Issues and Methods for Development Policy and Planning

# INTRA-HOUSEHOLD RESOURCE ALLOCATION

Edited by

Beatrice Lorge Rogers

and Nina P. Schlossman

# Intra-household Resource Allocation: Issues and Methods for Development Policy and Planning

Papers prepared for the Workshop on Methods of Measuring Intra-household Resource Allocation, Gloucester, Massachusetts, USA, October 1983

Edited by BEATRICE LORGE ROGERS and NINA P. SCHLOSSMAN

This volume arises from the interest of the United Nations University in research contributing to the understanding and support of the central role of women in maintaining household nutrition and health under conditions of poverty. It constitutes a part of the University's Nutrition and Primary Health Care Project, and is based on a workshop funded by USAID that focused on the practical application of methodologies from the disciplines of anthropology, economics, and psychology to the analysis of household resource distribution issues. The objective was information that will help to avoid negative consequences and promote positive effects of development programmes. The book discusses not only measurement of intra-household food and health related behaviours, but also of how the household responds to economic and social changes and interventions.

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United Nations University Press The United Nations University, Toho Seimei Building, 15-1 Shibuya 2-chome, Shibuya-ku, Tokyo 150, Japan, Tel.: (03) 499-2811 Telex: J25442 Cable: UNATUNIV TOKYO

Typeset by Asco Trade Typesetting Limited, Hong Kong Printed by Permanent Typesetting and Printing Co., Ltd, Hong Kong Cover design by Tsuneo Taniuchi

WHTR-13/UNUP-733 ISBN 92-808-0733-1 United Nations Sales No. E.90.III.A.2 03500 P The papers in this volume were prepared for the Workshop on Methods of Measuring Intra-household Resource Allocation, which took place in October 1983. The workshop was funded by the United States Agency for International Development, Bureau of Policy and Program Co-ordination, Office of Policy Development and Program Review, under grant number OTR-0096-GSS-2268-00 as part of a larger project on ways of incorporating a concern for the internal distribution processes of households into the design of economic development interventions.

The focus on project design and programme planning explains the applied nature of many of the papers in this volume. Wherever possible, the authors discuss applications of their topics in the context of the real-world constraints that donor agencies face on both time and funds. The theoretical issues raised in these papers are vital to the development of methods for measuring and monitoring changes within the household.

The first paper in the volume makes the case for including an analysis of intrahousehold issues in the design of effective, successful development programmes and as a means of avoiding unanticipated negative consequences. The rest of the papers are grouped in three parts. The first provides a set of conceptual frameworks for the study of the internal dynamics of household resource distribution derived from three major disciplines that have been concerned with these questions: economics, anthropology, and psychology. These papers illustrate the complementary perspectives and methods the three disciplines bring to the study of the household. They effectively show how the insights they provide should be integrated in the programme planning process.

The papers in part II present several approaches to collecting the information needed to analyse household dynamics as part of development planning. As a group, they stress the importance of combining qualitative with quantitative methods, and short-term with long-term perspectives.

The papers in part III discuss specific measurement issues related to estimating key variables of particular interest to planners and scholars concerned with intrahousehold issues. These variables include the definition of the household, how members allocate time, individual food consumption (as an example of an outcome

measure used to assess the need for, and success of, some kinds of welfare-related programmes), and the flexibility of households in adapting to externally induced changes in the economic and social environment.

The Appendix presents in table format one approach to incorporating intrahousehold issues into the design and evaluation of development programmes.

viii

### Acknowledgements

We would like to thank Dr Judy McGuire and Dr Nancy Pielemeier of the Office of Policy and Program Co-ordination of USAID for their assistance, including substantial intellectual input and funding of the original conference.

Dr Stanley Gershoff, Dean of the Tufts University School of Nutrition, was instrumental in funding the activities needed to prepare these papers for publication. Dr Nevin Scrimshaw of the United Nations University arranged for the publication of the volume. Lisa Miller ably co-ordinated the conference at which these papers were first presented. Finally, we wish to express thanks to the people who participated in the conference (listed on page 203), and whose thoughtful comments and insights provided the basis for much of the thinking reflected in this book.

