THE INTERNAL DYNAMICS OF HOUSEHOLDS:
A CRITICAL FACTOR IN DEVELOPMENT POLICY

October 1983

Prepared for the Agency for International Development
under Grant OTR-0096-G-SS-2268-00

Agency for International Development
Bureau for Program and Policy Coordination

Nutrition and Development Project
Paper No. 83-2

Contents

EXECUTIVE SUMMARY

The ways in which households allocate resources internally is increasingly recognized as a critical dimension of development policy. Evidence from virtually all parts of the world indicates that households do not function as single units, but that an internal economy exists in which members fulfill certain responsibilities and are entitled to certain rewards. The implicit contract involved in the distribution of tasks and goods depends not only on perceived need, but also on the perceived present or future economic contribution of household members.

An understanding of the allocation of resources and responsibilities is essential to predict the consequences of policy decisions and the impact of development projects. This is probably most important in the area of income-generation programs and policies to encourage different types of productive work as a means of generating self-sustaining economic growth through participation in the private sector. Such policies depend on inducing change, since they cannot require it. The structure of households determines how they will respond to alterations in the economic environment. Of course, similar concerns apply to more traditional programs of resource transfer.

Experience with development programs has demonstrated the importance of the intrahousehold dimension in several ways. Program benefits may be diluted or diverted from target individuals after they enter the household; a program which benefits some may increase the burden on others by altering the availability of labor, the allocation of tasks, or the access to resources; these changes may result in outright project failure if they create big enough barriers to participation; and finally, projects may inadvertently disrupt the support networks on which households previously relied. Obviously, these effects will seriously alter calculation of the rates of return from different projects. A consideration of household dynamics may in fact alter the selection of a particular program or policy approach.

There is evidence, however, that patterns of household dynamics are subject to outside influence. One need not simply throw up one's hands in the face of cultural barriers, but rather one should seek to understand the ways in which they can be modified in desirable directions.

The methods of measuring household dynamics have been developed in the context of academic research projects in which time was not the constraint which it is in the AID planning process. Therefore there is a real need for research on methods of obtaining reliable indicators of

intrahousehold distribution patterns without months or even years of resident research. As a start, the need to review existing ethnographic research in light of a few specific questions should be recognized. New approaches to data collection also need to be developed and tested. These should be designed to concentrate on the knowledge gaps identified after reviewing work already accomplished.

The critical questions to be asked pertain to household time availability, task allocation, access to resources, and the effects of altering the form, period, and earner of household income.

1. Introduction

The projects undertaken by USAID have diverse objectives: the modernization of agriculture, improvement in health and nutritional status, a reduction in fertility, a rise in levels of literacy and of education, to name 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 fifty 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 taken the form of adding new dimensions to an initially rather simple conception of the relationship between a country's aggregate economic activity and the economic well-being of its members. Without denying the importance of national, macroeconomic factors, it has been recognized that sectoral relations (e.g., between agriculture and industry) must also be considered; that urban-rural and socioeconomic 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 this progression has been a recognition that development does not stop at the door of the household. Development projects must consider the ways in which households (themselves very variable in structure) allocate both goods and responsibilities among their members, if they are to be successful.

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 in fact a composite of individual members' incomes, and there is increasing evidence that these incomes are not simply pooled and then spent to meet household needs, but, rather, that they are spent at least in part according to individual earners' different preferences. The household is certainly an important unit for planning and analysis, but it cannot be the only unit. It does serve as a mechanism for specialization of effort and redistribution of goods, but it can also be a mechanism for limiting access to productive resources and disproportionately allocating the burdens of work and their returns. Altruism is indeed one motivating force of household members, but self-interest is surely another.

2. The Importance of Household Dynamics for Project Success

What is the significance of this perception 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 programs, for example, that substitution of the supplement for home-supplied food often redirects the benefits of the supplement to other 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 other measures taken to assure that sufficient food actually reaches the individuals in need. If it is simply assumed that distribution will be according to the planner's perception of appropriateness, then the project may be ineffective.

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 women had the primary responsibility for producing food (UNECA, n.d.;

Loose, 1980). If the intrahousehold allocation of responsibilities had been recognized in advance, services could have been planned to reach the appropriate individual, and the projects would have been more effective (Huggard, 1978).

