural labourers appear to have decreased somewhat between 1964-65 and 1974-75 according to the RLE. Women earned two-thirds to three-fourths of men's earnings in the latter year, in the operations that absorb most female labour, i.e., harvesting, transplanting, weeding and 'others'. Weeding, the off-pack activity, shows the highest differential in 1974-75; harvesting, which absorbs considerable quantities of both female and male labour, shows the least differential. Again, this pattern at the all-India level is particularly true for the states with a high incidence of women agricultural labourers in the population.[22] Thus, the distinction between peak and off-peak activities appears to have some usefulness in an analysis of both earnings and earning differentials. Among the activities that absorb the bulk of female agricultural labour, the off-peak activity (weeding) has both lower earnings for women, and a higher differential between women and men, than the peak-activities (harvesting and transplanting).

Comments on the Data

The three major sources for the data used in this paper are the population census, the Rural Labour Enquiry, and the 32nd round of the National Sample Survey. The problems of undercounting of women workers by the census have been extensively discussed before.[23] There problems have been judged to have been particularly severe in the 1971 census. Despite this, I have argued that, so far as women agricultural labourers are concerned, even the 1971 Census provides reasonably reliable information for the study of regional variations, although not, perhaps, for the study of absolute magnitudes.

In examining the regional incidence of women agricultural labour a critical need is to be able to isolate the effects of short-term, peak-season migration of agricultural labourers, both female and male. It is our hypothesis that such *short*

[22]See "Wages and Earnings of Rural Households, *Rural Labour Enquiry*, 1974-75, pp. 134-39.

[23]See, for example, K.C. Seal, "Women in the Labour Force in India: A Macro-Level Statistical Profile," in *Women in the Indian Labour Force*, Bangkok, ARTEP/ILO, 1981.

term seasonal in-migration of women labourers may account for the low incidence of female agricultural labourers in paddy growing northeastern states. That is, to put it crudely, seasonal migrants may do much of the work that would otherwise be done by the women of the regions. The canvassing of this information, even by the population census itself, may be no more difficult than the usual census questions on migration. Both 'birthplace migration' and 'migration from place of last residence' avoid the issue of the time factor involved. The questions on seasonal migration for purposes of work could directly ask who migrated seasonally, where, for how long, for what work, and whether as a contract or other type of labourer during the previous twelve months (or some other appropriate period). Given the probable prevalence of short-term migration, these questions may in fact give us a much richer picture of the work patterns and locations of agricultural labourers, female and male, besides helping resolve some of the puzzles in the regional incidence of women agricultural labourers. The 38th round of the NSS is currently canvassing such information.

So far as unemployment is concerned, the NSS estimates appear to be more reliable than the RLE, for women agricultural labourers at least. This is because of the inordinately high number of 'unaccounted' and 'unclassified' days in the RLE, leading us to doubt the data especially for Karnataka, Maharashtra and Uttar Pradesh. The daily status unemployment incidence as obtained by the 32nd rouud of the NSS appears to provide the most reliable information.[24]

The break-down of employment and earnings according to agricultural operations in both RLE and the NSS suffers from

[24]There appears to be some logical inconsistency in the labour force measured by *usual status* in the NSS. Each respondent is classified broadly as employed, unemployed or outside the labour force according to the major time spent during the previous year. The potential problem can be illustrated as follows. If a person was unemployed for 40 per cent of the time, unemployed for 15 per cent of the time, and outside the labour force for 45 per cent of time, she would be classified as outside the labour force by the major time criterion, even though her total employed plus unemployed time is greater. This problem may be especially important for women.

the relative importance of the category 'others'. For example, 39 per cent of male labour time and 32 per cent of female labour time was absorbed by this category in 1964-65. A more detailed break-down of agricultural operations would perhaps relieve this problem. It might also make it possible then to use data to examine changes in the age and sex-based division of labour as new agricultural techniques are introduced, for example. Such changes, which may well be extremely important in altering the number of days of female employment and earnings, are now rendered opaque by the very broad categories presently in use.

Conclusion

The discovery of a relationship between poverty and the incidence, employment and earnings of women agricultural labourers is not very startling. That, within a region, agricultural labourers and *a fortiori* women agricultural labourers, are among the poorest is quite well known. I have attempted to argue in this and the previous paper, that the relationship hold *across regions* as well.

District level date for 291 districts of the major states of the country indicate a higher incidence of women agricultural labourers in the famale population in districts where agricultural growth is low, coarse grains tend to be grown, and landownership is more unequal. Furthermore, the unemployment rate among rural women is higher in the states that have a higher incidence of women agricultural labourers, while average daily earnings are lower. This corroborates our earlier finding that, according to the RLE of 1974-75, the annual incomes of landless agricultural labour households are lower in the states which have a higher incidence of women agricultural labourers.

The policy implications of these relationships are, in some ways, too obvious to need stating, but their regional dimensions need to be noted. It is worth emphasising that more employment for rural women is a particularly urgent need in precisely those states that have a high incidence of women agricultural labourers, although female unemployment is in fact a pressing problem in almost all the states.

APPENDIX

Table I: Simple Regressions

(Dependent variable – ratio of women agricultural labourers to the female rural population, 1971)

Independent Variables	*Coefficient*	*Std. Error*	*t Value*
Rice plus wheat area 1969-70	—0.0549	0.0129	4.2649***
GCA under foodgrains			
Agricultural growth rate, 1962/65-70/73	—0.009	0.001	8.8272*
Agricultural productivity, 1971	very low	very low	3.8673***
Gini coefficient of owned land, 1971	0.1298	0.0553	2.3485***

Notes: *—5 per cent significance level.
***—0.1 per cent significance level.

Table II: Correlation Matrix

Women agricultural labourers					
Female rural population	1.0				
Rice plus wheat area					
GCA under foodgrains	—0.247	1.0			
Agricultural growth rate	—0.470	0.156*	1.0		
Agricultural productivity	—0.239	0.583**	0.378**	1.0	
Gini coefficient of owned land	—0.131	0.224***	0.039	0.064	1.0

*—5 per cent significance level.
**—1 per cent significance level.
***—0.1 per cent significance level.

TABLE III: MULTIPLE REGRESSIONS

(Dependent variable—ratio of women agricultural labourers to the female rural population, 1971)

Independent Variable	*Coefficient*	*Std. Error*	*t Value*
Intercept	0.0071	0.0260	0.2719
Rice plus wheat area			
GCA under foodgrains	−0.0499	0.0118	4.2365
Agricultural growth rate	−0.0085	0.0010	8.6548*
Gini coefficient of owned land	0.1874	0.0492	3.8105***

Note : n=283 R^{-2}=0.283

* – 5 per cent significance level.

***—0.1 per cent significance level.

TABLE IV : INCIDENCE AND EARNINGS

	1	*2*	*3*	*4*
INDIA	0.08	0.95	0.07	2.27
Andhra Pradesh	0.19	0.85	0.18	1.96
Assam	0.01	1.70	0.003	3.07
Bihar	0.09	1.20	0.07	2.74
Gujarat	0.07	1.19	0.07	2.52
Haryana	0.01	*	0.01	3.94
Karnataka	0.09	0.79	0.09	1.81
Kerala	0.06	1.23	0 07	4.28
Madhya Pradesh	0.10	0.86	0.11	2.73
Maharashtra	0.16	0.77	0.14	1.53
Orissa	0.06	0.89	0.04	1.83
Punjab	0.004	1.45	0.002	3.41
Rajasthan	0.02	1.09	0.02	2.58
Tamil Nadu	0.11	0.85	0.11	2.32
Uttar Pradesh	0.04	0.93	0 03	2 47
West Bengal	0.03	1.36	0.03	2.83

Note: *Included in Punjab

1. Women agricultural labourers, 1961.
   Female rural population.
2. Average daily earnings in agriculture of women from agricultural labour households, 1964-65.
3. Women agricultural labourers, 1971.
   Female rural population.
4. Average daily earnings in agriculture of women from agricultural labour households, 1974-75.

Sources: Census of India, 1961, 1971; Rural Labour Enquiry 1963-65 and 1974-75.

TABLE IV A: RANKS CORRESPONDING TO TABLE IV

	1	*2*	*3*	*4*
Andhra Pradesh	1	11	1	12
Assam	13	1	14	4
Bihar	5	5	6	6
Gujarat	7	6	6	9
Haryana	13	—	13	2
Karnataka	5	13	5	14
Kerala	8	4	6	1
Madhya Pradesh	4	10	3	7
Maharashtra	2	14	2	15
Orissa	8	9	9	13
Punjab	15	2	15	2
Rajasthan	12	7	12	7
Tamil Nadu	3	11	3	10
Uttar Pradesh	10	8	10	9
West Bengal	11	3	10	4

TABLE V: DISTRICTS IN WHICH INCIDENCE INCREASED CLASSIFIED BY AGRICULTURAL GROWTH RATES

Agricultural Growth Rate	*No. of District*	*Frequency %*
>6.00	4	5.41
4.50 — 5.99	5	6.76
3.00 — 4.49	8	10.81
1.94 — 2.99	18	24.32
1.50 — 1.93	7	9.46
0 — 1.49	19	25.68
−1.49 — 0	0	0.00
−4.49 — −1.50	9	12.16
<−4-50	4	5.41
	74	

Note: The *average* agricultural growth rate was calculated by Bhalla and Alagh as 1.94.

TABLE VI

	No. of days not Worked by Women from Agricultural Labour Households Due to Want of Work		*Unaccounted plus Unclassified Days*
	Days	*Ranks*	
INDIA	96		67
Andhra Pradesh	99	6	107
Assam	43	13	25
Bihar	103	5	90
Gujarat	82	7	22
Haryana	*		*
Karnataka	8	14	114
Kerala	120	2	43
Madhya Pradesh	75	9	69
Maharashtra	44	12	82
Orissa	105	4	46
Punjab	59	11	94
Rajasthan	81	8	33
Tamil Nadu	155	1	27
Uttar Pradesh	108	3	78
West Bengal	73	10	21

Note: *included in Punjab.
Source: *Rural Labour Enquiry*, 1963-65.

TABLE VII: UNEMPLOYMENT ACCORDING TO NSS 32ND ROUND

	1	*2*		*3*		*4*	
			Rank		*Rank*		*Rank*
INDIA	5.52	9.18		2.89		50.58	
Andhra Pradesh	5.22	14 33	3	2.79	8	55.29	5
Assam	5.83	1.35	15	4.08	5	11.36	15
Bihar	3.98	9.23	8	2.37	9	35.23	11
Gujarat	1.74	5.61	9	4 47	4	51.58	6
Haryana	20.79	3.17	11	1.40	12	28.22	14
Karnataka	4.13	11.54	4	5.02	3	58.27	3
Kerala	29.18	27.41	1	7.15	1	69.87	1
Madhya Pradesh	0.75	3.39	10	0.71	13	33.26	12
Maharashtra	1.89	9.31	7	1.94	11	57.91	4
Orissa	4.43	9.67	6	4.05	6	45.60	8
Punjab	14.30	2 11	13	2.21	10	32.01	13
Rajasthan	2.89	1.96	14	0.43	15	40.65	9
Tamil Nadu	6.27	17.11	2	3.85	7	61.41	2
Uttar Pradesh	3.20	2.98	12	0.58	14	38.82	10
West Bengal	23.86	9.91	5	7.08	2	50.58	7

Source: "Women's Activities in Rural India—A Study Based on NSS 32nd Round (1977-78) Survey Results on Employment and Unemployment," *Sarvekshana*, January-April 1981, pp. 42, 47, 51.

Note: 1. Usual status unemployment incidence (women).
2. Current daily status unemployment incidence (women).
3. Per cent of women in domestic duties (by usual status) due to non-availability of work.
4. Per cent of women casual agricultural labourers who are available for additional work.

TABLE VIII: CASUAL AGRICULTURAL LABOUR

	Women Casual Labourers	
	Women—Regular Plus Casual Labourers (Usual Status)	
	Per cent	*Rank*
INDIA	96.37	
Andhra Pradesh	99.33	2
Assam	34.25	15
Bihar	96.90	10
Gujarat	99.40	1
Haryana	95.86	11
Karnataka	97.15	6
Kerala	90.95	13
Madhya Pradesh	96.32	9
Maharashtra	98.39	3
Orissa	97.55	5
Punjab	64.29	14
Rajasthan	96.86	7
Tamil Nadu	97.85	4
Uttar Pradesh	96.65	8
West Bengal	91.87	12

Source: *Sarvekshana*, January-April 1981, p 17.

TABLE IX: DAYS WORKED AND EARNINGS OF WOMEN AND MEN FROM AGRICULTURAL LABOUR HOUSEHOLDS—ALL INDIA

	1	*2*	*3*	*4*	*5*	*6*
1964-65						
Per cent of days worked in agriculture						
—women	4.88	2.45	7.69	15.03	30.46	32.18
—men	22.35	2.40	3.13	6.02	18.50	39.43
Average daily earnings (Rs)						
—women	1.02	0.97	1.15	0.87	0.95	0.92
—men	1.39	1.51	1.86	1.42	1.43	NA
1974-75						
Average daily earnings (Rs)						
—women	2.42	2.57	2.46	1.95	2.38	2.30
—men	3.35	3.74	3.34	3.07	3.41	3.11

Sources: *Rural Labour Enquiry*, 1963-65 and 1974-75.

Note: 1. ploughing
2. sowing
3. transplanting
4. weeding
5. harvesting
6. others

8

Women's Work and Discrimination

NIRMALA BANERJEE

I

While poverty is by no means a problem confined to women alone there is now sufficient evidence to indicate that women are at a special disadvantage when it comes to combating it through gainful activity. During the last decade this phenomenon has been widely noted in India and several studies, notably those of the National Sample Survey Organisation, have by now provided us with details of the actual levels of relative disadvantages of women in the labour market today. Briefly, they indicate that (*a*) women are more concentrated in manual, and especially, casual activities (see Appendix, Table 1); (*b*) unemployment and seasonal variations in employment opportunities are more frequent amongst them (Table 2 in the Appendix); (*c*) the relative wages and earnings of women are usually lower than those of men in the same industries and operations (Tables 3 and 4 in the Appendix) ; (*d*) for similar qualifications women earn less both because they get fewer hours of work per week and a lower rate per hour (see Table 5 in the Appendix).

To a certain extent the inferior position of women (shown by the above) in the present-day labour market of India can be explained by the desperation of the women workers. In the last twenty years, growing poverty and a continuing state of stagflation in the economy have forced into the labour force a large number of women who had neither any training for the job

market, nor any preparedness for such work. Being less trained, less informed and more desperate than men, they were more willing to accept the dregs of the job market. These were the findings from a study in 1976-77 of women workers in the unorganised sector of Calcutta.[1] Tables 6 and 7 from the NSSO survey findings also show that the asking prices of women for work both in their own village/town and outside were below those of men.

However, discrimination against women in the labour market has a long and varied history in societies where women had more skills at their command and played a more important role in the economy. Available evidence over a long period consistently shows that not only were working conditions worse and the wages lower in women's jobs generally, but also that their economic activities were more susceptible to the adverse effects of economic change; their skills were more prone to speedy obsolescence through technical innovation. New skills and large-scale production organisations triggered off by forces of modernisation tended to pass them by, leaving them confined to marginal and traditional tasks.[2] The secular trend in their employment was downward, gaining proportionately less than male employment in the upswings and losing more in the downswings of business cycles (Table 8 in the Appendix).

That this depressing story has been repeated systematically over a long period of time through a multiplicity of changes in the economy and in the industrial structure appears to call for an explanation which does not rely solely upon the peculiarities of the supply of labour by women. There must be factors working on the demand side as well which obstruct women's access to all parts of the labour market as equals of man.

Popular myths claim that the sex-wise division of labour is a natural one based on the physiological differences between the sexes. Women are said to be barred from certain tasks for no other reason but that those tasks, especially tasks demanding

[1]Nirmala Banerjee, "Women in the Urban Labour Market" in *Labour Capital and Society*, Vol. 12, April 1979, circulated as background paper at the workshop on Women and Poverty, Calcutta, 1983.

[2]J.N. Sinha, *India Working Process*, Census of India 1961, Vol. 1, monograph no 11, Govt. of India, 1972.

strength and hard work, are contraindicated for women in their reproductive stage. In actual fact there are few societies where poor women are exempt from hard physical labour. Especially in India, standard female jobs like carrying head loads of construction material, transporting several pitchers of water over long distances or pulling loaded hand carts, all involve rigorous physical labour and even pregnant women are seldom exempted from this.

What determines the scope of women's jobs then is definitely not the society's consideration for them as weak delicate creatures to be protected and saved, like the queen bee—only for reproduction. Available facts indicate that there are wide spread socially sanctioned prejudices about women's commitment to the labour market, their capacity to manage complicated machinery, to make quick decisions or even to undertake steady, regular work. This leads on the one hand to limiting women to low productivity, repetitive occupations and on the other, to a general degradation of what are women's tasks. The evidence for such a view comes from analysis of the NSSO findings of the All India 32nd round Survey of Employment and Unemployment conducted in 1977-78[3] and from the findings of several of our own studies of women's employment in the Bengal region. One of these surveys conducted in 1976-77 covered[4] women workers in the Unorganised Sector of Calcutta. Another was a study of the historical records of women's employment in this region in the last two centuries.[5] The third consisted of several case studies of present-day export-oriented industries of West Bengal. These studies were conducted during 1982-83.[6] The industries covered were garments, leather goods, prawn processing, silk reeling and electrical fans.

[3]National Sample Survey Organisation, *Employment and Unemployment Survey July 1977 to June 1978*, 32nd round; Vol. 298, Govt. of India, 1981.

[4]Nirmala Banerjee, *Women Workers in the Unorganised Sector*, Orient Longman, New Delhi, forthcoming.

[5]Nirmala Banerjee, ' Women in the Labour Force—The Bengal Experience since 1800", paper presented at the Eighth International Economic History Congress, Budapest, 1982.

[6]Nirmala Banerjee, *The Role of Women Workers in Export Oriented Industries*, the report of a project under the Indo-Dutch programme submitted to ICSSR, 1983.

II

Forms of Discrimination and Women's Work

Two kinds of discriminatory practices in the labour market can lead to women's inferior position; (*a*) for identical tasks women are paid less and (*b*) women are confined to a limited number of relatively inferior tasks. Obviously, the first form of discrimination is more blatant and implies a higher degree of subordination of women. In most countries the process of discrimination is not so obvious but is done more subtly through practices of the second sort. Table 3 in the Appendix however appears to indicate that in India for agricultural operations the first kind of discrimination is still being practised. In other words, for identical agricultural tasks women's earnings are less than 70 per cent of the male ones.

However, the picture becomes somewhat different when one looks at the region-wise and operation-wise figures of male and female roles in agriculture (Table 9 in the Appendix). To start with, within India, women's participation in agriculture is not evenly spread over all regions. For example in 1977-78 for the whole of India, 25 per cent of all rural women were usually working in agriculture. But the figure differed widely between different states. While only 6 per cent of West Bengal's rural women were in agriculture the comparable figures were 43 per cent in Maharashtra, 41 per cent in Madhya Pradesh, 37 per cent in Rajasthan, 31 per cent in Tamil Nadu. If we leave out women's work on their own family plots and consider only casual labour in agriculture, we find that women casual labourers provided about 50 per cent of the total casual labour used in agriculture in Maharashtra, Tamil Nadu and Andhra Pradesh but in West Bengal, Punjab and Uttar Pradesh, their share was only about 12 per cent.

Again, even in states like Maharashtra and Andhra Pradesh, women did not work on all agricultural operations. In most regions, they did very little of the ploughing. They worked mainly on transplanting, weeding and harvesting as well as other manual operations like thrashing, winnowing, processing and stocking of grain. Even in these operations, the picture was far from uniform. In Tamil Nadu women provided about 80 per cent of the total labour required for transplanting and

about 75 per cent of the labour required in weeding. In West Bengal on the other hand women did only about 25 per cent of the total transplanting work. Even within a state there were community-wise as well as region-wise variations in what tasks were permitted for women. Segregated data for sub-regions and for different communities was not available. But on the whole one would not be wrong in asuming that, at a given location, women's tasks were usually different from those of men. Although there may be few absolute taboos on any kind of work in poor households, there are accepted social norms about the division of tasks between men and women.

Again, while rates of wages of women in agriculture were on an average below those of men, the differences were far from uniform in all regions. Generally, the more important the role of women in agriculture the more unfavourable to them was the ratio of female to male wages. The exceptions appeared to be Madhya Pradesh where the majority of workers were tribals and Punjab where male operations were probably mechanised. Also, the region-wise differences in ratios of female to male wages were particularly glaring in operations which tended to be women dominated in certain areas. Examples were of transplanting in Tamil Nadu and Andhra Pradesh and harvesting in Tamil Nadu, Maharashtra, Andhra Pradesh and Rajasthan.[7]

These facts appear to indicate two things: even in agriculture the tendency was to confine women to certain limited tasks. Secondly, the more a task got identified with women, the more degraded it was vis-a-vis male work; the social rating of a task was not determined by the end product, but by whether men performed it or women.

Outside agriculture, my own findings in the studies mentioned before indicated that in West Bengal the number of women working in manufacturing, especially in decentralised and small units was definitely on the increase since the 1970s. While there were few industries where the majority of workers were women, there were several where they were a significant section of the work-force. Even within each such industry, the percentage of women workers differed widely from one unit to another. And,

[7]Kerala is an exception for which no immediate explanation was available.

in most units where women did work, the tasks assigned to them were definitely distinct from those assigned to men. In other units of that industry, where no women were employed, similar operations were done by men. In units which employed women for some operations, the rate of pay for these operations were significantly lower than those for other male operations. For example, there were both men and women who did sewing but generally women did the ordinary stitching while men stitched the more difficult parts such as collars and cuffs. Male wages for sewing were higher than female earnings by 50 per cent or more. Amongst firms making leather goods, one firm had male machinists while several others had women machinists. Earnings of the male machinists were definitely higher than those of women machinists in other firms.

There were some apparent exceptions to this practice of division of tasks by sex. For example, in our 1976-77 study of unorganised sector workers in Calcutta mentioned before, we found that in the bidi rolling industry men and women both did identical tasks; but men got Rs 8 for 1,000 bidis plus a daily dearness allowance while women got only Rs 3 per 1,000 bidis. There was no perceptible difference in the work since payment was strictly by results after a check for quality. However, while essentially the work was the same, the main difference from the point of view of employers was that men worked in bidi factories while women did the same work at home. In fact this industry of Calcutta was at the time of that survey in a process of transition and employers were increasingly putting out the work to cheap female labour because men workers in factories had got organised and had obtained an officially fixed, fairly reasonable piece rate for the work. Over the next few years, the industry has increasingly shifted production to home-based women workers and can now be regarded as a women's occupation which apparently justified the payment of the sinificantly lower piece rates.

We thus find two interesting aspects the sex-wise division of labour. The first is that, at least in the Indian society so far, economic activities of men and women have always been distinct. In the traditional production processes and techniques, there were elaborate rituals and taboos which, for example, barred

women of certain regions from handling the plough or the loom.