Beatrice Lorge Rogers and Nina P. Schlossman, Medford, Massachusetts Foreword vii Acknowledgements ix

1. The Internal Dynamics of Households: A Critical Factor in Development Policy Beatrice Lorge Rogers 1

### I. Conceptual Frameworks

Conceptual Frameworks

Beatrice Lorge Rogers and Nina P. Schlossman 23

 Programme Interventions, Intra-household Allocation, and the Welfare of Individuals: Economic Models of the Household Mark R. Rosenzweig 26

- 3. Peeking into the Black Box of Economic Models of the Household Jere R. Behrman 44
- 4. Intra-household Allocation of Resources: Perspectives from Anthropology Ellen Messer 51
- 5. Intra-household Allocation of Resources: Perspectives from Psychology *Patrice L. Engle* 63

### II. Methodological Approaches to Measurement

Methodological Approaches to Measurement

Beatrice Lorge Rogers and Nina P. Schlossman 83

- Combining Quantitative and Qualitative Methods in the Study of Intra-household Resource Allocation Susan C.M. Scrimshaw 86
- An Approach to the Study of Women's Productive Roles as a Determinant of Intra-household Allocation Patterns
   Lynn Bennett 99

8. Household Organization and Expenditure in a Time Perspective: Social Processes of Change

Elizabeth Jelín 114

### III. Measurement of Key Variables

Measurement of Key Variables

Beatrice Lorge Rogers and Nina P. Schlossman 131

- 9. Multiple Group Membership and Intra-household Resource Allocation Peter Heywood 135
- 10. Time-allocation Research: The Costs and Benefits of Alternative Methods

  \*Allen Johnson\*\* 140\*\*
- 11. Use of Emic Units for Time-use Recall

  Marian Frank Zeitlin 156
- 12. Data on Food Consumption by High-risk Family Members: Its Utility for Identifying Target Households for Food and Nutrition Programmes *Per Pinstrup-Andersen and Marito Garcia* 164
- Determinants of the Ability of Household Members to Adapt to Social and Economic Changes
   Constantina Safilios-Rothschild
   176

185

### Conclusions

Beatrice Lorge Rogers and Nina P. Schlossman

Appendix / 187

Participants 203

# The Internal Dynamics of Households: A Critical Factor in Development Policy

### **BEATRICE LORGE ROGERS**

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### INTRODUCTION

Development projects have diverse objectives: the modernization of agriculture, improvement in health and nutritional status, reduction in fertility, and increased levels of literacy and education, to name but a few. The underlying goal of all such projects, however, is the same: to generate self-sustained economic development in order to improve the well-being of the poor in developing countries. The best methods to achieve this goal have been a subject of theoretical argument and empirical exploration for at least 50 years, and, in spite of continuing debate, progress has been made in understanding some of the connections between development projects and development itself.

This progress has added new dimensions to an initially rather simple model of the relationship between a country's aggregate economic activity and the economic well-being of its members. Without denying the importance of national, macro-economic factors, it has more recently been recognized that sectoral relations (e.g. between agriculture and industry) must also be considered; that urban-rural and socio-economic class distinctions must be recognized; and that disadvantaged population groups must be targeted specifically if they are to benefit from the development process. The most recent step in understanding development has been the insight that the process does not stop at the door of the household. If they are to be successful, development projects must take into account the ways in which households (themselves very variable in structure) allocate both goods and responsibilities among their members.

Project objectives, after all, focus on individuals. Health, nutritional status, literacy, even productivity are characteristics of individuals. Income, frequently measured at the level of the household, is a composite of individual members' incomes. Increasing evidence indicates that individual incomes are not simply pooled and then spent to meet household needs in some unified fashion. They are spent at least in part according to the earner's own preference.

The household is certainly an important unit for planning and analysis, but it cannot

be the only unit. It serves as a framework for specialization of effort and redistribution of goods, but it can also be a mechanism for limiting access to productive resources and for disproportionately allocating the burdens of work and its returns. While altruism is indeed one motivating force of household members in the allocative process, self-interest is surely another.