Projects whose objective was to increase household income have failed to improve indicators of individual well-being in cases where the project increased the earnings of one member at the cost of another's earning power, or where the form or the timing of the income were altered. It is not uncommon, particularly in Subsaharan Africa, to find that husbands and wives, for example, 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. This is not to say that women's income is always spent on family well-being and men's income is not. There is evidence tnat in some cases, for example, men may devote their incomes to investment in productive resources, while women will purchase gold or jewelry as a form of saving. Alamgir (1977), for example, finds that Bangladeshi women save through hoarding. The point is, rather, that income is often spent differently by different earners, and one cannot predict the results of

increasing household incomes without understanding that all income is not treated the same.

Furthermore, the assumption that resources are pooled, and thus it makes no difference who receives benefits in the name of the household, results in inequity to those household members who are left out. For example, after the severe drought in Sudan and the Sahel, herds were restored by the granting of cattle to male "heads of household." This system failed to acknowledge that, within the family unit, some cattle are owned by women who separately control their products, and that their loss was as serious (and as important to restore) as the men's (Cloud, 1978). In the Mwea-Tebere irrigated rice settlement scheme in Kenya, payment for the rice was given entirely to the nominal male head of household upon delivery of the crop. Even though other household members made substantial inputs of labor, they were unable to obtain payment equal to the value of their work because its full value was not recognized (Hanger and Moris, 1973).

Of course households are not static, and neither are their internal patterns of distribution. Households adapt to changing circumstances, and if, for example, the member traditionally responsible for feeding the family can no longer do so, other members will surely take over. There is substantial evidence that out-migration of male

household members to seek urban employment has resulted in women adopting formerly male agricultural tasks. For example, Levine (1966) has documented this for Keyna and South Africa, and Colvin et al. (1980, cited in Chaney & Lewis, 1980) for Mali. In highland Peru, women manage the farms when their husbands are absent, engaged in wage labor (Alberti, 1982). It may even be the case that understanding existing distribution patterns permits one to predict how they will change in response to particular interventions, although the 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 desirable ways.

A second implication of intrahousehold dynamics for project planning is that benefits to some household members may result in burdens to others; projects should be planned with an awareness of potential secondary effects on household tasks. This may clearly be seen in projects which encourage the education of children. In many, if not most, LDC settings, school-aged children are important contributors of family labor, either in the market or in home production (Nag, White, Peet, 1978; King-Quizon and Evenson, 1978). The loss of children's time will result in a greater burden on the remaining household members (Minge-Klevana, 1978; Reynolds, n.d.). How this burden is distributed will depend

on how the children's work was viewed. If they were seen as "helping their mothers," then the mother 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 part of the benefit of the project (Hanger and Moris, 1973). Alternatively, the product of their labor may simply be lost to the household. In a number of societies where women of child-bearing age are secluded, their children provide women with access to the marketplace. Among the Moslem Hausa of northern Nigeria, for example, children are intermediaries in the sale of processed food made by women at home (Longhurst, 1980). In these cases, the loss of children's labor may cause not just an increased workload, but an actual reduction in income. For households which can afford it, the greater returns to children's work in the long run may be worth the short-run loss, but not all households will be free to make that calculation. An education program will achieve higher participation in these circumstances if an accommodation can be made to the household's labor needs.

There are several documented cases of agricultural projects which had unanticipated secondary effects on labor use. In Gambia, for example, the introduction of

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

A program may even fail completely if it neglects the intrahousehold dimension. The concern for loss of children's labor, which may reduce participation in educational efforts, may be a basic cause of the rejection of family planning by many households. The long-range expectation of support by grown children is often cited as a barrier to voluntary reduction of fertility, but the present or short-run economic contribution may be equally important. A less obvious example of the importance of understanding patterns of intrahousehold exchange is that of the Tolai Cocoa Project in New Guinea (Epstein, 1975). Cocoa growers refused

to bring their crop to the local marketing cooperative, even though the cooperative offered higher prices than private traders. Authropological study found that, because the land which they farmed was inherited through their wives, not their own line, farmers were reluctant to have public written records of the productivity of the land. When the cooperative stopped keeping these records, participation increased. The Gambian rice irrigation project cited above is another example of a project which failed because intrahousehold allocation of tasks was not accommodated.