In modern production processes this sexual division by tasks is less obvious; it is therefore often assumed that any sex-wise division of tasks that one may find is more of a hangover from traditional practice rather than the result of conscious discrimination. For instance in 1977, the Planning Commission had set up a study-group on women's employment.[8] Broad information collected by the group showed that only 40 per cent of women worked in women-dominated industries, i.e., in industries where the majority of workers were women. On that basis the study group arrived at the conclusion that the segregation of women in low paid employment was no longer the rule. In actual fact, however, if one goes deep enough into details of tasks and occupations, it becomes clear that even today, in any industry whatsoever, women are to be found doing a different set of tasks than men. Even in an industry where women are a minority in the work-force, they are all to be found only in certain selected tasks, tasks using very few men workers.

For example, in cotton and jute textile mills women are found working only on the stage of sorting out raw material—undoing the bales and ginning the fibre. In the pharmaceutical industry one often comes across pictures of pretty girls peering seriously into test tubes; but in reality almost all women in the industry work at the mindless task of packing and labelling products. In the ceramics industry, women work at the stage of preparing raw materials but once the processing gets started there is no woman to be found amongst the workers.

The other interesting point about the sexual division of labour is that while there is always a socially approved line demarcating the respective tasks of men and women, this line is by no means constant or uniform over different societies or over different times. Tasks that are male prerogatives at one time in one society are given to women in another and vice-versa. However, while the allocation of jobs between men and women can and does change through time and over-regions, it is by no means random. There is a definite pattern behind it. Over time, it has helped to keep women consistently in jobs where not only are

[8]Planning Commission, *The Report of the Sub-Committee for Statistics of Employment of Women*, Cyclostyle, Govt. of India, 1977.

the rates and working conditions comparatively poorer but their employment is also less secure. In the next section, we examine the likely nature of this dividing criterion that has persisted for so long.

III

The Line of Demarcation

If women's work had generally been confined mainly to low valued products or to small, segregated, mean markets, then its relatively low valuation could have been attributed to those factors. A section of women are indeed engaged in marginal activities such as keeping a few poultry birds or heads of cattle, tending small vegetable plots, collecting fuel or making cowdung cakes, all of which partly go to increase the family's real income and partly for local sales. Since such sales are generally also confined to neighbourhood markets the activities yield relatively poor returns. However, these are precisely the activities which usually get left out of the purview of official data collection for estimates of labour force participation or of the national product. They are definitely not the main activities for which data regarding sex-wise discrimination was given in Section I of this paper.

For those women's activities which are visible to official data collecting agencies, the discriminating line between male and female work can seldom be ascribed to the difference in the products of such activities. Whether in agriculture or in manufacturing, women mostly work on some particular stages in the production process while men work on others; or their products are similar to those produced by men, but produced with somewhat different tools. Indeed the main difference between male and female activities which can have significant effect on their relative productivities and hence earnings, appears to be in the tools and technologies they use.

The tasks given to women, whether at certain stages in production of particular goods or for different products and markets, are usually to be performed by techniques using relatively less capital per worker than the ones that men do. The processes they participate in tend to be more primitive, using cruder

tools which are mostly worked by manual energy. As a result production tends to be slow, and the product non-standardised. What are called women's skills are generally ingenious ways of substituting physical labour for capital and to get the best out of inferior tools. The skills therefore tend to be job specific and concentrating on small repetitive processes.

This hypothesis of relatively low capital intensity of women's jobs has so far not been systematically explored. A broad indication in its support is the fact that in those Indian industries where a significant percentage of workers are women, the capital/labour ratio and the output/labour ratio are both well below the all India all industries average.

TABLE A: INVESTED CAPITAL AND VALUE ADDED PER WORKER, RATIOS IN INDIAN INDUSTRIES WITH A SIGNIFICANT NATURE OF WOMEN WORKER, 1977-78

Industry	*Invested Capital per Worker (Rs)*	*Value Added per Worker (Rs)*
Grain milling industries	20,647	6,884
Cocoa chocolate and sweet-meat industries	22,475	14,752
Tobacco processing and bidi	2,224	2,759
Cotton ginning and baling	5,731	2,016
Cotton textiles	20,908	10,950
Coir and coir products	19,136	8,290
Matches	6,359	5,871
All industries	53,680	14,662

Source: Annual Survey of Industries, 1977-78.

An examination of some of the traditional as well as modern job-specific skills of women also points in the same direction. Traditionally the most famous women's skill in Bengal was of cotton spinning. Till the beginning of the 19th century, it was acknowledged the world over that there was no yarn finer than the one spun by Bengali women for Dacca muslins.[9] Yet for

[9]From the board of trade records of the East India Company as quoted by Amalesh Tripathi in *Trade and Finance in the Bengal Presidency (1793-1833)*, Oxford, Calcutta, 1979.

spinning this famous yarn, the tools these spinners had were only the "takli" and the "charka". These had not been changed or improved for centuries although better spinning technology had been available in other countries for several centuries.[10] Because of the crude tools, production was also uneven and not even the best spinner could produce fully standardized yarn.[11] Even with a full day's labour at the task a spinner could spin not more than one and three-fourth seers of yarn per month.[12] The total supply of yarn could not therefore be increased quickly even if demand was increasing. It was therefore not surprising that this fabulous skill was made quickly and totally obsolete when the new machinery devised in Britain during the industrial revolution began to spin absolutely standardised yarn at an infinitely faster speed and on a scale which could be expanded as and when necessary.

Another well-known traditional skill of women was silk reeling. Again for the indigenous silk yarn industry, women had no tools but a rough reel made of bamboo to reel on the yarn which they pulled out by hand and twisted on their thighs. The resultant yarn was uneven and brittle and could not compete on equal terms with the superior yarn produced by the filature system when that technology was introduced in Bengal by the Europeans at the end of 18th century.

What are called women's skills in the Indian economy of today are no different in character. Their main purpose is to use as little of capital or non-manual energy input as possible. For example, transplanting is largely a women's job while ploughing is not because the latter is said to require strength. Actually, ploughing is usually done by the aid of draught animals while transplanting is done by long hours of bending over. The same is true in manufacturing; in a number of small workshops we found women making glass ampoules for pharmaceuticals by manipulating glass rods over a naked gas flame. They had no measuring rods or even gloves to protect their hands. This

[10]Irfan Habib, "Indian Textile Industry in the 17th Century," *Essays in Honour of Prof. S.C. Sarkar*, ed. B. De, 1976.

[11]Barun De, "An Account of the Cultivation of Cotton in Bengal," an article in proceedings of the Indian Historical Records Commission, Trivandrum Session, 1958.

[12]Buchanon Hamilton, *Purnesh Report 1809-10*, Patna, 1928.

work in large pharmaceutical factories is done automatically by machine. Similarly in workshops making parts of electrical fans, women did the job of rubbing down cast iron parts for fan blades, rods and the balancing balls to get them smooth. They dipped the cast iron parts in an acid solution and then rubbed them with sand paper. When the same task was done in large factories it is assigned to machines and women were not allowed on the job. The machine, whose historical cost would be over Rs 25 lakhs, did the work infinitely faster than the women and the rejection rate was minimal.

Interestingly, for each of the tasks, improved mechanised tools were available. Women's skills consisted merely in replacing them with a much smaller input of capital and energy. The resultant end product was sometimes inferior and often unstandardised but generally indistinguishable in bulk from the machine product.

Since women's skills consisted of operating without proper tools and use of economy, the work is often physically harmful. Spinning for the finest Dacca muslins invariably ruined the eyesight of the spinners by the time they were thirty.[13] Transplanting rice seedlings requires constant bending over; tobacco processing is extremely harmful to lungs. The Lucknow chicken work, Narsapur lace making, or most embroidery work is bad for the eyes especially in the poor lighting that the women are allowed. In the modern electronic industry also, there is a very high incidence of damage to eyesight of workers within three years working in the industry.[14]

Use of primitive tools or reliance on manual ingenuity to an extent which is physically damaging are common characteristics of many primitive skills not necessarily of women alone. Our argument is that even in modern industries, women are seldom employed on any so-called skilled tasks except in operations using techniques of this kind.

Because women's skills mostly consist of capital and energy-saving ingenuity, they are seldom found giving a definite distinc-

[13]Sukumar Bhattacharya, *The East India Company and the Economy of Bengal.*

[14]Barbara Ehrenreich and Annette Fuentes, "Life on the Global Assembly Line", *MS*, January 1981.

tive character to the final product. Some handicraft industries have successfully survived the onslaught of mechanisation and other technical improvements in industrial processes. In these cases the final product bears a mark of craftsmanship which is treasured by the consumers and allows the slow, labour-intensive techniques not only to survive but often to flourish. The skill of the craftsman raises the quality of the product above that of the output of factories geared to large-scale production. Perhaps the size of the market for such specialties is so small that it prohibits competition from industrial processes complex enough to rival the quality of such products. Unfortunately such handicrafts seldom use women for the final stages of production. The skills which sell the product are the male workers': women's skills are limited to helping with ancillaries and are thus dispensable or at least replaceable. Mill-made cloth has never really totally replaced Indian handlooms, because the latter offered a variety of designs, qualities, textures which mill machines could not immitate except at great cost: but these qualities of handlooms came from the skill of weavers; women's skill of spinning was not obvious to the consumer and its main contribution, viz., fineness of yarn was a matter of degree, not of kind.

The women's contribution to the end product is invisible even to well-meaning policy makers became obvious in the case of the Kashmir handloom woollen cloth industry. In 1977 recently the Directorate of Industries, Government of Kashmir took up a project of modernisation of the local handloom woollen cloth industry. The main aim of the project was obviously to improve the local economy. However the very first step planned was to replace the hand spun yarn used by the industry by machine spun yarn although there were 16,000 local women engaged in spinning. The Department had not envisaged any loss of the distinct local character of the product through that measure.

The combined result of all these characteristics is that in a fast expanding, quality conscious market, women's skills are about the first to be replaced since their slow unstandardised output creates bottlenecks. In any case, their replacement by mechanised operations does not apparently alter the end product.

Women and Investment

The identification of women's skills with low technologies also works in the obverse. Any time the technique of production moves towards further mechanisation it becomes a signal for women to be pushed out of that occupation. They are denied both investment in physical capital for their work as well as investment in their training for the new kind of work. This is how Bengal's women were steadily ousted from their main occupations over the period 1901 to 1961.[15] In 1901, a quarter of worker women of the region were in manufacturing. By 1961 this percentage was down to less than 10 and even their absolute number had fallen drastically. Their main loss was in food processing. At the beginning of the century, rice pounding employed not less than 2.5 lakh women.[16] When the industry got mechanised after 1921, women lost their entire control over it. Within the one decade between 1921 and 1931, half of the rice pounders had lost their occupation and the trend continued progressively as more areas took to husking rice by rice mills.

The other major group of women industrial workers to suffer the same fate from modernisation was in textiles. The industry began to modernise in the 1950s. As a result, women's employment in it went down steadily from 82,000 in 1957 to 63,000 in 1965 and then 52,000 in 1970. Total employment in the industry hovered around 11.5 lakhs throughout the period.[17]

The practices of denying women access to work on mechanised processes and more sophisticated skills is as widespread today as over before. During the 1970s, it was brought to the notice of the Planning Commission, that in areas where agricultural processes were being mechanised, public programmes for retraining workers in the new techniques did not extend to women even in regions where those tasks such as harvesting,

[15]Census Reports, Census of India, Volumes on Bengal, Bihar and Orissa, 1901-1971.

[16]The figure may be considerably larger as uruged by Mukul Mukherjee in *Some Aspects of Economic Change in Bengal 1870-1930*, unpublished Ph.D. thesis submitted to University of Delhi, September 1981.

[17]*Women in Industry*, Labour Bureau, Ministry of Labour, Govt. of India.

winnowing, etc., had traditionally been done by women. The same is true of other economic activities. As Table 10 in the Appendix shows, women are in a very small minority in any of the publicly sponsored training programmes for newly emerging skills. In modern industries like garments, electrical and electronic goods, leather goods, etc., women were finding more scope for employment, but in each of these industries they were to be found concentrated in these units and operations which were least mechanised. Moreover, there were no examples of women workers of long standing being taught better skills or operations on more sophisticated machines. In the garment industry women were not being given the opportunity to learn cutting. In the leather goods industry, for a given operation units with more sophisticated mechaines employed men; others employed women for that task but on cruder machines. The rule of thumb about the sexual division of labour always appeared to hold good.

The reason for this reluctance to let women handle machines was not necessarily because of their lack of training. In most modern non-traditional industries, workers had little formal training. It was on the shop floor that they learnt to operate machines and do skilled work. Women were no worse than other such workers and could in principle have been trained similarly. The main barrier appeared to be a belief that women could not take the responsibility. They could at best be trusted to do routine jobs where their failures would spoil their own work but not hold up others or ruin expensive machines. Therefore even if they did work in mechanised factories, it was on assembly lines where they merely feted the ongoing process but never had controls of machines at any point.

This practice of eliminating women whenever mechanisation takes place is the chief cause of the secular decline in the manufacturing employment of the Indian women between 1911 and 1961. Sinha had estimated that in that period, of all the traditional women's jobs that had been denied to them, only 8 per cent were destroyed by obsolescence. The rest were taken over by men mostly at the point of "modernisation."[18] Tragi-

[18]J.N. Sinha, *op. cit.*

cally enough, because women's work consists mainly of the more mindless and routine tasks, their jobs are the first to get modernised or mechanised when technological choices expand and market forces permit their adoption.

IV

Women as Inferior Substitutes for Men Workers

Such a deliberate practice of discrimination on the part of profit maximising employers for long periods of time and over a variety of production processes cannot be explained except on the basis of a widespread social belief that women are inferior as workers. The individual employer does not necessarily reason to himself that women have no right to be treated as fully human; but social attitudes around him portray women as feckless, untrained imbeciles who would mess up his expensive production set-up if they were allowed to handle it. In evidence he has gathered all points the same way; the productivity of female labour is low, the output variable in quality, the skills minor and output specific. They have no talent for management or decision making. On the basis of the information at his disposal, he is acting rationally and minimising risks to his plant and machinery in disallowing women from those jobs. That this is the inevitable result of never using female labour in high productivity, high skill processes is not for him to work out. The myopia which does not allow employers to see that the very mode of production into which women are being constrained itself characterises their work is once again confirmed by every available instance of women's work. And there are no counter-instances of women working as responsible, skilled operators which could help to dispel this general prejudice.

Poor productivity due to poor equipment does not however account fully for the significant differences in male and female earnings. The problem is further compounded by certain social attitudes which themselves arise from the long traditions of associating women with low productivity work. One of them is to label any job that women do as being inferior to those that men do around them. As we saw in Section II, whenever an agricultural operation gets branded as a women's task, its relative wage

rate becomes particularly depressed. Alternatively, if a female task gets a somewhat important status, then male tasks around those tend to get automatically upgraded compared to their status elsewhere. We found several interesting examples of this in our industrywise study. For example in the frozen prawn industry, grading prawns by size is a skilled job and an important one since prices per weight of the end product are higher for bigger size prawns. Kerala women are highly skilled in this grading operation and are in demand all over India wherever the industry is developing. Even West Bengal employers bring in these skilled women from Kerala for this work in each prawn season. These women were being paid Rs 500 per month in 1982. This salary was considerably higher than earnings of both women and men in other seasonal jobs in that area. In the same plant, men were employed on unskilled jobs of loading, unloading or washing and cleaning. Interestingly they were also being paid similar salaries in those plants though their alternative earnings as unskilled casual labour would have been much lower. Since women got a higher rate, management for reasons of industrial peace had agreed to pay men more than their opportunity cost.

Another outcome of the prejudice is that, in general, for any job, if men are available at the going wage and working conditions they are *a priori* preferred to women. Employers often say that they prefer women for certain assembly line jobs or for several jobs which require "nimble" fingers: but generally this is because the jobs are extremely boring or laboriously repetitive and the employers know that men available for that work would definitely be less attentive or regular unless they are paid a lot more. If ever they find that men of same skills are available, they are fast to switch over. For example, at one time small scale units producing electrical fans used to employ women for armature winding which happens to be a fairly skilled but labour intensive job. After 1969, these units came under the minimum wages agreements in the engineering industry and the rate of payment for this job was raised considerably. The jobs then soon passed to men even when it meant making those skilled women unemployed. In our recent study of the industry, we found no unit employing women for this operation though we met several

women in the locality who had done this work ten years ago.

Cyclical Changes in Female Employment

This hypothesis that men are *a priori* preferred over women can go a long way in explaining the cyclical movements in women's manufacturing employment in India. Table 8 in the Appendix shows that from the 1920s, in each phase of the trade cycle, women's factory employment changed in a distinctly different pattern from that of men. In each period of stagnation or depression women's employment shrank in absolute numbers while male employment rose very slowly or remained stagnant (1923 to 1933 and again 1965 to 1968). When total employment was growing fast, again female employment rose much slower. This can be explained in the following terms. At the beginning of a period of recovery, employers tend to select male labour from the available pool of the unemployed. Later when the male wages tend to rise because of near full employment and/or regional bottlenecks, they start employing women because they are willing to accept lower wage rate. Often these women are employed not as regular employees but as casual, daily labour. The 1946 Labour Commission had noted that even in 1943, women were mostly working as casual and/or seasonal workers.[19] At the first sign of a downswing, the casual marginal labour is first to be dismissed as employers try to reduce their scale of operation. It is only at a very much later stage of the downswing that regular, experienced, mainly male work force faces retrenchment. The experience of women in coal mining provides a good case in point. At the beginning of 20th century, when coal mining labour was generally in short supply, women and children were in great demand for carrying coal underground.[20] However, with the first signs of the great depression the situation had changed radically by 1929 when employment of women in coal mines underground became illegal. Since male labour was easily available to replace then, a quarter of women in collieries lost their jobs within a year even though collieries had been

[19]Report of the Labour Investigation Committee, Govt. of India, 1946.

[20](a) Bengal Labour Enquiry Commission, 1896.
(b) Indian Factory Labour Commission, Vol. III, 1908, Calcutta.

allowed ten years' grace period to phase out existing women employees.[21] A large number of women even lost their surface jobs in coal mines in that short period.

The rather dramatic reversal of this cyclical pattern of relative changes in male and female manufacturing employment in the period since 1970 is not really a contradiction of our earlier hypothesis. The recent surge in jobs for women is not in any of the traditional industries of India. In fact even in those older industries where a significant number of women had been working in the past, their numbers continue to stagnate. Women are finding employment mainly in newly growing industries like electronics and electrical goods, fine chemicals and pharmaceuticals, garments and other fancy consumer goods, new kinds of processing of food items such as frozen bottled and tinned foods, jams, jellies, etc. In most of these cases the reason why women are finding employment is either because the industries have adopted fairly labour intensive primitive techniques for some processes or because they involve considerable amount of repetitive mindless tasks on the assembly line. In my study of several of these non-traditional newly growing export oriented industries in West Bengal, I found the same thing. Indeed the more interesting finding was that almost all the tasks that women did were indistinguishable from some of their most traditional tasks. In the silk industry in their work of spinning, technology and tools had remained unchanged for nearly two centuries. In prawn processing, women working on cleaning or grading prawns had always done similar work by similar methods either as housewives or as fish sellers. Same was true of garment making. Therefore the recent demand for their labour in modern industries does not really mean that they are now being absorbed in modern processes. All that it implies is that for some reason, modern industry is adopting traditional techniques and organisation for some processes and women are being absorbed in those. Women may get a preference for this because their supply price of labour for such jobs may be relatively low compared to that of men who would have to learn those skills afresh.

[21]Coal Employment, *Report of the Royal Commission of Labour in India*, 1931, page 113.

V

Conclusion

The inferior position of women in the labour market is not because they are necessarily confined to the production of inferior products or to localised markets. Their major handicap in the labour market is the identification of their work with low-technology operations. This means on the one hand that in the tasks they perform their productivity remains low. On the other hand they remain barred from efficient, responsible roles in the economy. And a continuous tradition of this kind of work leads to employers being prejudiced against them if equivalent male labour is available. Alternatively, when they do get work, it is in operations where only their kinds of skills are applicable.

The nature of these specific women-type jobs is not determined by any innate physiological capacity or lack of it in women as a sex. Nor is it determined by any simplistic version of the "Varnashram" system whereby women as a sex are considered an inferior group in the caste hierarchy. Although Manu had grouped women, dogs and low caste people (Shudras) together, in reality women of higher castes do retain their higher status over men of lower castes even in the labour market. Socially their work is always considered as superior to that of men of lower castes. For example even Brahmin women of Bengal were allowed to spin thread but never to do conservancy work.

Nevertheless, whatever the social status of a particular woman's occupation, it always has to contend with crude tools and stagnant technology. The distinguishing mark of all economic activities of women is the social tendency to minimise society's commitment in the form of capital, training, energy or innvovation for those jobs. However vital the role of a group of women may be for the sustenance of their households or for the production matrix of that sector of the economy, society continues to assume that the worker's role is at best a temporary paliative to be replaced by better alternatives as and when possible.

This is not to say that men never work under similar conditions with crude tools on physically debilitating or boring tasks; but in most such cases, one finds that over time demands of greater productivity and efficiency trigger off innovations and

investment in them to eliminate such work and replace it by machines, at first simple and later complex. Men working on those tasks move up to better ones as technology changes. Similarly, even in technologically advanced economies transition to more capital intensive techniques is not smooth or evenly spread. Some pockets always remain where work is done by primitive technology. The garment industry of the USA was one such pocket. Today, England has a similar fast growing garment industry. These pockets are manned by groups not quite assimilated in the mainstream of labour force—backs, now immigrants, scheduled caste or tribal people and equally important, by women—not just of the disadvantaged groups, but also of many other groups in the population. What is more, the barriers of social prejudice which had kept a particular group in a socially inferior set of jobs shift over time and those second class citizens gradually get absorbed in the first class citizenry. For women of all communities, however, the situation goes on unchanged till some day the pocket itself is removed by obsolescence and the job horizon for them shrinks further.

A plausible explanation for this situation can be found in the general belief that a woman's primary role is that of a housewife. Her first and foremost responsibility is supposed to be the provision to her family of all the non-marketed goods and services which come under the general label of house-work. Any other productive work she does is assigned a secondary role and is supposed to be interspaced between her various household duties.

This assumption underlies and moulds many of the social attitudes regarding women workers. Because housework is supposed to be a constant daily call on most of a woman's time, she is not expected to go away from the house for long hours on a regular basis. Hence the assumption that she would be unfit to work in factories or other jobs which involve daily absence of several hours from home. This does not rule out a tradition of her working on certain time-bound and seasonal tasks as sowing, transplanting or harvesting; but that is constructed as a temporary phenomenon unavoidable because the tasks are urgent.

The assumption that a woman would be largely pre-occupied

with housework also accounts for the reluctance to teach her marketable skills. Since she is expected to be only an occasional participant in the labour market, investment in her training is considered a waste. She is supposed to learn household skills such as pounding rice, cleaning fish, sewing cloths. And if required, she can use the same skills in economic activities. Also because of that she is not expected to devote the attention or collect the experience necessary for her to take important decisions regarding production processes. She can work on assembly line, but not on designing and products or controlling machines.

Similarly, even on a working day, woman's economic activities are supposed to be juxtaposed with her housework. In other words she is expected to do both by fits and starts. Therefore, fitting her activities with expensive tools or sources of energy is also considered wasteful ; the equipment would lie idle for long hours and constant starts and stops may ruin it or make it expensive to run.