# THE IMPORTANCE OF HOUSEHOLD DYNAMICS FOR PROJECT SUCCESS

The recognition that households follow allocative rules which may not always protect the most vulnerable members is of great significance for the selection and design of development projects. First, project benefits may be lost between the household and the target individual. It is a well-recognized problem of nutritional supplementation programmes, for example, that substitution of the supplement for home-supplied food often redirects the benefits of the supplement to other, less needy household members. Increasing a household's food supply should increase the food consumption of all members, but if only particular individuals within the household are targeted, patterns of distribution may cause those individuals to receive less than the projected amount. If the patterns are understood beforehand, then quantities can be adjusted or the programme can be redesigned to assure that sufficient food actually reaches the individuals in need.

Similarly, there are numerous cases in which agricultural extension services have been provided to households with the intention of increasing food production for subsistence, but the services were provided to men (or in such a way that only men would make use of them), while it was the women who had the primary responsibility for producing food (UNECA, n.d.; Loose, 1980). If the intra-household allocation of responsibilities had been understood in advance, services could have been planned to reach the appropriate individual, and the projects would have been more effective (Huggard, 1978).

Projects designed to increase household income have sometimes failed to improve indicators of individual well-being (Kennedy and Cogill, 1987), as in cases where the project increased the earnings of one member at the cost of another's, or where the form or the timing of the income was altered. It is not uncommon, particularly in sub-Saharan Africa, to find that husbands and wives have explicit responsibility for different aspects of household maintenance (Guyer, 1980). If women in a given setting are primarily responsible for providing food to the household, then an increase in income to men may not be translated directly into nutritional improvement of at-risk members. This is not to say that women's income is always spent on family well-being and men's income is not. In some cases, men may devote their incomes to investment in productive resources, while women purchase gold or jewellery as a form of savings. One study showed that Bangladeshi women save through hoarding (Alamgir, 1977). These examples emphasize the point that income is often spent differently by different earners. In order to predict the results of increasing household income, planners must understand that all income is *not* treated the same.

Moreover, designing a programme on the assumption that resources are pooled, and that therefore it makes no difference who receives the benefits in the name of the household, results in inequity to those household members who do not actually receive

the benefits. After the severe drought in the Sudan and the Sahel in 1975, herds were restored by granting cattle to male "heads of household." This scheme failed to acknowledge that, within the family unit, some cattle are owned by women who separately control their products, and that the women's loss was as serious and as important to rectify as the men's (Cloud, 1978). In the Mwea-Tebere irrigated rice settlement scheme in Kenya, payment for the harvested rice was given entirely to the nominal male head of the household upon delivery of the crop. Even though other household members had contributed a substantial amount of labour, they were unable to obtain payment equal to the value of their own work, because its full value was not recognized (Hanger and Moris, 1973).

Of course, neither households nor their internal patterns of distribution are static. Households adapt to changing circumstances, and if, for instance, the member traditionally responsible for feeding the family can no longer do so, other members will surely take over. Out-migration of male household members seeking urban employment has resulted in women assuming formerly male agricultural tasks. LeVine (1966) has documented this in Kenya and South Africa, and Colvin and colleagues (cited in Chaney and Lewis, 1980) in Mali. In highland Peru, women manage the farms when their husbands are engaged in wage labour elsewhere (Alberti, 1982).

Understanding existing distribution patterns may eventually permit planners to predict how they will change in response to particular interventions. The current state of knowledge in this field is not yet sufficiently advanced for that. At present, it can only be said that households do adapt, but not always rapidly, and not always in the most advantageous ways.

A second implication of intra-household dynamics for project planning is that benefits to some household members may result in burdens to others. Projects should therefore be planned, taking into account their potential secondary effects on household task allocation. Projects which encourage the education of children illustrate these trade-offs. In many if not most developing country settings, school-age children are important contributors of family labour, either in market or in home production (Nag et al., 1978; King-Quizon, 1978). The loss of children's labour time when they go to school results in a greater burden on the remaining household members (Minge-Klevana, 1978; Reynolds, n.d.). How this burden is redistributed will depend on how the children's work was viewed. If the children are seen as "helping their mothers," then the mothers may have to absorb the effects of their absence. This occurred in the Mwea-Tebere irrigated rice resettlement scheme in Kenya, where children were sent away to school as a project benefit (Hanger and Moris, 1973).