A fourth concern for project planners is the danger that economic change may disrupt existing patterns of support among household members and in the extended kinship group or community. There is evidence from a variety of settings that reciprocal arrangements among household members have been altered by shifts in the relative importance or economic status of their various tasks. In Gambia, for example, the promotion of groundnut production for cash, which was done by men, resulted in reduced access by women to total household resources, because of their reduction in relative productivity (Dey, 1981). In Java, the monetization of agricultural labor has reduced the observance of traditional labor exchange arrangements which guaranteed that the landless would have access to employment 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 direct output of projects but also to their broader consequences for individual well-being. We have shown, in the above discussion, that project benefits may be diluted or lost as they are distributed among household members. Further, projects, even those which achieve their proximate objective, may cause inequitable distribution of burdens and rewards. And these secondary effects may cause barriers to participation which ultimately result in outright project failure. These negative results can be avoided, and the likelihood of success increased, if the dynamics of the allocation of resources and of responsibilities within households are understood and accommodated in the planning process.

Research is still needed to develop a thorough understanding of the determinants of patterns of resource allocation and responsibility among household members. The recognition of this area as one of importance to development policy is still relatively new. However, even given the present state of knowledge, enough is known to provide some guidelines for incorporating a concern for intrahousehold dynamics into the development planning process. In the

next section, we review some of the available evidence about households and their behavior and discuss the ways in which this information can be used in the formation of development policy and in program planning. There have been few carefully designed research studies, but much empirical observation and description, which has provided useful insights into the ways in which households function. This evidence must be viewed as suggestive rather than conclusive, but it points to the areas in which future research might most fruitfully be concentrated.

Section 4 discusses some of the methodological issues in studying intrahousehold behavior. A legitimate concern of development planners and policymakers is that they cannot wait to take action until every potentially useful piece of information has been obtained. This section discusses ways of seeking available information and reviews the advantages and disadvantages of some of the data collection approaches which have been used in the past. Finally, brief mention is made of the research directions which seem to be most promising for purposes of project planning.

3. Ways of Incorporating Concern for Household Dynamics into the Planning Process

All development involves the introduction of some economic or environmental change with the intent of achieving

certain specified outcomes. Understanding the ways in which households function permits a more accurate evaluation of the likelihood of the chosen outcomes. Behavior cannot be forced, but must be induced, which is why concern for household dynamics is critical not only to project planning but also to the formation of development policy. Quite different project approaches to a given policy objective may be adopted as a result of recognizing the constraints imposed by existing patterns of intrahousehold allocation.

There are four broad areas relating to the household which must be considered in the process of setting development goals and selecting and planning projects. These are (1) the amount of time available to different household members; (2) the allocation of 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. Let us briefly discuss each of these.

3.1 Time Availability

Time is obviously a critical element in development projects. Many types of interventions affect the total amount of time available to the household or propose to alter the ways in which time is spent. It was mentioned

earlier that family planning programs and, to a smaller degree, primary education programs indirectly reduce labor time available to the household by reducing the number of its members or their availability. It has been well documented that labor burden per person is lower in larger households (Loose, 1980; McSweeney, 1979; Evenson et al., 1979), since (apparently) the extra work involved in maintaining additional household members is less than their contribution. There are a number of studies which suggest that the net contribution of labor 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 women'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 is not surprising. The success of these programs might well be improved if an attempt were made to reduce the need for the labor whose supply would be reduced as a result of the program. For example, fetching water is a time-consuming task in many settings, often occupying one household member close to full time. Piped water or a convenient well might reduce their labor burden, creating enough slack in the system so that the loss of a child's labor could be absorbed. Thus

an apparently unrelated intervention might provide direct benefits as well as indirect benefits through the program in question.

With any agricultural or income-generating project, a primary issue 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 programs which directly provide consumption goods such as health care, supplemental food, education and training. 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 entail a real cost--for example, the cost of the time taken to walk to the supplemental feeding site or clinic, or the time to attend a training program. Programs which offer free or subsidized goods or services must be planned to minimize the time costs of participation as well.

3.2 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 labor 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 from one culture to another. A number of attempts has 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 labor seems to be quite culture-specific. For example, in three ethnic groups of Nigeria, similar tasks were allocated differently between the sexes (Tolley, 1978).