Like any sweeping generalisation, the assumption that all women are overwhelmingly pre-occupied with housework is both short-sighted and grossly unfair. The myth that there is a socially approved division of labour wherein men do economic activities and women do housework is rarely valid. Most women do both and bear the burden of a double day without recognition. In the Indian context, the boundaries of housework are themselves not clearly defined. In most households a woman's economic contribution is crucial for its subsistence ; male earnings alone are by no means sufficient. However because a woman is barred from taking up regular paid work, she has to undertake diverse activities to make good that deficit in family's survival requirements. She adds to the real income by collecting and processing fuel, fish, vegetables or fruits. She substitutes for paid labour in activities like repairing and maintaining the house. She also looks after small productive assets such as vegetable plots, poultry or cattle. She is often self-employed in making and selling services and goods. All of this work is lumped with housework and gets no recognition. It has been mentioned before how the social accounts system continues to ignore this work of women both in estimates of national product and of labour force. Their families also give women no consideration for this. In the Calcutta study of unorganised women workers, we found that home workers got even less help with household duties than other women who went out to work.

Also, even if all women's work is categorised as housework, it still does not by itself explain why society should undervalue it as compared to men's work. That technique and tools used in women's jobs seldom change for the better even when the rest of the economy modernises, or that women's work is always paid less than men's work must be because of another equally powerful, social myth that women are basically inferior beings and their labour and effort is less valuable than men's. Unless one admits the widespread prevalence of that belief, the discrimination against women in the labour market cannot ultimately be fully explained.

APPENDIX

TABLE 1: DISTRIBUTION OF WORKING PERSON-DAYS IN (000) PER DAY OF PERSONS AGE 5 AND ABOVE BY TYPE OF ACTIVITY, INDUSTRY AND SEX

	Manual		*Non-manual*		*Total*	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*
Agriculure						
In own household	(92.93) 640,55	(56.44) 14,416	(7.07) 48,705	(43.56) 11,127	(100.00) 689,280 (71.14)	(100.00) 25,543 (15.43)
As regular employees	(96.82) 63,432	(97.82) 7,396	(3.18) 2,083	(2.18) 165	(100.00) 65,515 (6.76)	(100.00) 7,561 (4.57)
As casual workers	(98.73) 211,414	(99.35) 131,555	(1.27) 2,727	(0.65) 862	(100.00) 214,41 (22.10)	(100.00) 132,417 (80.00)
Total					968,936 (100.00)	165,521 (100.00)
Non-Agriculture						
In own household	(69.19) 98,226	(80.05) 36,561	(30.21) 42,517	(19.45) 8,830	(100.00) 140,743 (51.54)	(100.00) 45,391 (57.52)
As regular employees	(51.24) 41,489	(67.44) 9,028	(48.76) 39,482	(32.56) 4,364	(100.00) 80,971	(100.00) 13,387
As casual workers	(96.40) 49,501	(97.82) 19,700	(3.60) 1,850	(2.18) 440	(100·00) 51,351 (18.81)	(100·00) 20,140 (25.52)
					273,065 (100.00)	78,918 (100.00)

Source: *Sarvakshana*, Vol. V, Nos. 1 & 2, July-Oct. 1981, Table No. 13.2, P.S. 37.

TABLE 2: AVERAGE NUMBER OF DAYS UNEMPLOYED PER WEEK FOR PERSONS OF AGE 5 AND ABOVE IN THE LABOUR-FORCE (CURRENT WEEKLY ACTIVITY)

Sub-round	*Rural*		*Urban*	
	Male	*Female*	*Male*	*Female*
1	0.5	0.5	0.7	1.0
2	0.5	0.5	0.7	1.0
3	0.5	0.6	0.6	0.9
4	0.5	0.7	0.6	0.9
Combined	0.5	0.6	0.6	0.9

Source: Sarvakshana, Vol. V, Nos. 1 & 2, 1981, Table 39, P.S. 158-59.

TABLE 3: AVERAGE WAGE EARNING (RS 0.00) PER DAY RECEIVED BY CASUAL WAGE LABOURERS BY AGE-GROUP, TYPE OF OPERATION AND SEX FOR RURAL AND URBAN AREAS

Industry and Operation	*Rural*				*Urban*			
	Age-Group (15-59)		*All Ages*		*Age-Group (15-59)*		*All Ages*	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*
1	2	3	4	5	6	7	8	9
Agriculture (O)								
1. Ploughing		(73.8)		(74.6)				
	3.89	2.87	3.85	2.87				
2. Sowing		(62.4)		(61.9)				
	4.04	2.52	4.04	2.50				
3. Transplanting		(72.8)		(72.9)				
	3.90	2.84	3.87	2.82				
4. Weeding		(66.5)		(66.7)				
	3.40	2.26	3.33	2.22				
5. Harvesting		(74.1)		(73.2)				
	3.90	2.89	3.84	2.81				

1	2	3	4	5	6	7	8	9
6. Other (manual)		(67.8)		(68.5)				
	3.82	2.59	3.71	2.54				
7. Other (non-manual)		(70.6)		(70.3)				
	3.54	2.50	3.30	2.32				
All Combined		(69.3)		(69.2)				
	3.81	2.64	3.73	2.58	4.47	2.81	4.38	2.79
Non-Agricultural-Activities (*1—9*)								
8. Manual work in non agriculture	5.26	2.84	5.12	2.74				
9. Non-manual work in non-agricultural activities	5.22	2.60	5.08	2.60				
All Combined	5.26	2.83	5.12	2.74	6.57	3.12	6.29	2·99

Source : Sarvakshana, Vol. V, Nos. 2 & 3, 1981: Tables 42(R) and 42(U) P.SP. 63-166.

TABLE 4: AVERAGE WAGE/SALARY EARNINGS (RS. 0.00) PER DAY RECEIVED BY REGULAR WAGE/SALARIED EMPLOYEES (31 AND 71) BY SECTOR (INDUSTRY OF WORK, SEX AND AGE-GROUP)

Indutry & Sector	*Rural*				*Urban*			
	Age-Group (15-59)		*All Ages*		*Age-Group (15-59)*		*All Ages*	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*	*Male*	*Female*
0	3.91	3.94	3.56	3.71	6.28	5.32	5.62	5.19
1—9	10.49	8.05	10.14	7.28	15.10	9.87	14.80	9.25

Source : Sarvekshana, Vol. V, Nos. 2 & 3, 1981; Tables 41, P.S.162.

TABLE 5: WEEKLY EARNINGS AND PERCENTAGE OF WORKING DAYS OF MALE AND FEMALE LABOUR FORCE URBAN ALL INDIA—1972-73

General-cum-Technical Education Group	Average Weekly Earnings		Female Earnings as % of Male Earnings	Hours Worked as Percentage of Total Available Work Hours per Week		Column 6 as Percentage of Column 5
	Male	Female		Male	Female	
1	2	3	4	5	6	7
1. Illiterate	29.53	14.41	48.80	91.48	81.60	89.20
2. Illiterate with some technical training	59.75	27.21	45.54	99.69	66.67	66.88
3. Literate but below Primary level or with Primary Education	68.30	19.17	28.07	92.20	80.13	86.91
4. Literate or with Primary Education and with some Technical Training	66.13	50.53	76.41	94.51	71.20	75.34
5. Middle Education	47.12	33.91	71.96	89.16	69.54	77.99
6. Middle Education with some Technical Training	67.41	50.18	74.44	85.84	69.75	81.26

Source: Table (5) and Table (3) of the *Survey on Employment and Unemployment, National Sample Survey*, 27th round October 1972 to September 1973, 255/10 series.

TABLE 6: ALL INDIA (RURAL)

	Workers Usually in Household Enterprise Seeking Agri. Work.	Workers Usually in Household Enterprise Seeking Non-agri. Work	Usually in Wage Employment or Bondage Seeking Agri. Work	Usually in Wage Employment Seeking Non-agri. Work	Usually Working as Casual Workers in Any Farm or Non-farm Occupation.	Usually Unemployed Seeking Any Work	Usually Engaged in Domestic Work and Gathering etc.	Total
	1	2	3	4	5	6	7	8
Want to work in (M)	37.36	27.52	33.54	24.35	33.84	15.70	55.80	32.14
village/town only (F)	75.99	84.84	77.46	70.62	62.17	56.43	78.13	64 94
Rs 3.00 wiling to work at Rs 3.00 or below in own (M)	18.99	9.54	22.69	7.87	22.06	8.35	45.54	18.78
village/town only (F)	60.90	36.65	47.08	44.58	57.09	35.49	47.78	53.75
3.00+3.01—5.00 willing to work at Rs 5.00 below in (M)	57.01	39.31	63.60	33.39	70.46	36.19	80.13	60.35
own village/town (F)	90.85	78.92	87.51	78.58	86.32	68.81	99.58	85.98
Required Rs 5.00 or above to work in own village/ (M)	29.66	64.58	27.99	62.33	28.70	59.26	10.93	34.85

		1	2	3	4	5	6	7	8
town only	(F)	6.88	12.30	12.86	20.26	7.08	29.56	7.37	10.05
Willing to work at Rs 3/- or below outside own village/	(M)	1 24	1.40	4.19	1.24	5.26	2.04	10.26	3.51
town only	(F)	7.72	4.60	4.12	7.05	11.90	10.24	7.78	10.51
Willing to work at Rs 5/- or less outside own	(M)	11.52	10.30	20.53	6.59	23.52	18.21	27.01	17.64
village/town only	(F)	17.52	18.06	16.93	16.03	26.12	21.02	14.12	22.84
Requires Rs 5/- or more to work outside own	(M)	48.75	76.84	45.99	69.06	42.65	72.79	16.96	50.06
village/town only	(F)	7.39	21.19	5.61	13.41	9.07	24.68	6.73	10.18

Source: Sarvakshna, Vol. V, Nos. 1 & 2, July-Oct. 1981, Table 46, P.S. 173-76.

TABLE 7: ALL INDIA (URBAN)

		Worker Usually in Household Enterprise Seeking Agri. Work	*Workers Usually in Household Enterprise Seeking Non-agri. Work*	*Usually in Wage Employment or Bondage Seeking Agriculture Work*	*Usually in Wage Employment Seeking Non-agriculture Work*	*Usually Working as Casual Workers in any farm or Non-farm Occupation*	*Usually Unemployed Seeking any Work*	*Usually Engaged in Domestic Work and Gathering etc.*	*Total*
1		2	3	4	5	6	7	8	9
Want to work in	(M)	32.83	29.22	26.93	31.79	36.61	26.89	48.98	31.62
village/town only	(F)	85.38	67.75	45.00	67.70	69.64	63.97	84.87	69.80
Rs 3/- Willing to work at Rs 3/- or below in own	(M)	4.14	1.93	12.27	4.13	7.38	3.28	22.95	4.84
village/town only	(F)	57.63	25.37	75.00	27.51	54.02	15.59	21.23	30.90
3.00+3.01−5.00 Willing to work at Rs 5/- below in own	(M)	35.92	15.20	52.00	19.37	37.99	21.95	51.02	27.23
village/town only	(F)	88.14	59.15	75.00	54.87	92.44	42.35	56.03	63.20

1		2	3	4	5	6	7	8	9
Required Rs 5/- or above to work in own village/town only	(M)	60.58	78.17	46.40	76.35	60.86	76.96	48.98	70.25
	(F)	8.90	33 33	25.00	41.65	15.31	57.12	28.28	35.70
Willing to work at Rs 3/- or below outside own village/ town only	(M)	0.94	0.29	2.13	0.37	1.09	0.60	—	0.72
	(F)	4.45	4.62	30.00	0.70	5.30	1.45	2.34	3.00
Willing to work at Rs 5/- or less outside own village/ town only	(M)	4.29	3.03	18.95	3.78	11.47	4.97	10.20	6.97
	(F)	9.32	12.86	55.00	10.12	17.50	6.85	6 84	10.90
Requires Rs 5/- or more to work outside own village/ town only	(M)	63.04	67.76	53.60	64.37	54.20	70.35	40.82	62.67
	(F)	5.30	19.38	—	22.33	11.14	29.54	8.18	18.50

Source: *Sarvekshana*, Vol. V, Nos. 1 & 2, July-Oct. 1981, Table 46, P.S. 173-76.

TABLE 8: PERCENTAGE OF RATES OF CHANGES IN FACTORY EMPLOYMENT (ALL INDIA)

Year	*Male*	*Female*
1923-33	(+) 4.8	1.9
1933-39	(+) 28.3	12.3
1939-43	(+) 42.4	7.5
1951-55	(+) 10.2	(+) 5.4
1955-65	(+) 49.9	(+) 16.2
1965-68	(−) 0.08	(−) 12.2
1968-76	(+) 20.11	(+) 47.5

Sources: For figure uptil 1943 see Report of the Labour Investigation Committee, Govt. of India 1946. From 1951 up to 1976, GOI Statistical Abstract, All India.

TABLE 9. RELATIVE POSITION OF WOMEN IN AGRICULTURE IN DIFFERENT STATES OF INDIA 1977-78

States	Women Agricultural Workers as Percentage of Total Female Population	Share of Women in Total Labour Days in Agriculture	Share of Women in Casual Labour Days in Agriculture	Ratio of Female to Male Average Daily Earnings of Casual Labour	Transplanting		Weeding		Harvesting	
					Share of Women in Casual Labour	Ratio of Earnings of Casual Labour Female to Male	Share of Women in Casual Labour	Ratio of Earnings of Causal Labour Female to Male	Share of Women in Casual Labour	Ratio of Earnings of Casual Labour Female to Male
Andhra Pradesh	38.60	35.80	50.06	63.17	74.15	69.84	74.45	72.86	52.91	70.80
Bihar	16.73	20.55	31.02	90.83	50.00	83.92	45.09	90.82	42.38	85.98
Gujarat	31.23	33.67	37.15	90.00	49.68	92.86	44.44	90.95	38.13	82.80
Haryana	10.36	16.89	23.84	83.91	28.51	83.74	10.39	64.58	48.29	67.07
Karnataka	32.66	32.87	41.55	65.67	60.66	45.30	63.35	52.90	50.14	43.40
Kerala	11.61	29.73	22.80	63.20	24.21	49.77	24.48	68.03	39.89	70.72
Madhya Pradesh	41.10	26.21	43.36	94.96	51.02	80.57	56.67	95.79	53.82	118.77
Maharashtra	43.15	41.39	54.24	63.72	62.44	87.99	73.78	66.91	67.97	64.82
Orissa	21.93	22.50	31.30	75.40	59.66	74.63	41.20	74.65	31.65	70.10
Punjab	7.89	18.97	23.52	38.67	34.89	69.05	5.27	84.74	36.58	69.26
Rajasthan	36.08	45.64	41.89	67.42	87.59	61.34	50.11	35.92	60.02	67.19
Tamil Nadu	31.84	37.49	48.23	58.24	83.61	60.41	74.10	63.41	55.88	62.70
Uttar Pradesh	16.59	22.83	26.17	75.00	55.65	62.78	40.08	64.11	35.99	75.06
West Bengal	6.06	9.27	13.64	81.00	24.98	82.33	17.53	66.58	19.14	88.72

Source: Report of the 32nd Round NSSO Survey of Employment and Unemployment 1977-78. Report Series No .298, Tables No. 10, 13 and 42.

TABLE 10 : STATEMENT SHOWING TRADE-WISE BREAK-UP OF TOTAL CAPACITY AND STUDENTS ON ROLL AS ON 31.3.1978 UNDER CRAFTSMEN TRANING SCHEME

Sl. No.	Trade	Capacity	On Roll as on 31.3.71	
			Men	Women
1.	Building construction	384	269	—
2.	Draughtsmen (civil)	3413	3543	82
3.	Draughtsmen (mech.)	3998	4041	43
4.	Electrician	16339	17169	7
5.	Electroplator	432	329	—
6.	Fitter	25567	25744	9
7.	Instrument mech.	2425	2218	41
8.	Machinist	11955	11894	17
9.	Machinist (grinder)	2052	1990	—
10.	Mechanic (M & V)	8749	8513	—
11.	Refrigeration and air conditioning	2188	2017	14
12.	Mechanic (Radio & Television)	4150	3773	123
13.	Pattern maker	1168	852	—
14.	Surveyor	1795	1625	19
15.	Turner	16003	15973	20
16.	Watch and clock-maker	304	244	11
17.	Wiremen	10274	9887	5
18.	Electronics	1228	1157	54
19.	Tool and die making	924	935	3
20.	Millwright mech.	232	269	—
21.	Farm mechanic	224	175	—
22.	Blacksmith	2371	1625	4
23.	Carpenter	3808	2721	22
24.	Mechanic (diesel)	2944	3143	—
25.	Mechanic (tractor)	2478	2358	—
26.	Moudler	3790	3531	20
27.	Painter	819	717	55
28.	Plumber	1305	1219	3
29.	Sheet metal worker	2846	2247	70
30.	Upholstry	48	32	—
31.	Welder (gas and electric)	9778	9881	3
32.	Wireless operator	146	123	—
	Sub-total :	144138	140212	625

Source : Papers of the Planning Commission Working Group on Women's Employment 1978.

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PART FOUR

MEASUREMENT AND THE HOUSEHOLD

9

On the Issue of Underenumeration of Women's Work in the Indian Data Collection System

SUDHIR BHATTACHARYYA

Although statistical records about the Indian economy are still far from adequate, there is now a history of over a hundred years of official attempts of obtaining an estimate of the total number of economically active population in the country. Ever since its inception in 1972, the decadal population census system of India had continuously tried to categorise the total population into those with income earning activities and those without. These attempts were further refined by the 1961 Census when, for the first time was introduced the concept of a worker, i.e., a person engaged in a socially productive activity, whether income-yielding or not. Since 1950 the Indian National Sample Survey (NSS) has also been collecting similar information about participation in work or economic activity (whether gainful or not) through repeated sample surveys. Apart from other official data collection systems, these two, the population census and the NSS will continue to be important and regular sources of this information by sex, region and age for the Indian population.

The adequacy of the conceptual framework and procedure adopted by data collection agencies in collecting information about the extent of economic activities especially of the female population has always been a matter of academic concern. The debate has gained special importance in the last decade not only in the developed countries but also in the Third World and

especially in India.

Official Indian statistics[1] indicate that women continue to lag behind men in all spheres of life—social, political and especially economic. Their economic activities appear to be considerably less important than those of men. In recent years, women's participation in the labour force (the standard statistical indicator of the extent of economic activity) has never been more than 28 per cent of total female population. However, there is now considerable literature, especially by feminist authors, arguing that these figures do not reflect the full extent of Indian women's involvement in productive activities, both within their households and outside in the wider economy. This is so, they argue, because the concepts, measures and techniques used by these data collection systems are not appropriate for the Indian situation.[2] Customs and traditions about sexual division of labour place women in such an unfavourable situation that a large part of their work bypasses the perception of men and women. This lack of perception is reflected also in the design of the data collection machinery so that while the system gives satisfactory results for men, it fails singularly in the case of women.[3]

In view of these repeated references in various national and international forums to the faults of the Indian data collection system with regard to women's work, the question needs careful scrutiny and study. What makes the problem even more interesting is the fact that in spite of these widespread criticisms, the Indian data collection system stands on a distinctly better footing as compared to other Third World countries, especially those countries where there are cultural restrictions on women disclosing their participation in productive work done both for the household and for the society.[4] This issue is raised here

[1] *Women's Activit'es in Rural India Part I : Study Report*, National Sample Survey Organisation, Department of Statistics, Ministry of Planning, Government of India, June 1981.

[2] Amartya Sen, *Employment Techonology and Development*, Delhi Oxford University Press, 1975.

[3] Devaki Jain and Malini Chand, Institute of Social Studies Trust, *Report on A Time Allocation Study—Ist Methodological Implications.*

[4] Helen Ware, "Women & Work : A Background Note" circulated in the Technical Seminar on Women's Work and Employment, New Delhi, April 1982.

because in some of the national and international gatherings organized to discuss women's questions in developing countries and gaps in their data base, India's distinctly different position is seldom highlighted. Tasks formulated there are often considered equally applicable to all third world countries including India. Very little is said about the fact that even the relatively sophisticated Indian data system sometimes fails to capture all the relevant work sitautions particulrarly of women and children. What this implies is that the existing system, however refined, may have inbuilt problems for dealing with work situations that are common to all backward, especially, rural economies. The entire system needs to be suitably reconstructed and adapted to the conditions of each country.

In this paper we shall briefly bring together several aspects of this question with a view to place the subject matter of the debate in proper perspective. This would help in formulation of a few operationally feasible corrective measures.

In section two we shall try to itemise the different types of work situations that women face either perforce or according to their free will : we also discuss the problems that statistical operations face in identifying each one of them. The causes responsible for enumeration of women's work can then be clearly indicated.

In section three, some of the critical views regarding the gaps or procedural inadequacies of the existing data collection system in India are presented and they have been examined in the light of categories and concepts indicated in section two. The process and direction of rethinking currently initiated in this country and also abroad towards building up reasonably adequate statistical standards and procedures particularly for collection of data on women's work will be outlined in the concluding section.

What Constitutes Women's Work ?

Any difference of analytical significance between men's work and women's work cannot be clearly understood unless a critical analysis of the pattern and conditions of their work is made [5]

[5] Vibhuti Patel and Maitreyi Krishnaraj, "Domestic Work : Problnms and Perspective." Technical Seminar on Women's Work and Employment, April 1982.

A basic difference observed in the workstyle practised by women and men is that, while women predominantly work indoors, men spend the major part of their working time in outdoor work. In other words, the former's work is essentially restricted to the private sphere of "households" while the latter in the main, work outside the "household" boundary. This is not to say that women do not perform any outdoor work or men do not perform any indoor work within the private sphere of household. It is only that the respective domains of work of women and men, *i.e.*, where they spend the major part of their working time are different. The choice of the domain of work, particularly for women, does not in the main, rest on their free will ; it is primarily the result of relegation by tradition of the responsibility of house-making or house-keeping work (often termed "housework" or "domestic work") to women in almost all societies.

Moreover, all underdeveloped countries including India are marked by the predominance of agriculture and household-based production units where there is non-wage employment of family members. This is especially true of the subsistence or non-market part of such productive activities. In these household economic units, work for generation of output and income is divided amongst men and women according to some set patterns. While these patterns of division of labour between men and women are not identical in all regions within India, there is a general tendency to assign to women roles which can be suitably combined with household tasks which are regarded as their primary responsibility. Therefore their productive tasks tend to be mainly confined to the private, indoor domain of the household. Also their participation in household productive activities is likely to be intermittent, casual and often marginal. This is generally true though at times, especially in the busy seasons of agriculture, women are required to bear the full load a day's productive work along with or at some sacrifice of their regular household tasks including care of children and the aged.

Invisibility of Women's Work

On a careful study of women's work pattern, what appears to

be striking is their ingenious technique of combining the two distinct types of activities, housework and productive work. However, because house-keeping work keeps women occupied for much longer hours in a day, often the other productive or gainful part of the total work burden is lost sight of. Not only is this productive part of their daily activities often invisible to the outsider, *i.e.*, to the statistical enumerator, but also to the male and even female members of the household themselves. The tasks appear to be small and not worth attaching separate identity, not to speak of value to them. This element of invisibility associated with women's 'productive work' is an important reason for its under enumeration and under valuation.