Alternatively, the product of children's labour may simply be lost to the household. In a number of societies where women of childbearing age are secluded, their children provide them with access to the market-place. Among the Moslem Hausa of northern Nigeria, for example, children are intermediaries in the sale of processed food produced by women at home (Longhurst, 1980). Here, the loss of children's labour may cause not only an increased workload for the women, but an actual reduction in their personal income. For households which can afford it, the greater returns to children's work after schooling in the long run may be worth the short-run loss, but not all households are free to make that calculation. An education programme will achieve higher participation under these circumstances if an accommodation can be made to fulfil the household's labour needs.

Several agricultural projects have had unanticipated effects on household labour

use. In the Gambia, the introduction of irrigation for rice culture permitted an increase in planted area, which augmented the workload of women in weeding and transplanting even though they personally could not own land in the scheme. Eventually, women refused their labour, and the output of rice production actually fell (Dey, 1981). In Sierra Leone, a swamp rice project significantly increased the labour burden of male children relative to the rest of the household (Spencer, 1976). Thus, the introduction of one kind of labour-saving technology increased the burden of another kind of labour. Had planners taken into account the different responsibilities of household members, they could have attempted to alleviate the latter burden as well, either directly or by reducing the labour cost of some other tasks normally done by these individuals.

A programme may even fail completely if it neglects the intra-household dimension. The concern over the loss of children's labour, which may hinder participation in educational efforts, also may be a basic cause of the rejection of family planning by many households. The long-range expectation of support by grown children in old age is often cited as a barrier to voluntary reduction of fertility, but the present or short-run economic contribution of children may be equally important. A less obvious example of the importance of understanding patterns of intra-household exchange is that of the Tolai Cocoa Project in Papua New Guinea (Epstein, 1975). Cocoa growers refused to bring their crop to the local marketing co-operative, even though the co-operative offered higher prices than private traders. Anthropological study found that, because the land which they farmed was inherited through their wives' line, farmers were reluctant to have public written records of the productivity of the land. When the co-operative stopped keeping these records, project participation increased.

A fourth concern for project planners is the danger that economic change may disrupt existing patterns of support among household members and within the extended kinship group or community. In a variety of settings, reciprocal arrangements among household members have been altered by shifts in the economic status of their various tasks. In the Gambia, for example, women's access to household resources was reduced when groundnuts, produced by men, were promoted as a cash crop, so that the perceived relative contribution of women to household income fell (Dey, 1981). In Java, the monetization of agricultural labour reduced the observance of traditional labour-exchange arrangements which guaranteed that the landless would have access to employment in return for a share of the crop (Hart, 1982).

The conclusion to be drawn from these examples is that the success of development projects in any sector depends on an understanding of the sometimes complex economic and social relations among household members. In this context, "success" refers not only to the specific outputs of projects but also to their broader consequences for individual well-being. As we have shown, project benefits may be diluted or lost altogether as they are distributed among household members. Furthermore, projects, even those which achieve their proximate objective, may cause inequitable distribution of burdens and rewards. These secondary effects may create barriers to participation which ultimately result in outright project failure. Negative results can be avoided, and the likelihood of success increased, if the dynamics governing the allocation of resources and responsibilities within households are understood and taken into account in the planning process.

The papers in this volume present some of the recent evidence on how resources and responsibilities are allocated within households, and discuss ways of measuring the

processes and the outcomes of intra-household allocation. Although research is still needed to identify the determinants of intra-household allocation patterns, what is already known can be used to improve the design of programmes and projects now being implemented.

## INCORPORATING HOUSEHOLD DYNAMICS INTO THE PLANNING PROCESS

All development involves the introduction of some economic or environmental change to achieve certain specified outcomes. Understanding household functioning permits a more accurate evaluation of the likelihood of the outcomes. Behavioural change cannot be forced, but can be induced. It is therefore critical not only to project planning but also to the formation of effective development policy that intra-household dynamics be taken into account.