Nor is the division of labor immutable. Within certain limits, there is evidence that as circumstances change, so may the division of labor. 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 will adopt those

of women (Reynolds, 1982). This may be true in some instances, but there are many examples of men taking over, for example, crops formerly associated with women when the crops became more profitable through mechanization or other technology, or through development of cash markets (Burfisher and Horenstein, 1982), possibly because these changes allowed the task to be redefined in some way. Further, there is considerable evidence from settings as diverse as Ethiopia and Bangladesh and India that the sexual allocation of tasks is less rigid in lower socioeconomic groups where such artificial constraints on productive work are an unaffordable luxury (Tadesse, 1982; Alamgir, 1977; Mies, 1982). And women in certain positions, such as widows and the elderly, seem to be exempt from the task limitations imposed on other women (Little, n.d.).

What is important, though, 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. For example, a number of writers 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. There have been cases where this approach

was tried but was unsuccessful. For example, 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 done through women's cooperatives. 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 labor-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. One can also not assume that work burdens will necessarily be allocated equitably. For example, there is evidence from Laguna, Philippines that when women work in the market up to six hours per day, they do not reduce their work time at home (Folbre, 1980), and men do not increase their contributions to household tasks (King-Quizon and Evenson, 1978).

3.3 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. In fact, the concept of joint ownership by the household, rather than by individuals, is certainly inapplicable in many settings, particularly in Africa (Guyer, 1980). Goods such as food, for example, may be distributed within the household according to accepted patterns which do not match planners' preferences. The generalization that women and children are always disfavored in food distribution is not supported by the evidence (see, for example, Lipton, 1983). Still, distribution of food often fails to meet the needs of all members when the quantities available are only barely adequate, and there are systematic patterns determining who in the household is most likely to fall short. The argument has been made that food, as well as other goods such as health care and education, are allocated within the household based on 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 this is not recognized in the household's structure of entitlements. Examples of this kind of work are food-processing and preparation, childcare, and household

maintenance. This is work which conserves rather than earns income; the services provided are essential 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). There is suggestive evidence that in much of Subsaharan Africa, where women have well-defined, explicit economic roles (Guyer, 1980), they also tend to receive their fair share of food in the household (McFie, 1967; Nicol, 1959a and b). What evidence there is of discrimination against women and girls in food distribution comes from south Asia, where women's economic roles are more circumscribed (Grewal et al., 1973). An interesting analysis of Indian census data (Rosenzweig and Schultz, 1981) found that differential allocation of resources was parallel to the differential econonic roles of children. The survival of girl children vis-à-vis boys, taken to reflect the distribution of food and health care, was higher in areas where there were significant earning opportunities for women, lower where women had few economic options. Not surprisingly, this relationship was strongest in low-income households, where resource constraints are greatest. A parallel finding from African studies is that females apparently are favored 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 (Schofield, 1974/5).

Much of this evidence is suggestive rather than definitive, but it does suggest that a policy approach to encouraging equitable distribution of resource flows inside the household is to work toward providing economic opportunities on an equitable basis in the market sector. It suggests that alleviating the burden of women's tasks inside the home, though it would provide real benefits, may not have the same effect as providing work opportunities outside the home. Certainly it suggests that resources provided to a family or household as a unit may not reach the target individual unless distribution patterns are taken into account. This is a clear example of the importance of understanding intrahousehold behavior if one is to predict the effects on individuals of policy change and program implementation.

3.4 Changes in Income

A final important concern to those planning development projects and guiding policy is the potential effects of altering the form, period of earner of household income.

There is considerable evidence that income which enters a household is not treated homogeneously (Guyer, 1980; Kumar, 1979; Jones, 1983). A central objective of most development policy is to raise the incomes of the poor, and generally it is recognized that programs which expand income-earning opportunities are the most likely to generate combined self-sustaining economic growth. But there are numerous examples of large-scale economic development projects which had unintended negative effects on some household members because they changed the form in which income was received, the period, or the earner. For example, the Mwea-Tebere irrigated rice resettlement scheme, which disrupted many aspects of the resettled household's economy, also channeled 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 them from subsistence to cash, had negative nutritional impact because households were unaccustomed to using scarce cash to purchase food (Lambert, 1979) An intervention could easily have been incorporated into the project to deal with this problem, had it been anticipated.