While household based production may also in some cases mean that men too work within the household, there is much less chance of their being left out of the labour force by the statistical enumerator because, by convention, they are expected to be engaged in income earning activities, and also because their productive work pattern is usually continuous and in full sight of others. Some of their work on household tasks such as repairing, dwellings or collecting fuel and fodder may go unrecorded ; but by and large they are not likely to be left out of the ranks of economically active population.

The broad outline of women's work pattern as described above is still the dominant one on the Indian scene and particularly in the rural areas; other variants of the pattern are also observed. However, in metropolitan cities and large urban areas, income and output earning pursuits are almost the same for men and women because most workers are wage and salary earners. One should not however miss the significant point that in such areas, the proportion of women participating in income and output earning work is itself extremely low. And notwithstanding this similarity of work pattern, the urban women also bear the major responsibility for housekeeping work. Thus they also carry the double burden of housework and productive work in the same manner as women in rural areas. The only difference is that the problem of invisibility is not that marked as the quantum of productive work performed within the household is relatively much smallar in urban areas.

Low Asset Base and Perception of Work

The invisibility issue discussed above becomes especially important in the non-marketed or subsistence sector where output generated in household-based units of production is not sold or exchanged in the market but is directly consumed by the household. The subsistence sector, whose existence is also an indicator of underdevelopment, comprises of households with a low asset base, be it land area or cattle or spindles. Because of the small size of the asset base, the household normally does not think of generating marketable surplus ; whatever is produced there generally goes into household consumption. Because total productive work input of household members will be much less in such households as compared to that in households having a larger asset base, the contribution of women members of households as participants in generating this non-marketed product can only be small in absolute size, however crucial it might be to the survival of the household. The separate identity of this marginal work, which in major cases is performed only intermittently together with women's other work of housekeeping, is more often likely to be lost in reckoning. In effect the work also becomes "invisible."

Subsidiary Productive Work

This invisibility question may once again appear in predominantly wage or salary earning households, which, besides the house site, some land utilised only as a kitchen garden, or for keeping a few poultry birds, a cow, a buffalo or a few goats. Products accruing from either one or all of these assets are often not even adequate for satisfying the needs of the household itself. Compared to the main work related to wage/salary earnings by the men and to housekeeping by the women, work performed in such subsidiary productive activities both by men and women will be so small and marginal as to be totally ignored for separate identification ; most probably women's participation in these productive activities will be taken as integral part of the "housework" and will not be counted as "work". Men's participation in wage/salary earning will necessarily be their major work and will obviously be counted as "work" in statistical enumeration.

The most interesting part of the story is that women themselves will most probably agree with this kind of assessment by the statistical enumerator of their contribution towards the productive activity pursued in the household. In other words, their perception of their own role may be no different than that of the men or of the statistical enumerator. This is the main crux of the perception problem confronted by the Indian data collection system.

Categories of Women's Work Situations

In view of the foregoing discussion, we have attempted a categorisation of women's partly by the work content of each task but also by the situation in which the tasks are performed. The same task, be it of cultivation or of processing the output or helping in a family enterprise, can be more or less visible and amenable to enumeration depending on (*a*) whether it is performed for wage or not, (*b*) the extent of time regularly allotted to it, and (*c*) also on the relative value of its output to the household. Several tasks are found in more than one of our categories precisely because in different circumstances there are more or less chances of their being invisible. This kind of listing should be of some help to finding a way of bringing into the statistical net a larger part of women's productive work that now goes unnoticed.

In this categorisation, we have not gone by the usual procedure of classification according to "work" and "non-work" as done in the census or according to "labour force" and "not-in-labour force" as done in the NSS. We have adopted a simple procedure of classification of all the different items of work that women normally perform both inside and outside the household. However, while we aim at presenting a list which broadly includes all types of women's work it is proper to mention here that the most important work of "reproduction" has not been included. In no data collection system is this work brought under the coverage of either productive or unproductive work. The category-wise list of women's work is given in Table 1.

TABLE 1

Category	*Description of category*	*Item of activities*
(*1*)	(*2*)	(*3*)
A	Household chores in own household	(*i*) Sweeping, cleaning of residential house and its surroundings. (*ii*) washing—clothing and utensils of household. (*iii*) cooking (including grinding of grain, pulses, cutting of vegetables, fruits etc.) for household members and guests. (*iv*) child care. (*v*) attending to old, disabled and diseased members of household. (*vi*) fetching drinking water for household use. (*vii*) collecting fuel and firewood for household use. (*viii*) purchases of groceries, garments and household necessities. (*ix*) sewing and mending of clothing, for household use. (*x*) tutoring of household children. (*xi*) observance of social and religious duties. (*xii*) own schooling and attending to higher studies, training, etc.
B	Pseudo household chores : activities which belong to the primary or secondary production sector but are performed solely for consumption within own household.	(*i*) preparation rice, flour etc. from paddy, wheat and other cereals. (*ii*) pounding of rice, pulses, spices etc. (*iii*) milking of cows for production of milk for household consumption. (*iv*) attending to household cattle. (*v*) preparation of ghee, butter, curd, panir etc. exclusively for household consumption. (*vi*) papad, achar, sauce, pickle making for household consumption. (*vii*) attending to household poultry for production of eggs exclusively for household consumption.

(*1*)	(*2*)	(*3*)
		(*viii*) manufacture of chira, muri and similar other products from rice and other cereals, pulses, etc. (*ix*) helping male members of household in minor construction, repair of own house and cattlesheds, such as thatching of roof, construction of fencing, etc.
C	Work in household cultivation or other enterprises for the production of goods or services solely for household consumption.	(*i*) substantive participation in terms of considerable time spent in the production process. (*ii*) only intermittent, casual or seasonal participation in the production process by extending a helping hand to the male members of the household.
D	Work in household cultivation or other enterprises for the production of goods and services mainly to be sold in the market but also partly consumed in household.	(*i*) substantive participation in terms of considerable time spent in the production process. (*ii*) only intermittent, casual or seasonal participation in the production process by extending a helping hand to the male members of the household or by working only part-time.
E	Work done for others in cultivation of any other enterprise for production of goods and services in lieu of wages or salaries or exchange of services.	(*i*) only part-time work done. (*ii*) full-time work done. (*iii*) intermittent and casual participation as exchange labour in others' enterprises.
F	Work done essentially outside the household to persue one's own independent profession.	(*i*) part or full-time participation in the work of the profession depending on its nature.
G	Search for work	(*i*) efforts made in search of work.

Probable Sources of Underenumeration

In our search for locating the sources of underenumeration, we would at the outset dismiss the notion that there is any conscious motivation which guides either the census or the NSS

to formulate their concepts and/or data collection techniques in a manner that hinders proper enumeration of women's work. No doubt there are leakages in their conceptual frames. In fact we shall in due course identify some of those leakages. However, it is worthwhile to emphasize that neither the loose use of the term "male bias" against the entire data system, nor a stance of total complacence about the perfectness of the census and the NSS system can be considered a scientific approach towards solving the problem. We do not like to treat perception problem and 'bias' on the same plane as they describe two distinctly separate situations. On the other hand, to achieve perfection in recording human behaviour, particularly in a developing economy like India is an almost impossible task.

In all countries whatever their socio-cultural patterns, once women and men attain workable age, (this age varies from country to country according to the prevailing socio-economic conditions obtaining in those countries), they start doing work for themselves, their own families (or in a stricter sense household), their kith and kin and lastly the society. Here the term "work" has a wider connotation to mean both socially useful (or "fruitful") work and also work performed for the production of goods and services (which is labelled as productive or gainful work). It is well known that all fruitful work is not considered productive. Productive or "gainful work" may further be split up into two categories: one which has "use value" and the other which has "exchange value". While the latter is easily amenable to evaluation with the usual tools of economic science, the former is not.[6] This dichotomy is relevant in explaining the differences in the definition of work by the census and by the NSS. In case of some work, only use value criterion is used while in other cases exchange value criterion is used.

Housework

Of the categories listed in Table I, items of work listed under category A called "housework" are by definition treated both in the census and the NSS as non-work and thus straightway considered not relevant for the purpose of enumeration of

[6]Swapna Mukhopadhyay, "The Nature of Household Work", Technical Seminar on *Women's Work and Employment*, New Delhi, April 1982.

women's work. Neither in the "Instructions of Enumerators" issued by the census administration nor in the "Instructions to Investigators" issued by the NSS, does one find any attempt to clearly and unambiguously define "housework" and this creates a lot of confusion in using the terms "housework" or "domestic work" etc. But on the whole, the definition of "work" provided for in the said instructions, by implication, suggests that within the broad category "housework", they want to include only the washing-cleaning-cooking drudgeries normally performed under all circumstances by Indian women. In spite of the gradual increase of hired help in the relatively affluent Indian households, these tasks are predominantly performed by women within the private sphere of the household. Conventionally, in all countries those who are engaged in housework to the exclusion of all other activities are not included in the labour force. Nor is the value of their product included in the total national product. Following that convention, items included in category A of Table I are those household tasks which are definitely intended to be excluded from enumeration of work by both agencies, the census and the NSS. This is a concrete case not of underenumeration, but of nonenumeration by official policy.

In recent years, writings on women's issues have raised questions about the justification in treating all housework as non-economic activity.[7] Even in this country some leading economists have strongly argued in favour of a meticulous enumeration of "housework" in terms of time spent daily by women for such work, and have suggested methods for evaluation of those work items in monetary terms. The matter still remains unresolved since others have raised questions about the feasibility of such exercises under the prevailing structure of the Indian economy. Apart from the theoretical issues involved, the measurement of labour force has also to be synchronised with the computation of national product and official decisions to change the conceptual framework of both the data systems have to be taken together. Otherwise, there will be serious inconsistencies in estimates of labour force and of the value of their

[7]Gita Sen, Changing Definitions of Women's Work—A Study of the Indian Census: Paper contributed to the *Golden Jubilee Symposium on Women, Work and Society*, New Delhi, September 1982.

total product.

Nevertheless, we still feel that there is need to disaggregate the different tasks that are lumped together under the category housework and to estimate the relative time spent on each by women. There is no reason why the national data collecting systems cannot, with reasonable accuracy, collect such information for a week or a day on a sample basis. This is essential if we are ever to recognise the extent of women's participation in housework which limits "their access to education, employment and participation in public life through curtailing their time and mobility" and may also have an "adverse effect on women's health". The recent attempts of the NCAER in this direction are particularly welcome and we look forward to their results.

So far we have discussed about the most important non-enumerated women's work, *i.e.*, "housework". Added to this category of non-enumerated activities are activities like begging, rent receiving, soliciting, attending educational institutions; these activities are also considered non-economic by the Indian data collection system. This procedure is not peculiar to the Indian system alone: but clubbing "house work" with these kinds of activities may justifiably be questioned in the Indian context because of the major role of "housework" in women's lives under Indian conditions.

"Productive" Activities

If we attach some value to the general belief that women in general, excepting a small proportion of them in urban areas are "overworked rather than underemployed", then it is difficult to establish that non-enumeration of "housework" is the sole cause for the generation of a considerably low "work force" or "labour force" participation rates of Indian women. We have to look for other sources of enumeration errors.

Of the other categories of work in Table I, sections E and F are the two problem-free areas for the purposes of enumeration of women's work. Since work in question is carried out by women outside the household in lieu of wages or salaries, the enumerator has no difficulty in identifying such work; no invisibility question is involved. Also when women members of the

household have secured the freedom to work outside, male respondents will hardly find any justifiable reason to suppress information in this regard from the enumerator. Thirdly, regarding the type of women's work performed in exchange of wage or salary, both male and female members of the households have no divergent perceptions. Therefore, in this area of women's work, exclusion of any work items from enumeration is hardly possible if the enumerators can reach the proper household and find out the appropriate persons there to respond their questions.

Therefore, one has to scan items of work listed under categories B, C and D presented in Table I to locate the probable sources of underenumeration of women's work. Of these three categories again, the relatively hazy area is that covered by categories B and C which are performed in the non-marketed or subsistence sector of the economy: the product or services generated in this sector are totally consumed by the household. Because of the nature and condition of women's work obtaining in this sctor, it is most likely to be the key area where the extent of underenumeration is maximum.

Unpaid Work

Some researches hold that, the main reason for underenumeration is the "unpaid" nature of most of the productive activities done by women in their own household cultivation and other non-cultivating enterprises.[8] They claim that such activities generally remain "invisible" either because they are not adequately reported by male respondents or they are not adequately identified by the interviewer. We feel hesitant to entertain this view without reservation about unpaid work in general. At least in category D, this should not be the case, both in the census or in the survey operations of the NSS, special efforts have been made all through to net in this category of work. In the earlier census operations when a hybrid income cum-work concept was in use, some of the "unpaid" family workers might have been overlooked in enumeration. Even then instructions were to include

[8]S. Ramachandran, "Methodology for Valuating Women's Contribution to Economic Activities", paper contributed to the Technical Seminar on *Women's Work and Employment*, New Delhi, April 1982.

"unpaid family worker" as a special case even though no income accrued to the worker for the performance of such work. However, since the adoption of the "work concept" since 1961 Census and subsequent improvements made on it for the 1981 Census, there is apparently little scope for exclusion of work of the "unpaid" type from enumeration of women's work in the Indian Census. There is however still some confusion about such work in households producing solely for own consumption which we have discussed later.

In the NSS also right from the beginning when it started collecting information on economic activity, "unpaid" family workers are being enumerated. Various titles have been used to identify the category, such as "unpaid household enterprise worker" or "unpaid helper". By and large, a consistency in the estimates of this "unpaid" type of productive work had been observed in the published results. It is only in the recent rounds of NSS (the 27th and 32nd rounds), that one finds a noticeable fluctuation in the estimates of "unpaid helpers". This has happened because of the adoption of an altogether different definition for the 32nd round of the NSS survey. This new definition attempted to separate, amongst the usual unpaid helpers in the household farm and enterprise, those who have ownership rights in such farm or enterprise from others who have no such right. This was done with a view to treat the former as "self-employed" in farm or enterprise and the latter as "unpaid helpers". For men, there probably was no enumeration error since the total of the estimates of "self-employed" and "unpaid helpers", remained by and large of the same order. For women, however, the 32nd round estimate of "unpaid helpers" has drastically gone down. Thus the introduction of the definition has created some special problems for the NSS but this cannot be attributed to slackening of alertness in capturing the "unpaid family workers" in the NSS investigation. The reason for the confusion may be ambiguity regarding women's title to family assets.

Underenumeration because of Lack of Perception of Workers

We have labelled work-items listed under category B of Table I as "pseudo-housework" only to emphasize that these items of work should all be considered as productive work in collecting

data on economic activity by both the census and the NSS and also for constructing national accounts. However even if definitions of work to include there are adopted, they may still miss enumeration because they are treated as part and parcel of housework by the members of the household themselves. Their separate entity is seldom recognised by men or women who perform them. As a result while reporting as respondents, household members, whether males or females, normally merge these work-items with "housework" and only "housework" gets recorded in the census or the NSS field records. There are numerous examples of this especially in the rural Indian scheme : preparation of rice from paddy, attending to domestic cattle producing a small quantity of milk and manufacturing of butter, ghee, lassi, curd, buttermilk only for household consumption, feeding a couple of poultry birds which produce a few eggs which are consumed by household members or even participation in minor construction or repairs of residential house, cow sheds, etc. These tasks are not considered a job qualitatively different from the usual washing, cleaning, cooking, childcare drudgeries performed by women, because after all, these activities remain confined within the private sphere of household and meet only household needs.

We also saw before that some tasks of category B and also of C and D [especially C (ii) and D (ii) level] to escape notice because: (*a*) Value of such productive work is small in absolute terms ; (*b*) Relative to housework, the tasks take only a small part of the working time and attention.

However foolproof a statistical kit one may use, these tasks will go unenumerated unless a thorough and in-depth probing equiry is pursued to cull them out from "housework" and to enumerate them separately. Given that census enumeration is conducted by a team of *ad-hoc* enumerators and that normally the time spent for enumeration is very short, it will be unfair to expect in-depth probing from census operations. And, even if arrangements for the required in-depth probing are made either in the census or in a more favourable kind of data collection network that NSS has across the country, the quality of enumeration would improve only slightly unless these deep-seated blocks in perception of men and also women regarding "housework" are themselves removed.

Problems of Official Definitions

Apart from constraints of perception, the type of concept of "work" adopted in the 1981 Census and also in the NSS 32nd round survey hinders enumeration of work items listed under categories B and C irrespective of whether they are performed by men or women. The kind of instructions laid down in the 1981 Census Instructions Manual to test whether or not a particular activity is "work" only helps to confuse the issue further.

Census Instructions say:[9]

> (*a*) [Para 79]: "work may be defined as participation in any economically productive activity".
>
> (*b*) [79 (vi)]: "An adult women...if in addition to her household work she engages herself in work such as rice pounding for *sale or wages*, or in domestic services for wages for others or minding cattle for *wages* or selling firewood or *making and selling* cowdung cakes or grass or *any other work like cultivation* etc. she should be treated as working".
>
> (*c*) [Para 84]: "a man or woman who is doing only household duties or making something *only for domestic consumption* (and not for sale) is *not doing any work* in census terminology".

It is clear that: (*i*) instructions quoted in (*a*) contradict subsequent instructions quoted in (*b*) and (*c*). According to latter two instructions, productive activities performed in cultivation and also in such other productive activities as performed only for sale or wages will be considered as "work". That means that "making something only for domestic consumption (and not for sale) in secondary or tertiary sector is not work"; (*ii*) productive activities performed in the subsistence sector of agriculture are to be treated as "work" in census enumeration. However, it is not clear if "Agriculture" includes only 'cultivation' or all activities covered under Division 0 in the National Industrial Classification (NIC) in the subsistence section.

[9]Census of India, 1981 : *Instructions to Enumerators for Filling up the Household Schedule and Individual Slip :* Office of the Registrar General & Census Commissioner for India, New Delhi, Ministry of Home Affairs.

Compared to the census procedure, the NSS, procedure is much more inclusive and liberal. In the NSS, all productive activities performed under such circumstances in the primary sector, *i.e.*, agriculture, animal husbandry, fishing, forestry, etc. are treated as "work". However even in the NSS, items of productive work performed in the secondary and tertiary sectors are to be included only if they are for sale or exchange. Similar work items done only for household consumption are to be excluded. As a result, the NSS survey operation also excludes some of the work items listed under categories B and C which should properly be considered productive.[10]

It is officially being claimed that:

> With the liberal definition of 'working force' currently being used in the population census as well as the NSS surveys, marginal workers engaged in primary production partly or wholly used for own consumption are also expected to be included in the working force and the national product broadly in conformity with the recommendations of SNA particularly at the overall level.

This claim is in fact not valid. It is not based on any deep analysis of either the census or the NSS procedure adopted for the enumeration of "work" of men and women.[11] We have reasonably established that the Indian data collection system is not fully effective to cover within its enumeration frame, the marginal productive work done by women in their household farm and non-farm enterprises. This is particularly so in households with small assets and where production of the family enterprise is solely used for household consumption. This is probably the main cause of the recorded discrepancies between estimates of "economically active population" obtained from the 1961 Census and the 1971 Census, and between the NSS 27th and the NSS 32nd round estimates of "labour force". In

[10]Paul Jacob : *Concept of 'Work' and Estimates of 'Work Force'—An Appraisal of the Treatment of Activities Relating to Non-material Output.* (unpublished mimeographed), 1983.

[11]Central Statistical Organisation, "Output and Employment in Non-marketed Sector", *Monthly Abstract of Statistics*, Vol. 16, No. 1, January 1983.

the 1971 Census, incomplete coverage of women's marginal work and merging of a few marginal items of women's work with "housework" had caused problems of comparability between the 1961 and the 1971 Census data. This is also true of the discrepancies between the 27th and 32nd round NSS data on "economically active or labour force population" of India.

Prospects

In view of the increasing awareness both regarding the inadequacies of statistical tools adopted for enumeration of women's work, several corrective measures are being designed to formulate an appropriate concept and definition of "work". In this connection we may refer to the relevant portion of the resolutions adopted in the Thirteenth International Conference of Labour Statisticians held in Geneva on 29 October 1982 which are recommendatory for use by all member countries of the United Nations.[12]

The Geneva conference has defined "economically active population" as comprising of all persons of either sex who supply labour during a specified time-reference period for the production of economic goods and services as defined by the United Nations system of national accounts and balance. According to this system, production of economic goods and services includes all production and processing of primary products whether for the market, for barter or for own consumption. It also includes production of all other goods and services for the market, and, in the case of households which produce such goods and services for the market, the corresponding production for own consumption. In the NSS 32nd round, this resolution was almost fully adopted. The 1981 Census, we have mentioned did not however do so.

The conference resolution also says:

> Further, in order to obtain more accurate statistics on women's participation in economic activities, measurement methods should be carefully reviewed to ensure unbiased coverage of men and women Sex biases in the form of underenumeration of women participation in economic activity may result, for example, from incomplete coverage of unpaid economic activities, failure of respondents and enumerators to take account of women's multiple activities and use of proxy respondents.

[12] I.L.O. Geneva, "Appendix I (Resolution 1)" of the Proceedings of the 13th International Conference of Labour Statisticians, October 1982.

This is essentially a recommendation on survey or census methodology. To remove the difficulties envisaged in this resolution, two methods are being currently tried out in India in the NSS and in some other micro studies enquiring into the conditions of income and employment of women : (*i*) introduction of additional probing questions in the survey questionnaire to go deep into the conditions of work and employment of women, and (*ii*) the deployment of female investigators in the survey operation.

On the problem of identifying women's work, the conference resolution further says:

> In order to provide improved and more detailed information on employment, unemployment and underemployment and for other purposes such as identifying multiple activities and marginal activities, attempt should be made to collect periodical statistics on time-use.

Unfortunately there was no scope to discuss in the body of resolution the question of feasibility of collecting time-use statistics in the conditions prevailing in developing countries like India. Serious attempts have been made in some regions of the country to collect data on time-use statistics for women by posting both male and female investigators in villages for an entire year and using interview-cum-observation method. The veracity of such data are sometime questioned on the ground that this kind of investigation may introduce another kind of bias known as "conditioning effect" on both the enumerators and the respondents. As a result the data may reflect a magnified picture of women's intensive participation in "house work" and other "productive work" done within the household. Even now the feasibility of such data collection on time-use in micro surveys in such a large country as India is considered a doubtful pro-

position. Nevertheless it is a welcome start.

Another important suggestion for improving the quality and coverage of data on "work" and employment in the NSS has been suggested. Instead of collecting data on time-disposition for only those persons predetermined as belonging to labour force, such time-disposition data should be collected for all persons of the household for all the seven days of the reference week.[13] The NSS is still reluctant to change its method perhaps due to inertia but the proposal is worth serious consideration.

The NSS planners may also think of introducing a small innovation in third quinquennial survey schedule. Besides collecting data on household cultivable land they should also collect data on other small assets like milch cattle, poultry birds, sweet water ponds, charkha, or a sewing machine. Any positive entries recorded in the questionnaire on account of any of these items may motivate the survey investigator to probe for further ascertaining how these assests are utilised for generating any output, no matter how small its quantum and regardless of whether it is entirely used for household consumption or not. They should also find out in what manner members of the households, particularly women, are associated with this process of generation of output. Such probing enquiry would make "visible" and enumerable a few more productive tasks performed by women.