Four broad areas relating to the household must be considered when setting development goals and selecting or planning projects. These are: (1) the amount of time available to different household members for participation in the project; (2) the allocation of household tasks to different members and the degree to which these tasks are transferable among members; (3) differential access to goods, both for production and for consumption; and (4) differential control over income.

### Time Availability

Time is a critical element in development projects. Many types of interventions affect the total amount of time available to the household or propose to alter how time is spent. It was mentioned earlier that family-planning programmes and, to a lesser degree, primary education programmes indirectly lower labour time available to the household by reducing the number of its members or their availability. It has been well documented that the labour burden per person is lower in larger households (Loose, 1980; McSweeney, 1979; Evenson et al., 1979), since (apparently) the amount of extra work involved in maintaining additional household members is smaller than their contribution. A number of studies suggest that the net contribution of labour time which children provide becomes positive as early as age six (e.g. Navera, 1978). Given the other forces which militate against limiting family size in some cultures, such as the dependence of a woman's prestige on the number of her children and the reliance on grown children's support in old age, the poor showing of many family-planning projects does not come as a surprise. Such programmes might achieve better results if the labour constraints on households could be alleviated. Fetching water, for example, is a time-consuming task in many settings, often occupying one household member close to full-time. Piped water or a conveniently located well might reduce the labour burden, creating enough slack in the system so that the loss of a child's labour for education could be absorbed. This illustrates how one apparently unrelated project could enhance the effectiveness of another.

A primary issue in any agricultural or income-generating project is whether the proposed beneficiaries have the time to participate. Examples were cited earlier of projects which failed because the additional time burden they created was unacceptable. The same consideration applies to programmes which directly provide consump-

tion goods such as health care, supplemental food, education and training. As Rosenzweig discusses in the next chapter, one of the major conceptual contributions of the "new household economics" (Becker, 1965; Lancaster, 1966) is the recognition that consumption of goods entails two kinds of costs – the direct costs of the goods consumed and the time it takes to consume them. Goods which are ostensibly free, therefore, still have a real cost such as that of the time taken to walk to the supplemental feeding site or health clinic, or the time required to attend a training programme.

### Task Allocation

Closely related to the question of time availability is the issue of the distribution of tasks among household members. In most cultures, different kinds of work are considered suitable for different household members. These distinctions encompass the sexual division of labour as well as division by age and by status in the household. The rigidity of these distinctions is quite variable, and, with the exception of baby care and cooking, which are always women's tasks, and ploughing and land-clearing, which are usually men's, there is tremendous variability in the allocation of specific tasks between the sexes and ages from one culture to another. Attempts have been made to identify in a generally applicable way the determinants of task allocation to one sex or the other (Brown, 1970; Murdock and Provost, 1973), but these schemes do not have good predictive value, since the division of labour seems to be quite culture-specific. For example, similar tasks were allocated between the sexes differently in three ethnic groups of Nigeria (Tolley, 1978).

Nor is the division of labour immutable. Within certain limits, evidence shows that as circumstances change, so may the division of labour. Cases were already mentioned of women taking over the agricultural tasks of men who had migrated to the cities (LeVine, 1966; Pala, 1978; Alberti, 1982; Reynolds, 1982). It has been argued that women can take over men's tasks more readily than men can adopt those of women (Reynolds, 1982), but changes in task allocation occur in both directions. There are numerous instances of men taking over crops formerly cultivated by women when the introduction of new technology or the development of cash markets made these crops more profitable (Burfisher and Horenstein, 1982). Considerable evidence from settings as diverse as Ethiopia, Bangladesh, and India indicate that the sexual allocation of tasks is less rigid in lower socio-economic groups where such artificial constraints on productive work are an unaffordable luxury (Taddesse, 1982; Alamgir, 1977; Mies, 1982). And certain women, such as widows and the elderly, seem to be exempt from the task limitations imposed on other women (Little, 1987). These issues are addressed in detail by Messer and Safilios-Rothschild in this volume.