Many studies report that women control, or at least believe that they control, the income which they directly earn, much

more than that which is earned, for example, by their husbands (Loose, 1980 [Senegal]; Ahmad, 1980 [Bangladesh]; Roldán, 1982 [Mexico]). There is a substantial amount of anecdotal evidence (Nelson, 1979; Pala, 1978; Tripp, 1978), supported by some empirical research (Guyer, 1980) indicating 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 since women generally work in the market from severe economic necessity, it is not surprising that their incomes should be spent on necessities (Singh, 1977). Kumar (1979) working in Kerala, found that in households where women worked for wages, their incomes were more highly correlated with children's nutritional status than were total household income or men's wage income. However these households were poorer and had less land available to them than those in which the women did no wage work. It is to be expected that cash income increments would have a greater effect on child nutrition in households with the most severe resource constraints.

Further, this perception does not always take account of how the income of men would be spent in the absence of women's income. Jones (1983) working in an area of Cameroon, found that there was no significant difference in the amount of rice retained for home consumption depending on whether men or

women controlled the disposition of the crop. Further, the amount of household expenditure on the supplementary sauce ingredients was not significantly different in male- and female-headed households. Married women spent less on these items than independent women; their husbands' contributions made up the difference. However this was in the irrigated rice project area under study. In the poorest, non-rice cultivating village in the study, women bought the majority of purchased grain in the hungry season, using their own incomes.

Jones 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 is that income is not entirely fungible. In designing projects and proposing broader sectoral policies to promote development, one must be alert to the possible consequences of altering the nature of income while attempting to raise it.

Throughout this discussion we 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 in the literature. 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). However, 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 consuming unit (e.g., Dorjahn, 1977 [Sierra Leone]; Foster, 1978 [Thailand]; Longhurst, 1980 [Nigeria]). Co-residence may not always be associated with shared production or shared consumption (i.e., "eating from a common pot") (White, 1980). The definition of co-residence itself may not be clear where many dwelling units form a single compound (e.g., Gurney and Omolalu, 1971). Migration of household members creates another ambiguous case, where a person may leave the household, but return to contribute labor in certain seasons, share in the product of the sending household and send remittances for the support of other 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 percent of its income from the extended family. This tends to understate disparities in household income, since the poorest nuclear families have their incomes combined with the larger unit (Greenhalgh, 1982). Yet to exclude the extended family from the definition leaves out an important dimension

of sources of support for the members of the nuclear group. A definition which acknowledges the fluid nature of the boundaries separating the household from the community of which is it is part is Guyer's (1980) statement that "a household is a particularly dense center in a network of exchange relationships."

It seems that planners and researchers alike must accept the fact that the equivalent of the western concept of the household does not exist in most places. Rather than force a definition which has more exceptions than otherwise, it makes sense to analyze the particular dimension of interest, whether it be sharing of production responsibilities, common uses of income, co-residence, or the common cooking pot. In this way, the mistake will be avoided of first applying an erroneous definition and then making assumptions about the behavior which the definition implies.

It is clear that organization into households is an important survival mechanism for individuals. Where traditional households (co-residential kinship groups of various kinds) are not available, it is common for people to establish reciprocal relationships with "fictive kin" which serve similar functions of mutual support and specialization of household maintenance tasks (Nieves, 1979). Nonetheless, the household is clearly not a homogeneous unit in which all members share a common set of preferences. The household can better be seen as a group of

people bound by an implicit contract which specifies the rights and obligations of each member. As in conventional contracts, the balance of rights and obligations is determined in part by the alternatives available to each member and by their relative power. Thus Jones (1983), for example, in her study in northern Cameroon, found that married women provided their husbands with labor at below-market wage rates, and could not completely refuse to work out of fear of beating. But she also found that these women worked less for their husbands than those who were paid a higher wage, and spent the balance of their time on crops which were less profitable, but whose profit they controlled. Similarly Longhurst (1980) found that within the conjugal unit, labor and goods are often exchanged for cash.