Despite all these new ideas for effective improvement of data collection on women's work, a dramatic change in the data collection system cannot and should not be expected unless the basic issue regarding the perception of both men and women on the sexual role of women in Indian society undergoes a qualitative change.

[13]K.N. Srinivasan : "Employment and Unemployment—An Assessment of two National Sample Surveys", *Economic and Political Weekly*, pp. 1541-46.

10

The Household Trap : Report on a Field Survey of Female Activity Patterns

DEVAKI JAIN

One of the most widespread presumptions in the description and analysis of labour force data—especially in relation to employment policy and programme—is the denoting of women's economic roles as supplementary, subsidiary or secondary. The prescription has its base not only in mythology—patriarchal attitudes to the roles of women, that whatever they do it can only be subordinate in status to men's roles; but also in the methodology which generates the facts. The link between the two, the myth and the methodology, is obvious. It also has its base in reality—in that women and girls are uniquely engaged in household chores or domestic activity, and many similarly supportive activities, as well as in production of goods and services which are usually the lowest skilled, lowest paid and predominantly household or household proximate.[1]

Perception also plays a vital role in leading to this presumption. Women perceive themselves as mainly engaged in

[1]"Women's Activities in Rural India—a Study Based on NSS—32nd Round (1977-78)," survey results on employment and unemployment—Part I, Study Report, *Sarvekshna*, Vol. IV, Nos. 3, 4, January-April 1981; Devaki Jain, and Malini Chand, "Domestic Work—Its Implications for Enumeration of Workers", Paper presented at the Seminar on Women, Work and Society, ISS, Delhi, September, 1982; Gita, "Domestic Activity in 32nd Rounds", (Columbia) Conference, August 1984.

activities within the household, of which their most regular engagement is in that are called domestic activities. These are cooking, cleaning, childcare, the three C's. Cooking implies water and fuel. Apart from reporting this fact, they also perceive these activities as having less value—which indeed is how society perceives them.

The link between myth, methodology and reality is obvious. The myth pervades the perception of both men and women, the perception gives values to the activities, the methodology depends on the values and presents the reality in formate which further strengthen the myths.

A field study reported[2] here not only provided some insights on how to disengage this muddle but also revealed some of the reality. It provided a close-up of women's activity patterns, and the factors that determine these patterns. It was suggestive of the importance both of culture and class in determining female work patterns. It indicated some methodological changes in survey design and implementation that could reduce the roles of perception. The study involved household surveys in six villages, where time spent by men, women and children across a broad range of forty-two activities was recorded largely through observation.

Kuita, Selampur, and Thabgaon are a cluster of three villages in Birbhum, one of the poor districts of West Bengal. The main rural activity in the district is agriculture, and the main crop is rice followed by potato and jute.

Etrampura, Mehtoli, Chentoli are a cluster of three villages in Bharatpur, a backward district of Rajasthan. The main rural activity in this district is agriculture. The main crops are jawar and bajra, which are adequate for household consumption. The chief cash crops are groundnuts, maize and chillies.

One hundred and twenty seven rural households—52 from

[2]Devaki, Jain, *Female and Child Workers, a Case for Methodological Revision*, Working Paper, Asian Development Centre, Boston University, Boston Mass, USA; *Report on a Time Allocation Study*, Technical Seminar on Women's Work and Employment, Institute of Social Studies Trust, New Delhi, 1982 (forthcoming ILO Bulletin of Statistics); D. Jain and Malini Chand, "Patterns of Female Work: Implications for Statistical Design, Economic Classification and Social Priorities, Prepared for National Conference on Women's Studies, Bombay, April 1981.

Rajasthani villages and 75 from Bengali villages were studied by five women researchers, who lived in these villages for more than 1 year each. The researchers visited each household six times during the fifty-two weeks period ; they observed and recorded the activities of all members of each household, above 5 years of age, in intervals of half-hours.

Quantitative Data

In order to select these 127 households a full census was done of all the 860 households in the six villages. This was done through a questionnaire and one visit during which gainfully active persons were identified with the usual or standard method employed in India's employment surveys and labour enquiries – namely, giving an activity code to all persons in a household on the basis of their predominant pre-occupation over the year, or/and over the previous week.

During the year 1977-78, the national sample survey organisation also surveyed 102,000 rural and 59,300 urban households across India for their periodical employment/unemployment data collection.[3] This was the 32nd round of sample survey. Responding to concerns about the accurate measurement of employment, especially of women, the questionnaire was extended to asking what were called "probing" questions. These were a set of 24 questions addressed to those persons within a household, who had identified themselves as being mainly engaged in domestic work only or domestic work and collection of goods and services, *i.e.*, activity codes 92 and 93

The hope was to net visible and invisible employment or, put the other way round the labour force—*i.e.*, those already contributing to the production of goods or services, or seeking work or available for work.

The special study, reporting here, also canvassed this 32nd round questionnaire on the sample of 127 households to see the

[3]The National Sample Survey Organisations (NSSO) has been conducting sample household surveys on employment and unemployment every five years regularly since 1972-73. This was the 27th round of the NSSO. The 32nd round on Employment/Unemployment was canvassed during 1977-78. The employment/unemployment rounds give estimates on labour activity status as well as daily and weekly activity status which helps comparability with other sources of data.

kind of profile of women's work this questionnare provided/as different from the standard questionnaire canvassed earlier as a base-line census and from the data provided by observed activity recording and grouping for the same households.

Qualitative Data

This process of data collection, while living continuously in the village, offered an intimacy of experience both to the household and the researchers.

Conventional stratifications of society - whether caste, class, age or gender appeared and disappeared according to circumstances or issue. For example, the villages in Rajasthan looked like one mud heap, and it was difficult to know who was rich and who was poor from the size of the construction.

But for the insider, it was the stocks of foodgrain that determined security and autonomy and its consequences—power. If you had enough foodgrain stored till the next crop you did not get into debt, you did not have to struggle for wage work. Indebtedness and grain stocks emerged as their indicators of inequality than land or homestead or consumption expenditure and jewellery.

Women's views on priority needs of the village varied vastly from men's views, whatever the caste or class. Men identified a road, and women a health centre as the first need. Men a school, and women training for employment as priority needs.

The household, or family seemed important units of social formation, useful for identification but the internal dynamics seemed to provide equally important and useful information.

Determinants of Female Labour Supply

The selection of villages and then the sample households provided an opportunity to relate what can be called external factors or externalities to the observed female participation rate, both adult and child.

It appears that, more than any other factor, poverty, whether expressed as landlessness or lack of any other resource seems to be the most striking influence. It cuts across region, crop, religion, ethnicity, age. Invariably, there is an inverse relationship between ownership of land and female participation rates. This is corroborated by other studies which have

TABLE 1 : PERCENTAGES OF GAINFULLY EMPLOYED MALES/FEMALES TO TOTAL MALES/FEMALES

	1961			1971			ISS Census 1976	
	M (1)	F (2)		M (3)	F (4)		M (5)	F (6)
Rajasthan State	58	36		52	10		—	—
Bharatpur District	58	23		51	4		—	—
—Etrampura	69	69		53	0		55	47
—Mehtoli	60 } 62*	30 } 53*		53 } 52*	0 } 1.3*		54 } 54*	40 } 46*
—Chantoli	59	60		51	4		53	50
West Bengal	54	9		49	5		—	—
Birbhum	52	9		49	5		—	—
—Selampur	60	7		59	15		53	12)
—Thabgaon	60 } 58*	1 } 3*		41 } 52*	2 } 6*		58 } 54*	4) 7*
—Kuita	53	0		56	2		3	

*Figures represent the average work participation rates for the three villages. All calculations are the percentage of gainfully employed males/females to total males/females in the population. 1981 Census figures not yet available.

Table 1 sets out census figures for the states and villages and introduces in columns 5 and 6 figures for the three villages as collected by the census of household conducted by this survey.

analysed labour force participation across economic strata whether they use assets such as land or income/expenditure or any other proxy of poverty.[4]

TABLE 2 : WORK PARTICIPATION RATES BY LAND, CLASS AND SEX IN THE SURVEYED VILLAGES

(*a*) *Rajasthan* (*October 1976*)

Operated Land in Bighas	*Males*	*Females*
Landless	67	74
0.1—2	69	47
2—5	67	67
5—10	68	58
10—15	67	54
15—20	51	52
20	64	52
Overall	65%	55%

(*b*) *West Bengal* (*December 1976*)

Operated Land in Acres	*Males*	*Females*
Landless	71	4
Homestead only	79	5
0.1—1	69	3
1—2	57	6
3.5—5.0	57	5
5.0—7.5	49	2
7.5—10.0	38	4
—10	50	0
Overall	59	4

(Census of Households—Villages, 1976 Census).

[4]Gillian Hart, "Patterns of Household Labour Allocation in a Japanese Village", Paper prepared for the workshop on household studies of the Agricultural Development Council, Singapore, August 1976; Ruth Dixon, *Measuring the Sexual Division of Labour in Third World Agriculture*, University of California, Davis, June 1983.

It is noticed that while in Table 2 (*a*) and (*b*) land does not effect male participation very much in Rajasthan, it is a significant factor for *females* in Rajasthan and *males* in West Bengal. In fact throughout the study this strange similarity of characteristics between female labour in Rajasthan and male labour in West Bengal persists, especially in children. The female work participation rate (FWPR) in Rajasthan and male work participation rates (MWPR) in West Bengal amongst the landless is greater than the average general work participation rate.

In Rajasthan the FWPR moves steadily in inverse proportion to land ownership class, whereas the MWPR does not show this effect. Among the landless, FWPR is greater than MWPR. The pressure of landlessness, however, does not seem to bring out females in West Bengal into the easily identified worker categories. What they are doing under this pressure, namely more intensive work in household chores, comes out better in the time allocation tables.

The second factor is culture, namely the tradition of allowing or inhibiting women to work for others—apart from the family—in fields, on roads. West Bengal has always shown a low, lower than national average, female participation rate over the decades.[5]

This is in striking contrast to Rajasthan. It is also important to notice that this low participation rate for females in West Bengal occurs in spite of the major crop being rice. A scan of all the rice growing districts in India reveals that there is no worthwhile association between rice cultivation and female participation.[6]

In fact, West Bengal, Orissa, and Bihar whether in rice or in other crops show a much lower female participation rate than the rest of India on the average.

It appears that in the Eastern Region the dominant reason for the low FWPR is not so much the agronomy and other economic factors, or measurement failure but some cultural modes

[5]Devaki Jain and Mukul Mukherjee, *Statistics on Women, Children and the Aged in Agriculture*, Institute of Social Studies Trust, New Delhi (to be published by FAO, Rome).

[6]*Sixth Five-Year Plan*, Yojna Bhawan, New Delhi, (pp. 324-427),

TABLE 3 : PERCENTAGE OF RURAL FEMALES WORKING ACCORDING TO CURRENT DAY STATUS TO TOTAL FEMALE OF AGE 5 YEARS AND ABOVE FOR ALL-INDIA AND CERTAIN STATES

ALL INDIA	23
West Bengal	9
Orissa	17
Bihar	14
Rajasthan	36
Madhya Pradesh	33
Andhra Pradesh	34

Source: Women's Activities in Rural India study Based on NSS—32nd Round. Survey Results on Employment and Uuemployment—Part I. Study Report, *Sarvekshana,* Vol. IV, No. 3, 4. January-April 1981.

that inhibit against women 'working like men'. West Bengal exhibits this inhibition even more than its neighbours, Orissa and Bihar.

This has lent further support to the view that certain cultural modes are a severe barrier to the demand pull for labour.[7] Even poverty does not push them into outside work to the extent that it does in other parts of India, or in the world.

One aspect of the cultural inhibition, which is similar to the wider problems of perception is that poor families in the West Bengal villages were engaged in income earning or/and in what can definitely be denoted as productive economic activity but in styles and areas of work which cannot be netted, or, to put it more clearly, in styles which the system of enumeration (as it stands now) cannot net or does not net.

Women and girls are engaged in providing domestic services to other households in the village.[8] Another activity which finds them in predominant numbers is begging. But begging is not coded as an occupation in the standard occupation list (Table 4).

[7]Banerjee, Nirmala, *Women Workers in the Unorganised Sector*, Orient Longman (forthcoming); *Indian Women in the Labour Market—Labour Capital and Society*, Montreal, April 1979.

[8]As a pretest for the major time-disposition study, a two-month survey was conducted on selected households in Muluk village (in Birbhum district, West Bengal) from the 14th of July to 13th of September, 1976, through direct observation of all activities performed by females of the selected households.

TABLE 4(a)—TIME ALLOCATION REVEALING SEGREGATION OF ACTIVITIES BY AGE AND SEX—RAJASTHAN

Age / *No. of Sample*	*5—9*		*6—14*		*14—19*		*19—34*		*34—44*		*44—70*	
	M 97	*F* 87	*M* 154	*F* 138	*M* 63	*F* 58	*M* 180	*F* 215	*M* 91	*F* 98	*M* 160	*F* 91
1	2	3	4	5	6	7	8	9	10	11	12	13
Ploughing Digging	—	—	0.05	—	0.57	—	0.75	—	0.87	—	0.79	—
Irrigation Fields	—	—	0.10	—	0.39	—	0.48	—	1.61	—	0.70	—
Harvesting	—	—	0.05	0.08	0.14	0.25	0.10	0.04	—	0·25	0.06	0.21
Groundnut picking	—	0.34	0.02	0.28	0.16	0.50	0.04	0.21	0.10	0·18	0.13	0.31
Vegetable picking	0.14	0.15	0.02	0.21	—	0.05	—	0.12	0.17	0.28	0.01	0.22
Cutting grass from fields	0.11	0.55	0.32	1.65	0.56	1.29	0.51	1.08	0.57	1.69	0.48	1.02
Weeding fields	—	—	0.12	0.42	—	0.54	0.06	0.66	0.69	0.71	0.63	0.83
***Total Agriculture**	**0.51**	**1.63**	**1.38**	**3.06**	**2.00**	**2.98**	**2.75**	**2.44**	**6.31**	**3.62**	**4.04**	**3.05**
Husking, winnowing, parboiling, grain husking	—	0.01	0.04	0.07	—	0.14	0.02	0.08	0.23	0.34	0.12	0.11
Cattle/goat grazing	1.12	0.87	0.61	0.81	0.54	0.20	0.35	0.12	0.56	0.05	0.30	0.18
Cattle milking and feeding	0.02	0.11	0.13	0.13	0.38	0.22	0.22	0.28	0.48	0.42	0.55	0.55
Making cow-dug cakes	—	0.16	—	0.33	—	0.20	—	0.18	—	0.17	—	0.10
***Total Allied**	**1.15**	**1.28**	**0.94**	**1.60**	**1.28**	**1.09**	**0.68**	**1.13**	**1.38**	**1.38**	**1.21**	**1.43**

1	2	3	4	5	6	7	8	9	10	11	12	13
Service	—	—	—	0.06	1.29	—	1.35	—	0.36	0.03	—	—
Production of straw mats, ropes	—	—	—	0.02	—	0.02	—	0.02	—	0.03	—	0.09
Selling goods (stationery grain, fish etc.)	—	—	0.11	—	0.47	—	0.46	—	0.01	—	0.09	—
Manual labour	—	—	—	—	—	—	0.37	0.03	0.31	—	0.21	—
***Total Non-agricultural**	—	—	**0.16**	**0.04**	**1.76**	0.04	**2.70**	**0.10**	**1.00**	**0.04**	**0.37**	**0.09**
Cooking (grinding, cutting, etc.)	—	0.26	0.04	0.74	—	2.00	0.03	2.34	0.10	2.76	0.08	1.60
Sweeping, washing clothes and utensils	0.01	0.45	0.03	0.56	—	0.93	0.01	1.09	0.02	1.02	0.12	0·53
Fetching water	—	0.16	0.03	0.36	—	0.52	—	0.52	0.01	0.41	0.02	0.23
Fetching fuel	—	0.01	—	0.07	—	0.04	—	0.08	—	0.09	—	0.09
***Total Household Activities**	**0.01**	**0.89**	**0.10**	**1.75**	—	**3.66**	**0.05**	**4.05**	**0.14**	**4.33**	**0.25**	**2.47**
Schooling	1.71	0.50	2.61	0.41	1.72	—	—	—	—	—	—	—
Playing-children	2.55	1.43	1.14	0.24	0.39	—	—	—	—	—	—	—
Time spent in childcare	0.16	1.71	0.40	1.23	0.20	0.31	0.07	1.13	0.17	0.69	0.15	0.91
***Total Child Activities**	**4.42**	**3.77**	**4.15**	**1.97**	**2.33**	**0.34**	0.08	**1.17**	**0.18**	**0.63**	**0.15**	**0·92**

Notes : *Totals include activities not here listed.

TABLE 4 (b) : TIME ALLOCATION REVEALING SEGREGATION OF ACTIVITIES BY AGE AND SEX—WEST BENGAL

Age	*4—9*		*9—14*		*14—19*		*19—34*		*34—44*		*44—70*	
No. of Sample	*M* 146	*F* 124	*M* 152	*F* 151	*M* 81	*F* 88	*M* 191	*F* 257	*M* 150	*F* 124	*M* 127	*F* 140
1	2	3	4	5	6	7	8	9	10	11	12	13
Ploughing Digging	—	—	0.05	0.09	0.56	—	0.67	0.08	0.69	—	0.58	—
Sowing	—	—	0.03	—	0.32	—	0.43	0.04	0.29	0.08	0.32	—
Harvesting	—	—	0.63	0.03	0.84	0.05	0.98	0.16	0.81	0.07	1.10	—
Cutting grass from fields	0.10	0.03	0.56	0.10	0.19	—	0.18	0.06	0.11	0.14	0.31	0.01
Weeding fields	—	—	0.03	—	0.39	—	0.36	0.02	0.46	—	0.26	—
***Total Agriculture**	**0.14**	**0.05**	**1.87**	**0.38**	**0.47**	**0.24**	**4.12**	**0.59**	**4.54**	**0.49**	**3.77**	**0.07**
Husking winnowing, grain husking	—	—	—	0.09	0.14	0.14	0.26	0.17	0.19	0.43	0.24	0.27
Cattle goat grazing	1.37	0.13	1.97	0.44	1.12	0.07	0.20	—	0.06	0.09	0.02	—
Cattle milking and feeding	0.08	—	0.52	0·12	0.68	—	0.10	0.02	0.08	0.03	0.05	0.03
***Total Allied**	**1.58**	**0.14**	**3.36**	**0·80**	**3.15**	**0.30**	**0.77**	**0.27**	**0.47**	**0.69**	**0.37**	0.41

1	2	3	4	5	6	7	8	9	10	11	12	13
Producer of strawmats, patchwork quilts ropes, etc.	0.08	0.11	—	0·52	—	1.06	0.01	0.50	—	0.23	0.09	0.22
Work as domestic servant	—	0.07	0.02	0.60	0.01	0.29	—	0.03	—	0.04	—	0.06
Selling goods (stationery, grain, fish, vegetables, wood, etc.)	—	—	—	0.02	0.73	0.08	1.04	0.17	1.47	0.01	0.37	0.05
Manual labour	—	—	0.06	—	0.19	—	0.46	0.14	0.70	—	0.32	—
Begging	0.12	—	0.17	0.80	—	—	—	0.33	0.40	0.47	0.64	1.24
***Total Non-Agriculture**	**0.21**	**0.18**	**0.31**	**1.72**	**0.99**	**1.44**	**1.62**	**1.20**	**2.58**	**0.76**	**2.16**	**1.59**
Cooking (grinding, cutting, chopping, cleaning)	0.01	0.05	0.01	0.70	0.10	2.30	0.09	3.67	0.68	4.40	0.06	2.33
Sweeping, washing, clothes and utensils	—	0.06	0.04	0.57	0.03	1.05	0.03	1.45	—	1.27	—	0.52
Fetching water	—	0.05	0.06	0.27	0.07	0.59	0·01	0.39	—	0.29	—	0.18
***Total Household Activities**	**0.74**	**1.10**	**0.60**	**2.81**	**0.27**	**4.31**	**0.18**	**5.77**	**0.10**	**6.39**	**0.08**	**3.16**
Schooling	1.25	1.30	1.12	0.83	—	0.06	0.09	—	—	—	—	—
Playing—children	2.80	3.28	0.73	0.72	0.06	—	0.01	—	—	—	—	—
Time spent in childcare	0.12	0.26	0.03	0.17	0.02	0.14	0.02	0.42	—	0.12	0.03	0.55
***Total Child Activities**	**4.19**	**4.92**	**1.90**	**1.81**	**0.08**	**0.25**	**0.11**	**0.48**	—	**0.19**	**0.04**	**0.62**

Note : *Totals include activities not here listed.

It seems that the cultural inhibition in Bengal, while it presumes to protect the women from the humiliation of working under other people, finds begging and domestic work less "humiliating".

The other side of this inhibition is that women can engage themselves in what traditionally can be considered "modest" or "feminine" or in some way secluded work. Begging has a connotation of helplessness and spirituality. Domestic work is what women do anyway.

A third activity which has been noticed in west Bengal[9] as an expression of poverty, especially destitution, is the increasing numbers in prostitution—another feminine, traditionally accepted role for women.

The question that arises from the observation of this relationship is whether the often commented safety of women in West Bengal—dignified treatment such as respect and protectiveness meted out to them in public places, the worshipfulness of Bengali men to their women folk, both at the ground level in terms of life in cities and in buses, but also in their deep devotion to the Goddess Kali, has a price. The price that women have to pay for this devotion being to perform their necessary economic roles or to provide their critical economic contribution of the household in a veiled, accepting feminine style.

Such contradictions are not uncommon in analysing female status. The characteristics of the female labour force in Japan provides another, but not dissimilar situation. In 1976, the Bureau of Statistics in Japan published a survey, *Social Life in the Whole of Japan*, based on collecting time-use data on the leisure, culture, and health of a sample population.

One of the hypotheses advanced about the characteristics of female labour force in countries like Japan is that there is an intense absorption of females into employment in their pre-marriage years. Marriage limits the time spent on work sharply, as Japanese culture expects that the women should fully bear the responsibilities of domestic work and family care. The time allocation data supports this hypothesis of women being inten-

[9] *Towards Equality—Report of the Committee on the Status of Women in India*, Government of India, December, 1974.

sively economically active in the age group 19-24, and then again after 0, Males are active from 25-60, their peak being 30-39. The long break for females may often mean maintenance at lower grades of work and wage.

TABLE : 5 AVERAGE TIME SPENT ON WORK

Age Group	*Males*	*Females*
15—19	6.03	3.21
20—24	1.27	1.36
25—29	5.36	4.27
30—39	7.06	2.59
40—49	7.25	3.34
50—59	7.21	4.29
60—69	4.36	2.17
70—79	2.37	1.10

Source: 1976 Basic Survey on Social Life. Whole Japan, Time spent on Activities, Bureau of Statistics, Office of the Prime Minister, Japan, 1978.

The concept of the woman's place being at home; and her function the building of the family, persists in Japan in spite of extraordinary technological modernisation, education, and internationalism. Within the family it is suggested that they are treated with unqualified respect and given complete power within the household, However. it is a well known aspect of Japan that the men socialise outside their homes without their wives but with entertainers.