What is important, for planning purposes, is that particular tasks are not always transferable among household members and, once transferred, may not revert. Project planners must recognize both the barriers to task reallocation and the dangers inherent in redefining tasks as a result of a project. A number of writers (Abdullah and Zeidenstein, 1975, 1982; Chand et al., 1980; Bryson, 1981; Mitra, 1981; Burfisher and Horenstein, 1982; Acharya and Bennett, 1983) have identified the need to target women specifically in development projects and have suggested that one way to accomplish this is to implement projects which focus on women's activities or women's crops. In certain cases, this approach was tried but was unsuccessful. For instance, a project to promote marketing of rice, cassava, and melons in Nigeria, where these

were traditionally subsistence crops grown by women, resulted in the crops being adopted by men (Burfisher and Horenstein, 1982). Apparently it was not the crop, but its subsistence nature, which gave it its identification with women. This shift could have been forestalled, or at least mitigated, if, for example, marketing had been through women's co-operatives. Similarly, the introduction of mechanized rice-hulling in an area of Java caused this task to be taken over by men, depriving women of an important source of cash employment (Stoler, 1977).

The solution is not to withhold labour-saving innovations in areas of women's employment, but rather to introduce them in such a way that they do not shift the allocation of the task away from women. Moreover, work burdens will not necessarily be reallocated equitably. For example, in Laguna, Philippines, when women work in the market up to six hours per day, they do not reduce their work time at home (Folbre, 1984), and men do not increase their contributions to household tasks (King-Quizon, 1978).

### Access to Resources

A third major concern in project planning is that household members have unequal access to the goods owned or obtained by the household. The determinants of access to consumption goods are discussed by Engle in this volume. As she points out, the concept of joint ownership by the household, rather than by individuals, is inapplicable in many settings, particularly in Africa (Guyer, 1980). Goods such as food may be distributed within the household according to accepted cultural patterns which do not match planners' preferences. The argument has been made that food, as well as other goods such as health care and education, are allocated within the household according to the perceived economic contribution of the members. The word "perceived" is critical, since much productive work, which contributes to real household income, does not enter the market sector, and thus may not be recognized in the household's structure of entitlements. Examples of this kind of work are food processing and preparation, child care, and household maintenance. This is work which conserves rather than earns income. The services provided are essential to the household and would have to be purchased from outside if they were not provided internally, but since no economic transaction takes place, the value of the service is often not recognized (Abdullah and Zeidenstein, 1975; Hogan and Tienda, 1976).

The generalization that women and children are always disfavoured in food distribution is not supported by the evidence (see, for example, Lipton, 1983). In much of sub-Saharan Africa, where women have well-defined, explicit economic roles (Guyer, 1980), they also appear to receive their fair share of food in the household (Nicol, 1959a, 1959b; McFie, 1976; Kennedy, 1988). Distribution of food within the family, however, often fails to meet the needs of all members when the quantities available are only barely adequate, and there are systematic patterns in some cultures which determine who in the household is most likely to fall short. For example, there is evidence of discrimination against women and girls in food distribution in South Asia, where women's economic roles are more circumscribed (Grewal et al., 1973). A provocative analysis of Indian census data (Rosenzweig and Schultz, 1981) found that differential allocation of resources among children was parallel to their potential economic roles. The survival of girls vis-à-vis boys, taken to reflect the distribution of food and health care, was higher in areas with significant earning opportunities for women,

and lower where women had few economic options. Not surprisingly, this relationship was strongest in low-income households, where resource constraints were greatest. A parallel finding from African studies is that females apparently are favoured in household resource distribution in areas where a high brideprice is paid; where no brideprice is paid or a dowry is given, girls did not receive as large a share of the household's food. Other studies in Africa, however, have found that women do consume less than their proportionate share (Schofield, 1974/75).

This discussion underscores the importance of understanding intra-household behaviour if one is to predict the effects on individuals of policy change and programme implementation. Although much of this evidence is suggestive rather than definitive, it does imply that one policy approach which would encourage equitable distribution of resource flows inside the household is to work toward providing economic opportunities in the market sector to both women and men on an equal basis. Alleviating the burden of women's tasks inside the home, though it would provide real benefits, may not have the same effect on women's command over resources as providing work opportunities outside the home, where their economic contribution may be more visible. Certainly, current research indicates that resources provided to a family or household as a unit may not reach the target individual unless distribution patterns are taken into account.