There is clearly a cultural component to the nature of what might be called the household contract. There is a strong tradition in Africa of separate economic spheres of activity for men and women, with considerable independence between them (Guyer, 1980). But even in such a traditionally patriarchal society as Bangladesh, economic forces affect the balance of decision-making power in the household. Women who bring in wage income have a greater say in how the income is spent than those who work only in the home (Alamgir, 1977). This mutability of traditional patterns is important for development policy

because it demonstrates that cultural factors are not an absolute constraint on behavior, and that economic forces can generate lasting change and progress. This means that the exercise of identifying patterns of household behavior is worthwhile, because those patterns are indeed subject to outside influence.

4. Methodological Issues in the Study of Household Dynamics

The study of the internal processes of households poses difficulties of definition, access, and measurement. Defining the household for the purpose of study is already a difficult task; then households are private institutions and their relationships may be considered too personal to discuss; and finally there is still much to be learned about what needs to be measured and how to measure it. Most of the empirical research which has been done on these household issues has been in the context of long-term research projects and doctoral dissertations where the cost of time-consuming data collection methods was not a major concern. Approaches are needed which can provide at least some guidance to project planners within a realistic time horizon.

In addition to primary data collection, this information may sometimes be obtained in part from the analysis of secondary data such as census information, household income and expenditure

surveys (if they contain demographic information), consumption and nutrition surveys. Valuable information can also be found by reviewing the available ethnographic literature on the area. There are few instances of planning for development in an area where no research has been done before. If a set of relevant questions is provided to planners, such as relating to the four issues discussed in section 3, at least some answers will be available without any new data collection effort.

This is not to suggest that data collection as part of the planning process is superfluous. Any project should be evaluated in terms of its potential rate of return for the effort and resources expended. We have demonstrated that knowledge of intrahousehold dynamics is essential to an accurate assessment of project outputs. What is important is to identify the most efficient ways of obtaining such knowledge. The issues which need to be addressed in this context are: (1) defining the unit of analysis; (2) measuring individual income and expenditure--that is, resource flows among and within households; (3) measuring time use and task allocation; (4) measuring individual access to household resources, including productive assets, food, education, and other human capital investments; (5) measuring the distribution of power and decision-making responsibility. Let us briefly discuss these.

4.1 Defining the Unit of Analysis

We have already discussed the difficulty of defining precisely what a household is. Any dimension along which households can be measured will include some individuals who ought to be excluded in a reasonable definition. Aside from the theoretical question of what is a household, there is also the practical problem that household composition and structure are highly variable over time. One study of household economy found that, over a one-and-a-half-year period, 20 percent of the sample households were disrupted in some way (Haugerud, 1981). In a study of food consumption presently being conducted in Zambia, household structure is charted anew in each monthly round of data collection (Kumar, 1982). Changing structure is in fact an adaptive mechanism of households (Nieves, 1979; Jelín, n.d.), so that information on the flexibility of household units over time is an important indicator of their ability to cope with economic stress and change. Further, individuals may belong to several different households at one time (Loufti, 1980): for example, if they receive support from both their natal and affinal families. People cannot be studied outside the context in which they live, but a useful suggestion is to use the individual as the point of departure, and to analyze the household or other support network to which he belongs as a characteristic (Watts and Skidmore, 1976). The practical application of this approach

still needs to be tested, but it suggests a way around a constant problem of household-level research.

4.2 Income and Expenditure

Most income and expenditure surveys measure all the income (cash and kind) flowing into the household and all the household's expenditure or consumption in a given reference period. It is very unusual to find a survey which distinguishes income by separate earner (Kumar, 1979; Guyer, 1980) or expenditure by individual. Yet it is well recognized that, to get accurate income data, each earner must be questioned and each source of income separately identified, since it is not uncommon for household members to lie to each other or to keep secret the amount of their income. It is not meaningless to aggregate household income, but this does not provide the data needed to study intrahousehold processes. In many cases, it is simply a question of preserving in the data-coding process information which has already been gathered.

For present purposes it is probably worthwhile to trade off sample size against the detail of information needed. At least at present, techniques of income measurement are not so well established that large-scale surveys are likely to obtain the quality of information required. And the statistical accuracy of quantity measures obtained in large-scale surveys is likely to be less important than capturing the nature of resource flows in and out of households and among their members.