Japanese feminists, trying to understand this phenomena which appears to be an anachronism in today's situation, suggest that women have opted to keep this power and in some way feel superior to their men, and more so as the men's dependence on the entertainment market increases[10]. This is the well known syndrome of infantilisation. Perhaps this is the price that Bengali women are paying for the social security of not being pinched, battered, or burnt.

[10]Masako Tanaha, Majo University, Nagaya 468, Japan at the Seminar on Women Religion and Social Change, Harvard University, USA, 1983 summer.

Influence of Other External Factors

(i) Seasons/Rounds: Having examined the crop calendars of the two districts, coincidental as it may seem, it was found that peak and lean agricultural sessions were close in timing. See Table 6.

TABLE 6

Sounds	*Seasons*	*Month*	*Peak/ Lean*	*Bharatpur Activity*	*Birbhum Activity*
I	1	Jan./Feb.	Lean	—	Harvesting Potatoes Mustard, Sugarcane
II	2	March-April	Peak	Harvesting Rabi, Mustard, Wheat, Chana	Harvesting of Boro (summer rice)
	3	May-June	Lean	—	—
III	4	July-Aug.	Peak	Sowing Khariff Bajra/Jawar Gwar Phalli	Sowing of Aman Rice
IV	5	Sept.	Lean	—	Seed bed for winter vegetables
V	6	Oct./ November	Peak	Harvesting Khariff/ Sowing Rabi	Harvesting Aman and Sowing of Boro rice

Our own rounds were not planned to coincide their duration was determined by the number of sample households and approximated a visit every 2 months, though there were serious variations due to the monsoons, assembly elections, sickness of investigators and so on. But the rounds approximated, fortunately to the actual seasonal activity calendar given above (Table 6).[11]

[11](It will be noticed that in most of the seasonality graphs, whether it is in hours per individual or in person percentages, there is a dip downward towards the 6th round, which is the November-December sub-round especially in Rajasthan. This is due to an error in the field investigation and not part of the observed phenomena. The questionnaire for the last round was changed in the hope that it would improve efficiency. Instead of using the schedules, investigators were asked to record activities in given time intervals, they were asked to record time against activities. As a result investigators split the 1/2 hour intervals and started to record minutes with a time piece leading to a break-down of comparison and difficulties in coding and tabulating).

Figs 10.1 and 10.2 represent duration of work in total gainful activities of males and females across the seasons/ rounds. The graphs show a smooth single peak curve in Rajasthan suggesting that there are no seasonal cycles. There is, however, a steep rise and a kind of plateau of more than half a day for all male

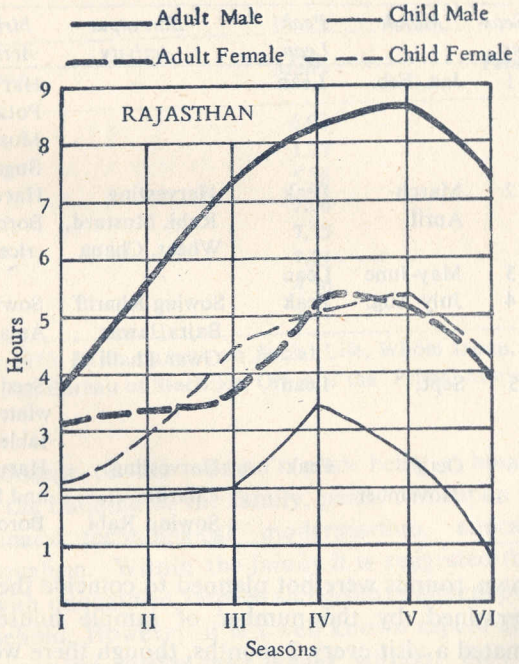

FIG. 10.1. Seasonal duration of participation by age/ sex and activity in Rajasthan (gainful employment).

and female adults, and female children, coinciding with sowing and harvesting. In West Bengal, however, males exhibit variations in the duration of work across rounds, peaking during sowing of Aman rice. It has often been noticed that men do rice transplanting in West Bengal. Females show no difference and remain at a low range of 1 to 2 hours of gainful activity across seasons.

Figs. 10.3 and 10.4 show the seasonality in household work. Females peak marginally in household work in West Bengal coinciding with the harvesting of Aman and sowing of Boro.

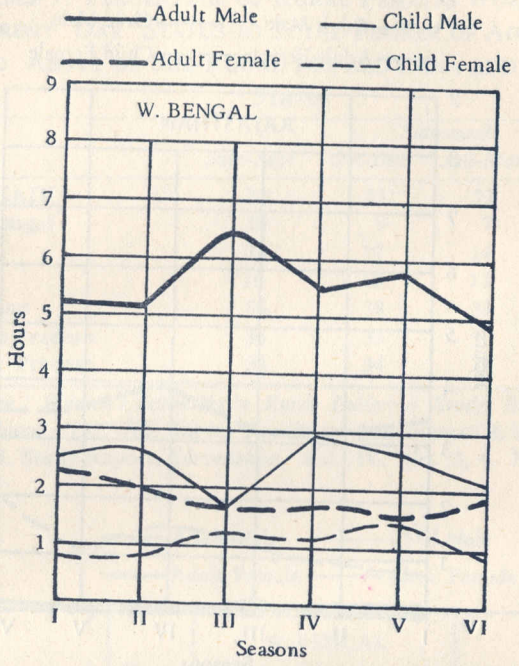

FIG. 10.2. Seasonal duration of participation by age/ sex and activity in West Bengal (gainful employment).

In Rajasthan, again the very marginal rise in hours spent on household work coincides with the rise in hours spent on harvesting. Could there be a relationship between the two?

It is well known that while harvesting or any other peak farm-income activity is going on in rural households, there is also feeding of farm hands (own and hired). This, for obvicus reasons, would be particularly intense in landed households. The processing of grain, cooking, serving/washing involved in feeding of *farm hands* is usually done by women, though unpaid when done by family members. It is possible that this explains the coincidence between peak for "house work" and peak for gainful activity.

Figs. 10.5 and 10.6 describe the actual *participation rate* of males and females not only across seasons, but in half-day measures of inensity. The majority of male workers (70 per

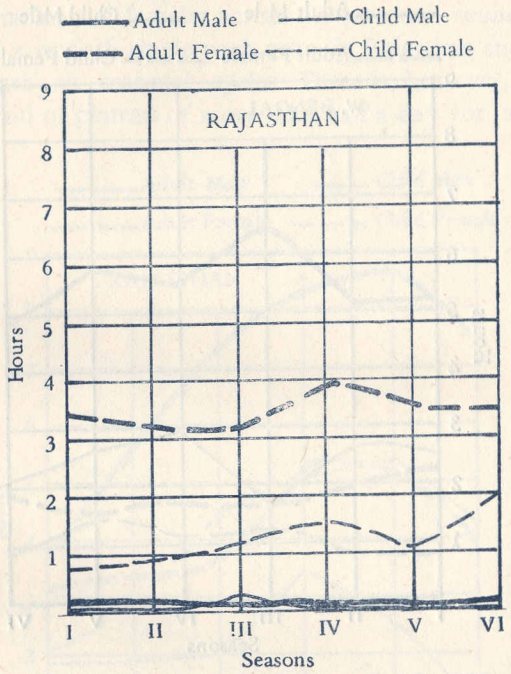

FIG. 10.3. Seasonal duration of participation by age/sex and activity in Rajasthan (household activity).

cent) in our sample, both in Rajasthan and West Bengal, are full day or bolt day workers and show no changes across seasons. Male half day workers are not only few, (less than 20 per cent) but also do not have much variation across seasons.

Whereas, female 4 hour workers in Rajasthan (who are in the range of 50 per cent or more) do exhibit cycles in participation rates, so too female half day workers in both Rajasthan and West Bengal are at a lower range of operation than their sisters in Rajasthan, but do have leans and peaks.

In other words female workers respond to seasonality or put in another way, exhibit greater unsteadiness in participation rates across seasons than males whether it is full day or half day workers. But in terms of intensity of work there are no clear cycles.

TABLE 7: PERCENTAGE OF RURAL FEMALES WORKING TO CURRENT DAY STATUS TO TOTAL FEMALE OF AGE 5 YEARS AND ABOVE BY SUB-ROUND FOR ALL INDIA AND CERTAIN STATES

	Subrounds			
	July-Sept	*Oct-Dec*	*Jau-Mar*	*Apr-Jun*
ALL INADI	24	23	22	21
West Bengal	10	9	7	10
Orissa	23	17	14	15
Bihar	16	15	13	13
Rajasthan	36	38	39	31
Madhya Pradesh	36	35	30	30
Andhra Pradesh	34	34	38	30

Source : Women's Activities in Rural India—A Study Based on NSS 32nd Round (1977-78), Survey Results on Employment & Unemloyment —Part I. Study Report, *Sarvekshna.* Vol. IV. No. 3, 4. January-April 1981.

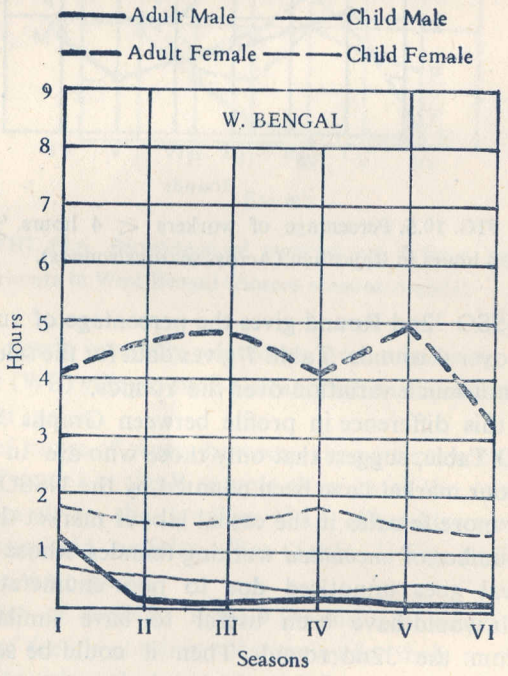

FIG. 10.4. Seasonal duration of participation by age/sex and activity in West Bengal (household activity).

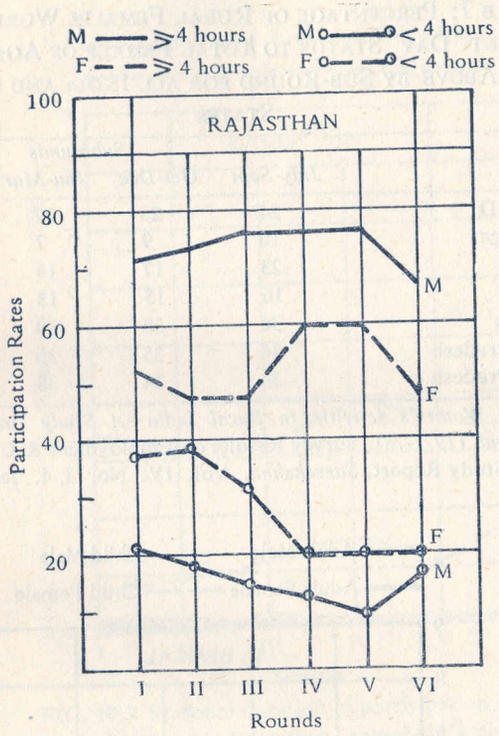

FIG. 10.5. Percentage of workers < 4 hours, ⩾ 4 hours in Rajasthan (Across seasons/rounds).

The NSSO 32nd Round gives the percentage of rural females working over 4 rounds. Table 7 gives data for the selected states. There is not much variation over the rounds.

Could this difference in profile between Graphs 5 and 6 and the NSSO Table, suggest that only those who are in the "formal" labour market have been counted by the NSSO, and since there are more females in the casual labour market there may be a large number of *uncounted* working females whose entry and withdrawal goes unnoticed due to poor enumeration methodology? It would have been useful to have similar data for males from the 32nd round. Then it could be seen if there is in fact measurement failure. But such data was not available.

(*ii*) *Land*: It will be recalled that in the Rajasthan (R) villages

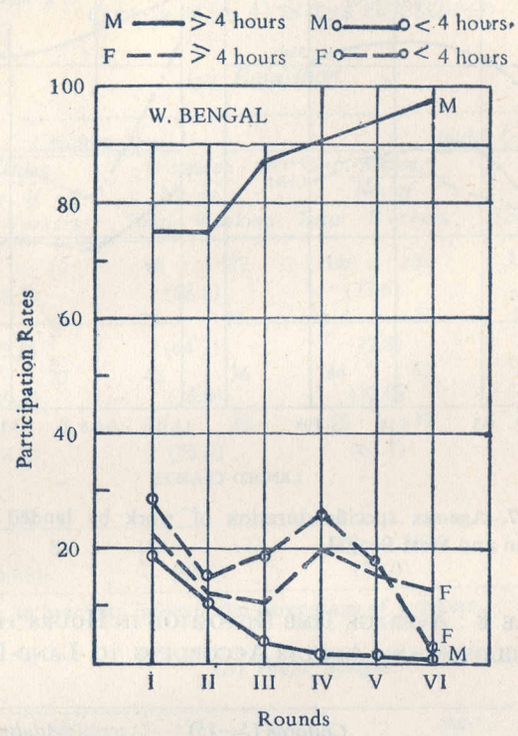

FIG. 10.6. Percentage of workers < 4 hours, ⩾ 4 hours in West Bengal (Across seasons/rounds).

FWPR was clearly inversely related to land ownership. In the West Bengal (WB) villages such a clear relationship was observed only amongst males.

In terms of hours of work, however, the patterns are different. The landed females in the R sample show twice the number of hours compared to the landless (LL). They also work more hours at household activity (See Table 7) Fig. 10.7 further illustrates the same point.

(*iii*) *Number of Infants*: Table 9 (a) and 9 (b) emphasise the phenomena of female children substituting for their mothers in gainful activity, when there are young infants at home, contrary to the pattern where female children stay home to look after the

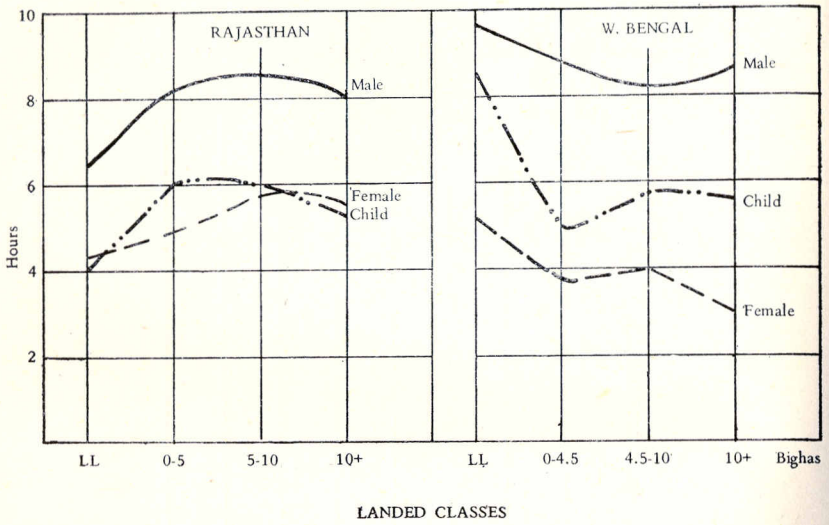

FIG. 10.7. Age-sex specific duration of work by landed classes in Rajasthan and West Bengal.

TABLE 8 : AVERAGE TIME DISPOSITION IN HOURS PER DAY OF CHILDREN AND ADULTS ACCORDING TO LAND-HOLDING

	Children (5—15)				*Adults (15+)*			
	Males		*Females*		*Males*		*Females*	
	LL	*R*	*LL*	*RR*	*LL*	*RR*	*L*	*R*
Rajasthan								
Size of sample	57	146	67	116	165	235	178	202
Gainful employmemt	2.7	2.7	3.8	5.6	6.5	8.8	3.8	6.2
Household activity, child activity	4.5	5.7	4.0	5.6	0.5	0.8	4.8	6.4
West Bengal								
Size of sample	121	187	112	163	209	340	223	386
Gainful employment	4.2	3.5	2.7	1.2	7.5	6.5	2.3	1.7
Household activity	3.5	3.8	5.0	5.4	0.3	0.2	5.3	5.6

The Muluk profile on time disposition underlines the same point.
L=Landless
R=Landed

TABLE 9 : PERCENTAGE OF WORKERS CLASSIFIED BY NUMBER OF CHILDREN (6. 4) IN THE HOUSEHOLD

(*a*) *Rajasthan*

	Children (5—15)				*Adult (+15)*			
	Males		*Females*		*Males*		*Females*	
	No. of		*No of*		*No. of*		*No. of*	
	Total	*Workers*	*Total*	*Workers*	*Total*	*Workers*	*Total*	*Workers*
0	33	17 (51.5)	46	27 (58.6)	146	106 (73.6)	117	78 (66.6)
1	87	87 (42.5)	73	47 (64.3)	114	83 (72.8)	126	102 (80.9)
2	69	27 (39.1)	48	36 (75.0)	84	62 (73.8)	74	58 (78.3)
3	14	2 (14.2)	16	12 (75 0)	58	37 (63.7)	63	36 (57.1)
4	–	–	–		–		–	
5—9	–		–		–		–	
Total	83		183	122 (66.6)	400	288 (72.0)	380	274 (72.1)

Figures in brackets indicate the percentage of workers.

(*b*) *West Bengal*

	Children (5—15)				*Adults (+15)*			
	Male		*Female*		*Male*		*Female*	
	No of		*No. of*		*No. of*		*No. of*	
	Total	*Workers*	*Total*	*Workers*	*Total*	*Workers*	*Total*	*Workers*
0	120	64 (53.3)	121	45 (37.1)	265	274 (65.6)	272	123 (45.2)
1	136	66 (48.5)	99	15 (15.1)	186	109 (58.6)	210	91 (43.3)
2	46	18 (39.1)	49	16 (32.6)	53	50 (94.3)	88	31 (35.2)
3	6	5 (83.3)	6	0 (0)	25	18 (72.0)	39	12 (30.7)
4	–		–		–		–	
5—9	–		–		–		–	
Total	308	153 (49.7)	275	76 (27.6)	549	431 (78.5)	609	257 (42.2)

Figures in bracket indicate percentage of workers.

young siblings. The adult female participation rate declines with the increase in the number of infants.

In terms of allocation of time between alternative activities it might be noticed from Table 10 (a) and (b) that female children of households with two or more infants spent more time in gainful activities.

(*iv*) *Religion and Ethnicity*: (*a*) Ethrampura, one of the 3 sample villages in Rajasthan was a village of Minas, a scheduled tribe of Rajasthan. Taking this as a basis of classification Table 11 (a) is constructed, showing a markedly higher FWPR than MWPR amongst tribals—females, adults and children. Amongst the females, unlike the males, it is also greater than PPR amongst non-tribals. For moles however the PR amongst the non-tribals is greater than amongst tribals. This seems to illustrate the fairly well established finding that tribal women work as hard and prominently, if not harder, than their men (See Table 12 (a) and (b) for time disposition across sectors).

(*b*) The sample villages in West Bengal had one village Kuita which was 95 per cent Hindu and two proximate villages with a Muslim minority population. As explained earlier, the villages were chosen in order to have this kind of additional parameter.

FWPR amongst Muslims is higher than the FWPR amongst Hindus, both adults and children. This may appear strange but it can be seen from the next table that the Muslim women are in non agricultural activities, which in these villages was straw mat making, a home-bound but tradeable economic activity. Muslim males were in agriculture and in this non-agricultural activity with half and a quarter day intensities.

(*v*) *Economic Opportunity*: However, this aberration/finding that the FWPR is high in the sample can also be turned into a generalisation—namely that if opportunity is offered at the door of a poor Muslim household, women will engage in visibly gainful activity.

In other words, the push of poverty overcomes the constraints of culture, if mediated by the right type of "secluded" work.

An obvious, but important factor, is the lack of opportunity to find some economic activity whether it is "counted" in the

TABLE 10 : TIME DISPOSITION OF CHILDREN AND ADULTS CLASSIFIED BY NUMBER OF CHILDREN (0–4) IN THE HOUSEHOLDS

(*a*) *Rajasthan*

	Children				*Adults*			
	Male		*Female*		*Male*		*Female*	
	No. of Children				*No. of Adults*			
No. of children (0–4 age group)	0—1	2 · 9	0—1	2—9	0—1	2 9	0—1	2—9
Total in sample	*12.0*	*83*	*1.9*	*64*	*258*	*142*	*243*	*137*
Agriculture	1.31	1.04	2.40	2.84	4.71	9.38	2.99	2.46
Allied	1.50	0.82	1.56	1.90	1.10	1.42	1.40	1.15
Non-agriculture	0	0.27	0.02	0.02	0.70	1.01	0.06	0.09
Gainfully Employed	*2.81*	*2.13*	*3.38*	*4.76*	*6.15*	*11.81*	*4.45*	*3.70*
Household activities (HHA)	0.05	0.13	1.51	1.25	0.14	0.08	3.85	3.79
Child activities (CHA)	4.64	4.75	2.58	3.08	0.49	1.25	0 66	1.5
HHA & CHA	4.69	4.88	4.09	4.33	0.63	1.33	4.51	5 38

statistics or not.

In the Rajasthan villages there are no landless peasants. The poorest household that could be found in these villages, which were deliberately chosen from the poorest part of the state, still owned land. It was dry and perhaps infertile. Yet the households could send their children to pick grass or twigs or graze animals. Everyone in the family was engaged in economic or quasi economic activity. This option is not available to the poor families in West Bengal where landlessness and acute pressure on land offers no scope at all for such participation.

Implication for Methodology

Comparison of data obtained from the questionnaire (census of

(b) West Bengal

	Children				*Adults*			
	Male		*Female*		*Male*		*Female*	
No. of children (0–4)	0–1	2–9	0–1	2–9	0–1	2–9	0–1	2–9
Total in sample	*256*	*52*	*220*	*55*	*451*	*98*	*482*	*127*
Agriculture	1.10	0.78	0.23	0.13	4.09	3.89	0.47	0.14
Allied	2.61	1.90	0.31	1.23	0.96	0.82	0.41	0.33
Non-Agriculture	*0.32*	*0*	*1.13*	*0.80*	*1.76*	*2.16*	*1.39*	*0.62*
Gainfully Employed	4.03	2.68	1.67	2.22	6.81	7.32	2.27	1.09
Household activities (HHA)	0.73	0.34	2.18	1.48	0.17	0.12	3.15	4.71
Child activities (CHA)	2.80	3.86	3.08	3.72	0.07	0.04	0.32	0.77
HHA & CHA	*3.53*	*4.20*	*5.26*	*5.20*	*0.24*	*0.16*	*3.48*	*5.48*

households) and the time allocation data for the same households revealed many weaknesses in methodology.

For example, in Rajasthan four out of the 37 women who reported as non-workers in the schedule (code 42-43), were in fact spending upto 4 hours a day in activities such as groundnut picking and sowing the fields. Nine others who reported as non-workers were grazing cattle and cutting grass for more than 1 hour. Thus 13 out of 37, at least 30 per cent were outside the questionnaire net.

Two of the 36 male children and 2 of the 34 female children who reported as non-workers were observed hoeing the fields, 18 other female children were observed grazing cattle and cutting grass.