### Changes in Income

Finally, those planning development projects and guiding policy must understand the potential effect of altering the form, period, or earner of income. There is considerable evidence that all income which enters a household is not treated identically (Kumar, 1978; Guyer, 1980; Jones, 1983a). A central objective of most development policy is to raise the incomes of the poor, and generally it is recognized that programmes which expand income-earning opportunities are the most likely to generate continued, selfsustaining economic growth. But there are numerous examples of large-scale economic development projects which had unintended negative effects for some household members because they changed the form in which income was received, the period, or the earner. The Mwea-Tebere irrigated rice resettlement scheme, which disrupted many aspects of the resettled household's economy, also channelled all income through the male household head. Women felt that they had less access to and less control over the income than when they were earning their own income directly (Hanger and Moris, 1973). A plantation development project in Papua New Guinea, which raised incomes substantially but changed the economy from subsistence-based to cash, had a negative nutritional impact on children because households were unaccustomed to using scarce cash to purchase food (Lambert, 1982). Had this problem been anticipated, it could have been avoided, perhaps by incorporating a home food production component into the project.

In many studies, women report that they have much greater control over the income which they directly earn than that which is earned, for example, by their husbands (Ahmad, 1980 [Bangladesh]; Loose, 1980 [Senegal]; Roldan, 1982 [Mexico]). Anecdotal evidence (Pala, 1978; Tripp, 1981; Nelson, 1979), supported by some empirical research (Guyer, 1980), suggests that the income earned by women is disproportionately spent on food and basic household necessities, in comparison with men's income. Few studies make the point, however, that women generally work in the

market out of severe economic necessity so it is not surprising that their incomes should be spent on basic needs (Singh, 1977). Kumar (1978) found in Kerala, India, that in households where women worked for wages their incomes were more highly correlated with their children's nutritional status than were total household income or men's wage income. These households, however, were poorer and had less land available to them than did those in which the women were not engaged in wage work. It is to be expected that cash-income increments will have a greater effect on child nutrition in households with the most severe resource constraints.

Moreover, the argument supporting women's spending preference for food does not always take into account how men's income would be spent in the absence of women's income. In an irrigated rice project area of Cameroon, Jones (1983a) found no significant association between the amount of rice retained for home consumption and the sex of the individual controlling the disposition of the crop. Nor was the amount of household expenditure on the sauce ingredients (to supplement the grain staple) significantly different in male- and female-headed households. Married women spent less of their own money on these items than did independent women; their husbands' contributions made up the difference. In contrast to the irrigated rice area, women in the poorest, non-rice-cultivating village in the study bought the bulk of purchased grain for their households during the hungry season, using their own incomes.

Jones (1983b) also found that women preferred to maximize their own incomes rather than the total income of their households, when the two were in conflict. Once again, the important conclusion emerges that income is not entirely fungible. In designing projects and proposing broader sectoral policies to promote development, policy-makers must be alert to the possible consequences of altering the nature of income while attempting to raise it.

### Defining the Household

Throughout this discussion, I have relied on an intuitive understanding of what a household actually is. This has been intentional, since the definition of the household is an intractable theoretical problem (Messer, 1983). Given the varied and complex nature of human society, no definition of the household, however general, completely fits all circumstances. One can identify a variety of functions usually associated with the household: co-residence; joint production; shared consumption; kinship links (Bender, 1967). Yet as Heywood points out in part III of this volume, these functions often define different sets of individuals. In many places, the unit of joint production consists of a different set of individuals from the food consumption unit (e.g. Dorjahn, 1977 [Sierra Leone]; Foster, 1978 [Thailand]; Longhurst, 1980 [Nigeria]). Moreover, co-residence may not always be associated with shared production or shared consumption (White, 1980). The definition of co-residence itself may not be clear where many dwelling units form a single compound (cf. Gurney and Omolalu, 1971). Migration of household members also creates ambiguities: a person may leave the household for most of the year but return to contribute labour in certain seasons, share in the product of the household of origin, and contribute remittances for the support of resident household members.

Any fixed definition of the household can create arbitrary and possibly misleading distinctions. For example, in Taiwan, the census defines a nuclear family as part of an extended family household if it receives more than 50 per cent of its income from the