In West Bengal, 20 out of 104 females who reported themselves as non-workers were observed to be working in activities such as winnowing, threshing and parboiling, working as domestic servants in the homes of others, for as many as 8-10 hours per

TABLE 11: PERCENTAGE OF WORKERS CLASSIFIED BY ETHNICITY

(a) Rajasthan

	Children (5–15)				*Adults (15 and above)*			
	Males		*Females*		*Males*		*Females*	
	No. of Total workers		*No. of Total workers*		*No. of Total workers*		*No. of Total workers*	
Tribal	44	14 (31.8)	34	26 (76.4)	71	45 (63.4)	51	41 (80.4)
Non-tribal	159	69 (43.3)	149	96 (60.4)	329	243 (73 8)	329	233 (78.8)
Total	203	83 (40.9)	183	122 (66.6)	400	288 (72.0)	380	274 (72.1)

(b) *West Bengal*

	Children (5–15)				Adults (15 and above)			
	Males		Females		Males		Females	
	Total	Workers	Total	Workers	Total	Workers	Total	Workers
Hindu	100	53 (53.0)	98	17 (17.3)	179	130 (72 6)	162	56 (34.5)
Muslim	208	100 (48.0)	177	59 (33.3)	370	301 (81.4)	447	201 (44.9)
Total	308	153 (49.5)	275	75 (27.6)	549	431 (78.5)	609	257 (42.2)

Note : Figures in brackets indicate percentage of workers.

TABLE 12: AVERAGE TIME DISPOSITION IN HOURS PER DAY OF ACTIVITIES ACCORDING TO ETHNICITY

(a) *Rajasthan*

	Children (5–15)				Adults (15 and above)			
	Males		Females		Males		Female	
	Tribal	Tribal	Tribal	Tribal	Tribal	Tribal	Tribal	Tribal
No. of sample	44	159	34	149	71	329	51	239
Agriculture	0.81	1.30	4.02	2.22	3.61	4.79	4.36	2.59
Allied	0.90	1.31	1.69	1.67	1.81	1.08	1.78	1.31
Non-agriculture	0.00	0.14	0.00	0.03	0.02	0.97	0.00	0.08
Gainfully employed	1.71	2.75	5.71	3.92	5.44	6.85	6.14	3.98
Household (HHA) activities	0.03	0.09	1.50	1.40	0.10	0.11	3.50	3.87
Child activities (CHA)	5.10	4.56	1.78	2.98	1.55	0.14	0.42	0.99
HHA & CHA	5.13	4.65	3.28	4.38	1.65	0.25	3.92	4.86

(*b*) *West Bengal*

	Children				*Adults*			
	Males		*Females*		*Males*		*Females*	
	Hindu	*Muslims*	*Hindu*	*Muslims*	*Hindu*	*Muslims*	*Hindu*	*Muslims*
No. of sample	100	208	98	177	179	370	162	447
Agriculture	0.89	113	0.31	0.19	3.48	4.33	0.85	0.23
Allied	3.46	203	0.50	0.50	1.21	0.82	0.27	0.46
Non-agriculture	0.04	0.37	0.08	1.55	1.69	2.02	0.49	1.50
Gainfully employed	4.39	3.53	0.89	2.24	6.38	7.17	1.61	2.19
Household activities	0.18	0.90	2.62	1.72	0.23	0.10	5.45	4.97
Child activity	3.62	2.68	3.50	3.05	0.14	0.02	0.38	0.43
HHA & CHA	3.80	3.85	6.12	4.77	0.37	0.12	5.83	5.40

day. This emphasises our earlier point regarding the seriousness of measurement failure in a situation like that of West Bengal.

Fifteen out of 64 female children who reported as non-workers were also observed to be doing some gainful work. The majority worked as domestic servants, 10 females were reported spending 8-10 hours begging, but were not included as workers in this exercise as the NSSO does not recognise this as an economic activity, though it is recognised as an occupation.

Priority criteria, the concept of main activity, even majority time criterion puts them squarely into the category of domestic workers. The efficiency with which their other activity—namely gainful activity—is netted depends on the degree of visible marketability of this activity. In other words, the fact that they are uniquely responsible for a zone, of work namely housework has given them the distinction of being difficult to net.

Is there a methodological innovation which can more satisfactorily handle this phenomenon?

Problems of perception have revealed how the self-perception of females as domestically active, pre-empt them from appearing in the labour force. It has to be seriously considered whether the code domestic activity cannot be dropped completely. In other words, this option to choose is not offered to anyone including women. It would have been noticed that this is not an option that men are forced to exercise because the time profile, whatever the culture, class, crop, has revealed that men and boys do not come into this picture.

This code domestic activity could be replaced by three others. The data revealed would then not only provide a more accurate number of female workers but in the developing countries would provide basic information for the planning of energy and water inputs, and the planning of social inputs like childcare and housing.

A suggestion of this nature was made to the Indian national sample survey, to be included in their national data collection in 1982-84.

Methodologically it needs to be linked to the next necessary innovation. Most standard employment questionnaires, and specifically the Indian questionnaire, denotes the activity of each member of the households in a format whose number

usually is 4 (block 4). In this block in column 3 the investigator, after discussion with the respondents in the households, given an activity code number to the respondent. It is here that domestic activity traps the female and excludes her, even if she is engaged in collection work.

Another suggestion, which has been made and which has now been accepted for trial by the pilot methodological survey being undertaken by the International Labour Organisation in a few countries[12], is to canvass the time disposition format block 5 (which follows block 4) on all persons in the household. This block records the individuals activities in half days over 7 days. Currently it is being canvassed only on those that are in the labour force, derived from block 4. The ILO methodological survey instead will derive the labour force by scanning the time disposition rather than the self-proclaimed activity code. Thus, investigation would only record time disposition which might include a number of household chores, but at the tabulation and analysis stage criteria will be used to select those who can legitimately claim also to be in the labour force.

The cultural inhibition that was noticed in West Bengal also has an implication for methodology. The observation of the time use of females in the sample in West Bengal reveals that they were actively engaged in what are identified as productive activities but the system has not got the techniques to capture this, in other words, the more male-like the activities of females, the more likely that it will be measured and noticed. Thus, in Rajasthan rural women, since they are on farms like men, appear in the labour force. Manipuri women, who dominate in trade appear in the labour force and are visible in statistics. (Table 13).

Prostitution, begging, work as house-maids, processing paddy at home are on the other hand invisible in data. It can be noticed that the time spent by landed women in household activities increased with peak agricultural season, activities like harvesting and declines when these seasonal activities end. Probing this, it

[12]Institute of Social Studies Trust, "Impact on Women Workers—Maharashtra Employment Guarantee Scheme", a study sponsored by ILO, Geneva, December 1979, (Mimeo).

was found that women in these households cooked and served meals to the extra farm hands who were engaged at this peak harvest time. But they are not counted as workers, even though this is a vital production service.

TABLE 13 : WORK PARTICIPATION RATE OF MALES AND FEMALES IN MANIPUR CENSUS REPORT

Year	*Males*	*Females*
1971	45.31	23.62
1981	45.94	34.59

Radical changes will have to be made in classification of occupations in the National Classification of Occupation (NCO). Provision of techniques for entering the household, estimating the value generated by home based processing of foodgrains would have to be brought in to expand the methodology, and capture phenomena related to women's economic roles which are trapped inside the household and its characterisation and its milieu.

Implication for Policy

The importance of providing infrastructure in the form of childcare services, access to social inputs become apparent once the role of the household is recognised as a releaser and inhibiter of female labour supply. This is not of equal importance to man. It is more of a survival line a critical mass for women than for men. Here too the concept of the household is an issue, the family hides the devastation taking place within the household. The household contains within it characteristics that provide much of the impetus or inhibition towards female labour participation or to the emergence of the female into the labour force. Those policies which unlock the household would automatically provide the key to female entry into the labour market.

While demand pull expressed in employment opportunities, training, raising of awareness are vital factors, they are not in themselves sufficient to bring about the kind of responses from female labour that we notice amongst male labour. Yet poverty presses them into uncounted productive work, free-collection of

goods for themselves or for wage employment, irregular, underpaid, and physically strenuous activities. The fact that households with zero or no resources put their females into the labour market, whatever the cost, whatever the type of work, makes it essential for policy makers to analyse the labour force participation or employment and unemployment and the need for employment in class terms. The tendency for all statistics to be shown in the aggregate, with stratification being done either as educated/uneducated, rural/urban, agricultural labour/non-agricultural labour and self-employed fails to take notice of the critical issue viz., the economic situation of the family and the individuals within it.

Poignantly, or ironically, if the labour force is analysed against the class stratification, it will be found that all the poor are working. The poor, especially poor families, cannot survive unless they bring into themselves and their families some returns paid or unpaid each day. The pressure for survival is so great that this is the categorical imperative.

Given that it is an imperative that the poorest have to be engaged in economic activity leading to bread it would seem strange that they are also those most in need of regular and better remuneration. It is only when we take profiles of workers in poverty[13]—men, women, and children—that it can be seen where unemployment is pinching and what kind of employment generation will absorb this critical mass of unemployed, and within this mass of workers and unemployed, women, who are in the deepest crisis.

[13]Gita, Sen, "Inter-Region Aspect of Incidence of Women Agricultural Labourers," Paper presented at the workshop on Women and Poverty, Calcutta, 17th-18th March 1983 by ICSSR and Centre for Studies in Social Sciences.

Leela Gulati, *Profiles in Female Poverty—a Study of Five Poor Working Women in Kerala*, New Delhi, Hindustan Publishing Corp., 1981.

11

The Investigator, the Respondent and the Survey: The Problem of Getting Good Data on Women

J. KRISHNAMURTHY

Dissatisfaction with the data may often be the first indication of progress. But if it ends with just desinging more questions or more sophisticated data processing, the progress, if any, will be very limited. Much more attention needs to be devoted to understanding the investigator-respondent nexus and strengthening it; it is this relationship that often holds the key to the success of empirical enquiries. When we move from routine surveys where the information is simple and unambiguous to complex surveys like those with a focus on women we find that the issues are intricate; the questions asked run the risk of being socially loaded; and reality and response are not easy to relate. The issue then turns on the investigator-respondent relationship and its implications. It is this class of questions which I discuss here, taking illustrations from the study of women in relation to work or economic activity.

Macro Studies

The decennial population census is often regarded as a valuable data source on women's activities. Yet given its immense size and the limited training its enumerators receive, the quality of the data it generates is not very good. In particular, rates of

work participation for females appear rather unstable over time and while changes in concepts are to blame to some extent, this is not the whole story. We need to look more closely at enumerator bias and respondent bias and take note of the fact that these biases themselves change over time.

Enumerator biases are well known. The enumerator may only capture the more visible aspects of women's participation in economic activity; work for wages may be noted, but work without explicit payment may be missed; work outside the home may get covered, but work within it may not. Also the enumerator may infer the work status characteristics of a woman on the basis of the caste or status of the household.[1]

Correspondingly on the respondent's side too perception biases are serious, but these are compounded by the fact that the respondent and the individual being surveyed are not always the same. An extreme case would be one where the male head of the household is questioned about the work done by his wife, daughters, daughters-in-law and so on. Considerations of prestige, status, caste, etc., may creep in and bias responses. Productive work within the household may be missed or underplayed and bias combined with ignorance can seriously distort information. Also, the mere fact that the woman concerned is asked and gives the answers may not improve matters much if she is constrained in her replies by the presence of certain male members of her household or if her own perception of herself in relation to work is distorted by culture, ideology, religion etc.

The only alternative to the census at the macro level is the National Sample Survey which collects a great deal of information in its quinquennial surveys on employment and unemployment. Let us examine the 32nd Round, 1977-78 survey which covered about 1.6 lakh households. The survey load is extremely heavy, for the NSS has to provide valid estimates by State and zone for a large number of cross-classified characteristics, e.g., age, sex, residence, per capita expenditure group, household land possessed, employment status, industry, occupation, education

[1]For a good discussion of these problems, see Richard Anker, 'Female Labour Force Participation in Developing Countries: A Critique of Current Definitions and Data Collection Methods', *International Labour Review*, Vol. 122, No. 6, Dec. 1983.

and skill. Further independent estimates have to be presented for each sub-round or quarter so that seasonal variations can be examined. All this means that the NSS Survey is akin to a mini-census and yet it has to provide the wealth of information expected from a large-scale sample survey.

Accepting these constraints, one can still examine the scope for improvement in the NSS both in terms of data coverage and data quality. One major defect in the current approach adopted by the NSS is the prior classification by weekly status of the entire population. Thus anyone who did any work at all during the reference week is classified as a worker; anyone who did not work but either sought or was available for work during any part of the reference week is classified as unemployed; and the remainder are deemed to be outside the labour force. Now, information on the day-wise activities of individuals is only collected from the members of the weekly labour force. If we were to decide to widen the ambit of economic activity and include some more women in the labour force on the ground that they were engaged in such activities as free collection of forest products or grinding of foodgrains, we could add them to the weekly labour force but their daily activity particulars cannot be got for they were not collected. So while the activity codes of the 32nd Round can be aggregated in different ways in respect of weekly status, the same cannot be done for daily status. One might argue here that the NSS should collect full day-by-day activity status particulars of all members of the population, so that the analyst can decide on the aggregation scheme of codes for obtaining the daily status work force and labour force. But here we need to remember that this would involve collecting this extra information from more than twice the number of individuals from whom it is currently collected. There is a price to be paid in terms of cost and quality and the issue has to be squarely faced. Also let us not forget the need for comparable data. Changes in the design of a survey often result in non comparability over time.

One might also favour a much longer list of codes for activities including joint activities, so that many more activities of women get specified. As Anker argues :

> In this way, no *a priori* assumptions are made about what is not a labour force activity; respondents are not required to reply to ambiguous socially loaded questions; the labour force can be easily defined after the survey in different ways for different purposes; and many of the numerous economic activities performed by women can be taken into account.[2]

This was the philosophy behind the recommendations of the Dantwala Committee which sought the collection of daily activity particulars from 'every individual in the sample'.[3] However, considerations of economy appear to have prevailed. Also, the NSS found actual time measurement to be unsatisfactory; it has evolved a day made up of two 'half-days'. The assumption is that each half day has about 4 hours, though an individual working a half-day may only put in one hour. Now once we increase the range of admissible activities for the day, it will be impossible to adequately deal with them within the two half-day framework. We may have to go back to the 24 hour day with all its problems, if we wish to do justice to women's activities. Here again I think in the short run considerations of comparability may rule out change, but in the meanwhile there could be experimentation with new concepts and procedures.

The NSS obtains quite a lot of its information on women's activities on the basis of probing questions. Even granting the better training of NSS investigators vis a-vis the census, it still remains true that at least some proportion of the responses are second-hand or biased by the presence of male members when the schedule is being filled. In general the information obtained from the probe is poor in quality. For example it appears that more people indicate willingness to undertake additional employment than could be accounted for on the basis of the detailed data for weekly status.

The participation rates from the NSS appear to vary greatly between 1972-73 and 1977-78 when we look at them by state, sex and residence. This is particularly marked for females. At

[2]Anker, *op. cit.*, p. 720.

[3]India, *Report of the Committee of Exports on Unemployment Estimates*, New Delhi, 1970, see Para 3.14 on p. 17.

the same time we know what changes in concepts have occurred. But the changes in rates, even after adjusting for conceptual changes do not fit a simple pattern.[4] It may be that other factors at the level of the investigator and the respondent need to be looked at more thoroughly.

One might be tempted to conclude that the individual should be the unit of the survey and that the surveys should be more elaborate. Now apart from cost and feasibility, another factor worth remembering is that the information will still depend on the perceptions of the individuals who respond; these individuals —men or women—are only too often prisoners of their own limited perceptions and victims of imperfect memories.

Micro Studies

Our examination of macro studies revealed some of the problems of large-scale enquiries organised at the governmental level which seek to explore the dimensions of activity and life within households. We now turn to look at micro-studies. Here we concentrate on one particular study for it raises most of the issues about such studies, and their comparability and their superiority or otherwise in relation to macro studies.

The Indian Social Studies Trust has been a pioneer in conducting studies relating to women. Their most ambitious study was the time allocation study for India (TAS).[5] This covered two districts, in Rajasthan and in West Bengal. In each district, three villages were chosen and a total of 127 households were actually covered. Each household was observed for two days for ten or more hours each day and this was repeated at two-monthly intervals over the year.

TAS is an important approach for it attempts to get a detailed assessment of the time spent on different activities by men, women and children. A very wide spectrum of activities is covered by a combination of observation and recall. It is often claim-

[4]For a detailed discussion see my 'Unemployment in India: The Broad Magnitudes and Characteristics', in P.K. Bardhan and T.N. Srinivasan (eds.), *Rural Poverty in South Asia*, Columbia University Press (forthcoming).

[5]Devaki Jain and Malini Chand: 'Report on a Time Allocation Study—Its Methodological Implications', Indian Social Studies Trust, April 1982.

ed that the TAS provides an alternative approach which *macro* surveys should adopt. But before jumping to such a conclusion we must examine the TAS methodology and only then decide whether the methodology can be adopted wholly or partially by agencies like the NSS.

First, the TAS has an extremely high investigator intensity. One investigator covers only about 25 households in a year, with six visits of two days each per household. The NSS investigator has to cover about four households a *day*. It is obvious that the 1.6 lakh households of the NSS would be covered by the TAS method only if 64,000 enumerators were used. Even if we do not assume wholesale transplantation of the TAS methodology, it is surely obvious that adoption of a TAS-type methodology would involve sacrificing something—possibly a great deal—in terms of the range of information collected and cross-tabulated and in the degree of disaggregation currently achieved by the NSS.

Secondly, can one station an investigator for ten hours or more in the same household? The investigator has to be highly committed and tenacious, for many households may be hostile to what they may regard not unjustifiably as an unwarranted intrusion into their privacy.

Thirdly, the time allocation study of the ISST, in spite of the great emphasis placed on observation, finds in the end that 40-45 per cent of the time recorded was based on recall, not on direct observation of the activity in question. If the results are affected by whether recall or observation was used, then variations in observation-recall proportions would have serious consequences. One would expect that the observation-recall ratio would be lower for men than for women and would be higher for inside-household activities compared to outside-household activities. Of course if the results are invariant with respect to whether observation was used or recall, then there is no case at all for replacing recall by observation

Fourthly, the case for TAS rests on the implicit assumption that the phenomena being investigated possess the property of observer-invariance. In other words, what people do is assumed to be unaffected by the presence or absence of an observer. This is not a very plausible assumption to make. If there is an observer sitting in the household for most of the day, the behaviour pattern of members of that household over that day are unlikely to remain unaffected. Observations of time devoted to certain activities or even of labour time in general could easily get inflated in relation to normal practice, even if the observer measures accurately.

Finally, given that time reporting is at least partially by recall, that people do not remember accurately the time spent on different activities, and that this problem would be more acute for women, I am not sure that time reporting is the best way of solving the problem of adequately capturing women's role. We need to experiment more with alternative methodologies for measuring women's contribution to the economy; at the same time, we need to accept that time measurement of the TAS type is not satisfactory and should not be recommended to the NSS and other macro data generators.

Conclusions

When we pool the experience of large and small-surveys designed to capture women's activity, are there lessons we can learn or are there new questions we need to ask? Here, I wish to raise some issues which merit a discussion.

There is a view which favours surveys of women, for women, by women. While it is true that large-scale studies employ very few female investigators and while mixed investigators teams may be a good idea, the administrator who has to see the survey through often finds it difficult to deploy women and to arrange for their travel and safety. Such considerations cannot simply be wished away.

We tend to assume that the best information on women's work and employment is that obtained from women themselves. This need not always be true. Rural women may be as much victims of biases in perception as their husbands. Also they may be quite ignorant about the alternatives open to them. A good investigator may find it worthwhile questioning everybody, but treating different people's responses to different questions differently, taking into account their knowledge, orientation etc.

In survery methodology, the open-ended questioning process is often advocated, but in practice, considerations of generality lead

to the adoption of rigid questionnaires and considerations of load prevent us from canvassing schedules from all persons directly and noting all activity particulars without pre-classification into economic and non-economic activity. Here there is a case for change, but agencies like the NSS need to experiment much more in the field before they can devote their huge apparatus to implementing a new idea.

Surveys elicit responses rooted in the cultural mores of the society in question. In the case of women's work, should we reject some responses and correct for what we regard as false perception? For example, if a woman is working during the week, but reports days outside the labour force, are we to disregard this and treat these as days of unemployment?[6] To choose between survey responses and norm based adjustments is difficult and to achieve unanimity is virtually impossible.

Can surveys really understand the complex of intra-household transactions? I fear not. We tend to survey *Individuals*, directly, or indirectly, but this does not give us a picture of the household. If we penetrate into the household in our quest for knowledge, we run the grave risk of losing that which was sought.

It also needs to be noted that most survey agencies are reporting growing hostility on the part of the respondent. This reflects, at least in part, disillusionment with the planning process. It is difficult to convince potential respondents that they might gain by providing information: they, and the enumerators, know only too well that this is an empty promise. In our thirst for more information we might well be providing the straw that breaks the proverbial camel's back. The best, only too often, turns out to be the energy of the good. We need then to think afresh of ways in which more *appropriate* data, rather than *more* data, is collected.

Large-scale surveys like the NSS need to experiment much more in pilot studies, and a start in this direction has already been made. Small-scale surveys are useful in themselves, in highlighting processes and relationships that got lost at the level of aggregates. The real problem, especially in the area of

[6]See P. Bardhan, 'On Measuring Rural Unemployment', *Journal of Development Studies*, Vol. 14, April 1978.

women's employment, is that when policy formulation is under discussion the findings of small-scale surveys are rejected on the ground that they are unrepresentative or unreliable; and corresponding data on the issue are not being generated in large-scale surveys. Ideally, the processes and relationships revealed in small-scale surveys should be taken into account by large-scale surveys. This requires high professional standards in the conduct of small-scale surveys and an open mind on the part of the authorities conducting large-scale surveys. I think we have in India made some progress towards this goal.

12

Contributions to and Use of Social Product by Women

MONI MUKHERJEE

Introduction

Poverty is deprivation of something—for example, of goods and services produced in the economy in the conventional sense. To what extent are women more deprived than men when poverty is reckoned in this manner? If they are more deprived, should we not consider their contribution to social product as well and examine whether they consume less because they produce less? Moreover, should we be satisfied with the conventional mode of reckoning social product and its use? If women contribute relatively less in enterprises which sell commodities at a price above cost and make profits, they contribute more to work within the household in comparison with men. If we were to measure social product including housewives' services, how do the contributions and sharing by men and women compare? Again, for both these notions of the social product, is the contribution of women smaller simply because of economic factors or some conventional social factors which enjoin that women should be paid less than men even when they do the same job? This social practice then also affects the housewives' imputed earnings because evaluation is done at market rates or at opportunity costs based on market rates of earnings of women. One could next consider, the relative shares of men and women in the use of extended social product If men

and boys consume more than women and girls, it would be fair if the contribution of the latter is somewhat lower than that of the former.

Even when we consider a concept of extended social product, we do not include all the intangible contributions of women for the smooth functioning of the family as an institution. This is what Hawrylyshyn[1] has to say about this:

> Clearly then, the dollar value that the economists might justifiable place on the contribution of a wife and mother to the household must be limited to the chores and tasks of household operation that the wealthy have usualy purchased on the market. Child care values must exclude the satisfaction of developing an effective human being, but may include the teaching of accepted social mores; spouses' "services" would include the meals and clean shirts, but exclude personal affection and companionship.

While both men and women contribute here, it is likely that women contribute more.

Finally, all above is within existing socio-political systems and one could think of more liberated systems. The question of equality of status should perhaps be discussed also in the perspectives of such possible liberated systems of the future.

All these points excepting the last have been considered in this essay, with quantitative underpinnings in certain areas. The treatment of different themes are at different levels of superficiality; estimates presented are very approximate. Some of these defects have arisen because of our intention to discuss the problem within a somewhat larger framework. The paper does not aim at analytical refinements; its main aim is to chart large relevant areas in which more refined quantitative estimates can be prepared and deeper analyses can be applied.

But before we start, a couple of paragraphs for elucidating some ideas, the notion of poverty here has something to do with

[1]Oli Hawrylyshyn, (1977): "Towards a Definition of Non-market Activities," *The Review of Income and Wealth*, Vol. 23, No. 1, pp. 79-96.

goods and services which households and persons desire or need to possess, actually possess or have means to acquire. The phrase "desire or need to possess" governs all of them A distinction is made between actual possession and having means to such possession, and poverty may be considered from both these standpoints and contrasted with the notion of availability. Goods and services may be available; yet persons and households may not have means to acquire them.[2] While actual possession is the ultimate end, a proper distribution system and providing adequate means for their possession require consideration in all ameliorative measures. To ensure availabilities is a necessary but not a sufficient condition for amelioration. Finally, households are to be distinguished from persons in order to stress that communism does not necessarily prevail within households: one could think of an absolutely equal distribution of household per capita consumptions accompanied by so wide an intra-household disparity that the distribution of consumption by persons is much above its "warranted" inequality. "Warranted" because babies, little boys and girls, and men and women may need or desire to possess different amounts of goods and services, and some intra-household interperson disparity has to exist.[3]

One cannot, however, be quite certain about all this. The biological need of men for food is taken to be higher than that of women. Was this the situation in some of the ancient matriarchal societies which were dominated by women? The difference in requirements which we see today may be largely a consequence of the historical process of male domination rather than due to strictly biological factors. Also, apart from history, is it not

[2]Amartya Sen, "Famine," *World Development*, Vol. 8, 1980:, pp 613-21.

[3]S.J Prais, "The Estimates of Equivalent Adult Scales from Family Budgets," *The Economic Journal*, Vol. 63, No. 252, pp. 791-810.

Male/Female ratios in average food consumption for British working class in 1937-38 according to Prais;

	Dairy	*Vegetables*	*Fruit*	*Farinaceous*	*Fish*	*Meat*	*All Food*
Adults	1.03	1.10	0.82	1.18	1.10	1.43	1.14
14-17 years	1.23	1.43	0.96	1.38	1.15	1.15	1.25

better to think in terms of more hefty and healthy females who eat about as much as men? Coming to children, and considering all goods and services, economic and non-economic, the needs of a child may be as high as those of an adult. After all, a baby needs full-time expert attendance and loving care; an adult's needs for these are for much shorter periods.

We now proceed to our main task. In the following Section 2, we give an estimate of the value of housewives' services in India. In Section 3, we give an estimate of the women's contribution to the net domestic product (NDP), conventionally defined. This contribution together with housewives' services gives women's contribution to the extended social product which is defined as NDP plus housewives' services. We obtain from this the women's share in the extended social product. In Section 4, we speculate on the use of social product by women indicating how one could try to obtain quantitative estimates here. We also talk about the inter-and intra-household distributions of final consumption but somewhat cursorily. The paper ends with some concluding observations in Section 5.

Valuation of Household Services

The value of household services is usually excluded from the national income which is intended to give an unduplicated aggregate of all economic goods and services produced. There is a long history of studies on the evaluation of household services and the best recent summarization is available in Hawrylyshyn.[4] In sum, three different methods have been used For all of them, we need an estimate of the time put in by the housewives and estimates of the rates at which this time or its proper parts are to be evaluated. Converting weekly man-hours to man-years (N), we need this N, and an average annual rate of earning (E) for evaluation. In method (1), E is taken to be the opportunity cost earning of the housewife. In method (2), followed, for example, by Kuznets, E is taken to be the cost of hiring a single individual to do all the housework. In method (3), N is split up into its

[4]Oli Hawrylyshyn, "The Value of Household Services: A Survey of Empirical Estimates," *The Review of Income and Wealth*, Vol. 22, No. 2, 1976, pp. 101-32.

proper parts, e.g., the times devoted to cooking and preparing meals, cleaning and washing up, laundry and mending, childcare, shopping, etc., say N_i and each function is separately evaluated by the corresponding nearest market alternatives (E_i). Thus instead of NE, we have N_iE_i as the measure of household services in this case. The opportunity cost measure has been variously arrived at by different authors. Nordhaus-Tobin[5] for example, by and large, used the wages of female earners in manufacturing. Usually, method (1) gives the highest estimate, method (2) an intermediate one and method (3), the lowest. Dimensionally, the value of housework as percentage of GNP comes to about 44 per cent in method (1), 35 per cent in method (2) and just less than 30 per cent in method (3), the figures being based on the available estimates for western countries by different scholars at different points of time. Estimates of the numbers of man-years put in are based on the information on man-weeks worked by housewives (and others) collected in various time budget studies.[6]

No work of this type has been undertaken in India so far, and it will be of some interest if the work is taken up. The estimates surveyed by Hawrylyshyn are all somewhat arbitrary and cannot be reckoned as very accurate. An Indian estimate also will remain arbitrary and somewhat shaky, particularly in the absence of representative time use data. But it will not be very much inferior than the estimates of some of the other flows included in our national income statistics. In the following few paragraphs, a very crude estimate of the contribution of housewives' services is presented. The estimate is based on readily available material and not much time has been spent to think

[5]W. Nordhaus and J. Tobia, "Is Growth Obsolete?", *Economic Growth*, 50th Anniversary Colloquium V, NBER, 1972.

[6] (*a*) United Nations, "The Feasibility of Welfare Oriented Measures to Complement the National Accounts and Balances", E/CN, 3/477, 17 Feb., Stat, Co., New Delhi, November 1976.

(*b*) Oli Hawrylyshyn, *op. cit* 1976.

(*c*) Oli Hawrylyshyn, *op. cit*, 1977.

(*d*) Murphy, Martin (1978): "The Value of Non-market Household Production: Opportunity Cost versus Market Cost Estimates," *The Review of Income and Wealth*, Vol. 24, No. 3, pp. 243-56.

about the procedure. But it does give a dimensional idea and will serve other purposes which will gradually unfold. Obviously, the estimate could improve if a small group works on it for a year or so. But given the information available and the nature of the problem, there is not much point in using larger resources now. The Central Statistical Organization (CSO) may perhaps take up the work; they have all the information needed at their elbow.

We first obtain 9 crores as the number of married women in 1970-71, the year for which the estimate is prepared. According to the 1971 Census, about 65 per cent of the females of 20 years of age or above were married and another 12.5 per cent were widowed.[7] Female population of 20 years of age or above in 1971 was 136.5 million.[8] We get an estimate of 8.9 or about 9 crores from this. Here we assume that widows cannot be housewives, and this is not correct. Alternatively, some 52.5 per cent of all females are in the age group 15-59[9] and this gives a figure of 138.6 million females in this age group. Taking 65 per cent of this, i.e., assuming a proposition valid for 20+ group for 15-59 group, we again get a figure of about 9 crores. Of course, less than 65 per cent will be married in the age-group 15-59; on the other hand, there could be housewives in the 60+ group. Under the circumstances, we can perhaps take 9 crores as our estimate of N. Here naturally a better estimate can be obtained by more carefully examining the census data and papers based on these.

Next we have to get an estimate of E. We may first have a look into the following estimates of average annual contributions to NDP per worker for 1970-71.[10]

1.	Registered manufacturing	:	5697 rupees
2.	Unregistered non-household manufacturing	:	2382 "
3.	Overall national average	:	1884 "
4.	Agriculture	:	1282 "

[7]B.K Roy Burman, "Size, Structure and Geographical Distribution of Population in India", Typed paper submitted to the ICSSR, 1971.

[8]A. Bose, et al.. "Population in India's Development," Vikas, 1974.

[9]B. K. Roy Burman, *op. cit.*, 1977.

[10]C.S.O., *National Accounts Statistics*, 1981.

5. Unregistered household manufacturing : 696 Rs.

We may next use method (1) to get our estimates. Application of the average earnings of registered manufacturing with 2/3 as women/men differential, yields an estimate of Rs. 33,800 crores as the value of household services which is almost the same as the NDP for the year which was Rs. 34519 crores. When no women/men differential is used, we get the following three estimates of household services for the last three of the average earnings listed:

	Rs crores
Overall national average	16,956
Average income in agriculture	11,538
Average income in household manufacturing	6,264

Of these, only the first two merit serious attention, and I think that the average contribution to NDP in agriculture should be a good approximation of the opportunity cost of the average income of housewives. The Final Report of the National Income Committee shows that the NDP per worker for agriculture was only slightly above that for domestic servants (Rs. 472 and Rs. 408). However, a paid housekeeper which Kuznets had in mind did not have much in common with domestic servants in India. In India, the status of a housewife and the ranges of duties she has to perform are both a way above than what we have in mind when we think of a domestic servant, and this is true for poorer strata of the society as well. Keeping this in view, one could even think of using the national average without adjustment for lower earnings of females. Adjusted by 2/3 rate, this gives a figure close to the unadjusted average agricultural income.

Since we use the opportunity cost concept, let us follow Murphy[11] and elucidate the idea.

> The rationale behind this approach is based on the view that individuals allocate their time in much the same way they allocate their income, that is, till the marginal yield of the last hour spent is the same whether it is spent on work, leisure, or home production. Thus to the extent that the marginal wage rate net of taxes represents the value of time spent at work, then in equilibrium it also represents the value of time spent in home production. Accordingly, time allocated to household tasks would be valued at hourly wage rate net of taxes of the individual performing the work.

[11]Martin Murphy, *op. cit.*, 1978.

Surprisingly, Murphy's own opportunity cost and market cost (used by Kuznets, for example) estimates come very close as the following figures of the estimates of household production as percentages of GNP in the USA for persons 16 years of age or above show:

	1960	1970
Opportunity costs	37.6	37.1
Market costs	36.8	34.3

We thus have the following figures for further consideration:

TABLE 1

	Imputed at Overall National Average			*Imputed at Average Agricultural Income*		
	Rs Crores	*As P.C. Of*		*Rs Crores*	*As P.C. Of*	
		(3)	*(1)*		*(3)*	*(1)*
N D P	34,519	67	100	34,519	75	100
Household Services	16,956	33	49	11,538	25	33
Total	51,475	100		46,057	100	

It will be seen that while one could say that we could add 50 per cent to our NDP if we include services of the housewives, we will prefer to say that it would add to about a third to the NDP. The total which we call "extended NDP" is a better figure than the NDP as an unduplicated aggregate of goods and services produced in the economy.

It has already been stated that the estimates are rather crude

and a good deal of improvement is possible in the procedure of estimation even when we decide *a priori* which average income is to be used for evaluation. For example, the available data on differentials of earnings of men and women have not been analysed here, and this could be easily done if the work is taken up seriously as we have suggested. Secondly, instead of contributions to NDP, one could use the available information on factor earnings and try to obtain women/men differentials here. Most of the available differentials relate to employee compensation; it will, therefore, be of interest for this and other purposes if such differentials could be worked out for mixed income and operating surplus. Finally, some attempt can be made to apply method (3), and examine to what extent N can be disaggregated and average earnings against its various compenents obtained. We have completely bypassed this method because barring one study[12] which is not fully suitable for the purpose, not much is known in India about the housewives' time disposition. It is surprising that this work has not multiplied in India despite its being fashionable in the USA and in Eastern Europe.

Women's Contribution to NDP and Extended NDP

There is little information in India on women's contribution to NDP. It is obvious that household services is largely their contribution, but over and above this, a part of the NDP is also contributed by women. We give below again a very crude estimate of this by simply allocating the aggregate contributions to NDP by various industrial sectors according to the shares of men and women in the labour force. Considerable improvement is possible here if we have recourse to further disaggregation of national product and labour force and use some estimates of average contributions to national product per man and per woman in the labour force on the basis of direct information to the extent available, and fall back on our type of method only when some direct data are not available. This work could also be taken up along with our suggested work on the evaluation of household services. However until this is done, the following estimates for 1970-71 would indicate some broad dimensions:

[12]Devaki Jain, and Malini Chand, "Report on a Time Allocation Study.....Its Methodological Implications" (mimeo), Technical Seminar on Women's Work and Employment, 9-11 April 1982.

TABLE 2

Industrial Sectors	*Labour Force in Million*			*p.c. Share of Women in Labour Force*	*NDP*	*Women's Share in NDP*
	Male	*Female*	*Total*		*in Rs Crores*	
Agriculture	104.1	25.9	130.0	20	16980	3396
Mining	0.8	0.1	0.9	11	327	36
Household industry	5.0	1.4	6.4	22	433	95
Other industry incl. electricity	9.9	0.8	10.7	7	4504	315
Construction	2.0	0.2	2.2	9	1853	168
Transport and communication	9.5	0.5	10.0	5	1574	79
Trade, etc.	4.3	0.1	4.4	2	3880	78
Other services	13.5	2.3	15.8	15	4969	745
Total	149.1	31.3	180.4	17	34519	4912

The calculation thus shows that the contribution of the women in the NDP is of the order of 14 per cent. In view of the fact that labour force estimates for women are known to be weak and possibly considerably underreported and also considering the offsetting factor that women's average earnings are sometimes lower than men's even for the same job, it is not certain whether this percentage will go up or down markedly when more detailed and rigorous calculations are undertaken. On balance, it may however, go down slightly.

Once we have a figure like this, one can work out the woman's share in the extended NDP The calculations are given below, the figures being in crores of rupees.

Thus, the women's share of 14 per cent in the NDP goes up to 36 per cent (shown in brackets above) of extended NDP in the variant we have chosen, i.e., women contribute a little more than

TABLE 3

		Rs crores
At national average earnings	Men	34,519−4,912=29,607 (58 %)
	Women	16,956+4,912=21,868 (42%)
	Extended NDP	=51,475
At average agricultural earnings	Men	34,519−4,912=29,607 (64%)
	Women	11,538+4,912=16,450 (36%)
	Extended NDP	=46,057

a third of the extended NDP even when they contribute only about a seventh of the NDP. Taking a somewhat higher rate of women's average earnings naturally enhances women's share in the production.

We have talked about the information on time disposals, etc, earlier. We present below some highly summarized data for advanced countries based on information slightly biased towards USA and Eastern Europe from 15 localized studies:[13]

TABLE 4

	Hours per Day		
	Employed Men	*Employed Women*	*Housewives*
Paid work	8.2	6.8	0.2
Household & children	1.6	4.3	8.8
Personal needs	10.0	9.9	10.7
Free time	4.2	3.0	4.3
	24.0	24.0	24.0

Here housewives who are not employed devote more time to household and children than employed men to their work. However, employed men also devote some time to household and

[13]United Nations, "Towards a System of Social and Demographic Statistics, Studies in Methods Series F," No. 18, 1975.

children, and employed women devote more time to household and children than employed men. A breakdown of item 2 above is also available, but the components given do not exhaust the total time, though covering a large part of it. The figures in minutes per day are given in Table 5.[14]

TABLE 5

	Employed Men	*Employed Women*	*Housewives*
Cooking, preparing meals	9	65	136
Cleaning, washing up	10	65	128
Laundry, mending	2	38	75
Childcare	14	26	65
Shopping, gardening, etc.	49	43	94
Total	84	237	498
Total in hours per day	1.4	4.0	8.3

This is the type of material which has been used for the application of method (3) for the estimation of household production. An interesting point emerges when we examine the figures. In a proper estimate of extended national product, it is not sufficient if we just add the services of housewives who are not employed; we have to reckon, in addition, these services rendered by employed women and men. In our estimates, we have gone by married women only and hence in concept covered employed women as well. But we have missed girls below 14 or so and men of all ages. We have pointed out earlier that it will be useful to have more data of this type for India.

The Use of Social Product by Women

After having considered women's role in production, we may next consider their role in consumption. We have not attempted to present any figure here and simply sketched what could be done. Given time, considerable work can be done in this field. We can, for example, seek out women's share in national consumption within the frameworks of both NDP and extended NDP. Estimates of private consumption are available in India

[14]United Nations, *op. cit.*, 1976.

by categories of final use like food, clothing, furniture, utensils, etc. Some of these can be taken to be consumed by individuals within households while others are consumed by the household taken as a whole. Food and clothing are for individuals while a kettle or wall-clock is for the family. There could also be goods and services for which no such clearcut lines could be drawn. Sex differential can be applied only when an article can clearly be conceived as of need to a person. Consumption of the other items can then be split up by the sex ratio in the population.

In the NDP framework, final uses of goods and services comprise of net capital formation, public consumption and private consumption As current capital formation is intended for future final consumption. We need not split up capital formation by sex. In fact, in global NDP or extended NDP, there is some justification for applying to capital the same sex ratio which is worked out for the aggregate final consumption. Sex differentials in ownership of consumer durables and productive assets is an interesting topic which we do not discuss in this paper. Women's share in public consumption cannot be taken as just half even when the numbers of males and females are roughly equal in the population.

Among the major items of administrative final outlays, only defence expenditure can probably be halved on the plea that armed services are supposed to defend men and women equally from foreign aggression. However, a much larger share of the outlay on public order and safety is needed for men than for women because the latter are less prone to criminal activities than men, and this is also true for juvenile delinquency. Educational outlays are more for men than for women and the share of health services availed of by women in India is less than that by men. Regarding the economic services, the lion's share would go to men, for men participate more in economic activities than women as we have already seen.

In private consumption, it is difficult to think of sex differentials for items like (*i*) gross rent, taxes, fuel and power, and (*ii*) furniture, furnishing, household equipment and operations both of which relate to collective family needs rather than individual needs. In Indian conditions, women's share should be less than men's in (*i*) education and cultural services, recreation and

entertainment; (*ii*) transport and communications and (*iii*) medical and health expenditure, for the types of reasons indicated earlier. There could be approximate eqality in clothing and footwear which takes up about 10 per cent of private consumption. For food including beverages and tobacco, which takes up something like two-thirds of the private consumption, the average per head intakes and hence the aggregates for almost all the items included in the category are known to be lower for women than for men.

It will be of interest to try to quantify all these and see what the women's share is in public and private consumption. For example, suppose we take 75 per cent as the share of private consumption in the NDP (at market prices) 10 per cent as the share of government consumption and 15 per cent as the share of net capital formation; we then depict the shares of men/women in the two consumption flows as 60 : 40 and 75 : 25 respectively; we then postulate that housewives' services are shared between men and women in the proportion 55 : 45. Then shares of men and women in the aggregate final consumption come to a ratio of 60 : 40, when we use the average income in agriculture for evaluating household services.

It will be recalled that under this variant, the women's share in extended NDP was found to be 36 per cent. The use of overall national average income raises the women's contribution to extended NDP to 42 per cent while their share in the final consumption remains more or less the same, the other percentages remaining unaltered. Thus, women's share in final use may roughly correspond to their share in extended production. While little validity is attached to the percentages chosen, it is not improbable that more detailed calculations will show that women's share in extended NDP and its use are dimensionally similar. This will show that in the context of extended NDP, women as a social class are unlikely to consume much more than they produce. They seem to behave more parasitically only when we use narrower concepts like NDP.

Household or individual poverty in larger social groups can be studied through the distributions of income or consumption prevailing within the group, and a measure of concentration like the Lorenz ratio taken together with the average income or

consumption could tell us about the nature of prevalence of poverty in the group. If concentration is large, the disparity between the poor and the rich is large, and given the average, we know how poor the poor actually are in a meaningful way. In India, most such studies pertain to households, each household having an associated average income or consumption. When data are of this type, we really study the poverty of households, a household having a large per capita consumption being conceived as better off than a household with a lower per capita consumption. It is clear also that in such studies, intra-household variations in consumption are neglected. Intra-household variations in income are not discussed because in India several types of incomes accrue to households and not to persons. With information of this type, the head count measure, i.e., the other customary tool for the study of poverty, gives the percentage of population in households which have an average per capita consumption below a preassigned value obtained from normative and other considerations. Thus we say that a household with a per capita consumption of Rs. A or below is a poor household, and from this, we can say what percentage of households are poor; and if persons belonging to a poor household are all poor, then we can say that this percentage of the population is poor.

Finally, there is an income gap measure, depicting, on an average, how poor the poor actually are compared to the chosen poverty level. Since a more egalitarian distribution amongst the poor will improve matters, the extent of shortfall from the poverty level by a household can be weighted by its rank; Sen has proposed a measure of poverty by combining the head count and income gap measure with the Lorenz ratio for the poor.[15] All this is only by way of recapitulation in a hasty and none-too-accurate a manner—because we need this well-known background to make one further observation.

Once we agree to admit intrahousehold variations in consumption—and here it has to be consumption and not income for all countries, because while women may earn, babies cannot—we

[15]Amartya Sen, "Issues in the Measurement of Poverty", *The Scandinavian Journal of Economics*, 81, 1979, pp. 285-307.

may feel like talking about inter-personal distributions and their concentration, and head count and income gap measures based thereon. However, reflection shows that this need not be a meaningful way of looking at things. As we have already observed, one could conceive in the abstract a society in which intra-household variation is so large that even an egalitarian inter-household distribution is associated with extreme variations between persons: women and girls are starved, the aged are not taken care of and a disproportionately large share of the consumption goes to the adult earners who are predominantly the males. On the other hand, with perfect communism within households, the intra-household variations will be small (though not equal because the needs of the children, the students, the sick, the aged will be different from those of the healthy adults) and this society could be preferable even when there is some inter-household variation in household consumptions, particularly if this arises out of the needs of higher overall production. In most societies, intrahousehold distributions follow some amount of communism: babies and children get more than they earn, the sick and the aged are taken care of irrespective of their contribution to the family pool, students are provided for, and so on, and this type of communism could possibly be acceptable as the ideal. We have deliberately refrained from talking about sex-differentials here, but obviously this dimension permeates intra-household variations in consumption and production. Very little work has been done in this field—a field which remains a fruitful research area.[16]

Concluding Observations

The main point which we have tried to make is that the available evidence seems to indicate that women and girls are more deprived than men and boys in India and this is not because they produce less but because of certain other reasons. Estimates of the value of household work indicate that the contribution of women to extended NDP is more than their contribution to NDP as defined customarily. Coming to the

[16]Amartya Sen, "Family and Food: Sex Bias in Poverty," Prepared for *The Rural Poverty in South Asia*, ed. Bardhan and Srinivasan (mimeo), 1981.

uses of social product, it is probable that women's share is sizably lower than men's. A serious study of distributional aspects and intra-household disparities as prevailing in India is likely to show that the propositions made above in terms of aggregates cannot but reveal a far worse situation when applied to individuals, particularly in the poorer sections of the society. Moreover, this deprivation cannot be removed just by assigning to women an equal status in the present day exploitative society. It is necessary to strive for a society in which women can contribute all that is inherent in their nature—and thus lead to a larger degree of application of the creative, receptive and non-destructive principles in the management of human affairs—a society in which women and girls will no longer be poor compared to men and boys.

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