It may be possible to derive some useful understanding of these flows from existing income and expenditure surveys if they contain good information about the occupational status of all household members, as some do. However, such multivariate analysis must be viewed as indicative rather than conclusive, because it is often impossible to distinguish between equally plausible explanatory variables if they covary. For example, Hanger and Moris (1973) attribute reduced food expenditure in the Mwea-Tebere rice project to the shift in earner. An alternative explanation might be the shift from steady, small amounts of income to an annual, lump sum payment. This demonstrates the real need for studies which are explicitly designed to investigate intrahousehold questions.

4.3 Time Use and Task Allocation

The literature clearly demonstrates the danger of relying on recall and self-report to obtain information on time use. The studies which have compared recall with direct observation have found substantial differences between the two methods. One study in Upper Volta found that 44 percent of women's work activities measured by direct observation were missed in a recall questionnaire (McSweeney, 1979). This is even greater than the 30 percent difference between a 24-hour and a one-

month recall questionnaire measured in Java (Sajogya, 1979). In the Philippines, King-Quizon (1978) found that children's market work time was three times as great measured by direct observation as by recall. There are several problems with using recall data to measure time use. One is, of course, that people simply may not know how much time they spend at a given task. Not all cultures are ruled by the clock as ours is. Further, people may not define their tasks in the same way as the researcher; some activities may simply not be recognized as work. For instance, the women lacemakers in Narsapur, India spend six to eight hours a day at the task, yet their husbands report this as leisure time, because it is not perceived as work (Mies, 1982).

Direct observation of time use can be done by following a small sample of individuals continuously during a day or a sample of days; it can be done by observing randomly selected short periods of a random sample of individuals (Johnson, 1975); or it can be done by participant-observation over some period of time. The Johnson method has the advantage of minimally disrupting normal activities and of providing a systematic body of observations. Predefined categories are not used, and multiple activities can be recorded. However, these random moments may not provide a sense of the organization and sequencing

of activities, which may be important factors in how time is used and constrained. Therefore, this method should probably be combined with some way of measuring whole tasks. The question of how many observations are minimally required for reasonable accuracy has yet to be explored.

4.4 Access to Resources

The special case of intrafamily food distribution has received considerable attention (Nutrition Economics Group, 1982; Horowitz, 1980; Carloni, 1981). This is an area in which the importance of individual-level measures has long been recognized, and various data collection methods have been tested. The food question is complex because, unlike education and other resources, food consumption has meaning only in relation to nutrient need. Chaudhury (1983) suggests that one reason for the commonly held notion that women generally receive less than their fair share of food is that careful controls for activity level and body weight have not been used in data analysis. Using such adjustments, his study found no evidence of sex discrimination in food distribution in most age groups. The question whether the WHO nutrient requirement levels may be set too high adds another dimension of uncertainty.

It is easier to measure outcomes (e.g., weight gain or loss,

nutritional status) than food consumption directly, but such measures do not distinguish patterns of food allocation from differences in energy expenditure, or in morbidity which affects growth.

For purposes of simply indicating patterns of distribution, shortcut methods may be possible. Checklists and food frequencies have been used to indicate overall diet quality, for example. Once again, though, methods specifically to measure intrahousehold distribution of food have not been widely used. Most commonly, 24-hour recalls or direct observation and food weighing have been the methods used.

4.5 Power and Decision-Making

The measurement of decision-making power poses serious conceptual problems. First, there is likely to be genuine difference of opinion among household members as to who makes what decisions (Safilios-Rothschild, 1969). Then, people may not admit the true allocation of influence. Alamgir (1977) suggests, for example, that the famale contribution to household decision-making is greater than either party will publicly acknowledge. Another important consideration is that decisions take place in a context which limits alternatives. There are studies from many countries indicating that women and men, for

example, make decisions which pertain to their own spheres of activity (Laird, 1979 [Paraguay]; Cloud, 1978 [Sahel]; Alamgir, 1977 [Bangladesh]),but presumably some of these decisions are fairly limited in scope: not whether to plant millet, but how much to plant. Roldán (1982) makes the important point that management of household finances need not imply control over them. In an environment of severe resource constraint, she points out, there are no decisions to be made; expenditure patterns are dictated by survival needs.

Probably the best way to observe the allocation of decision-making is to look at the results, that is, to look at investment and consumption decisions among households of a given type. The only other approach is to use psychodynamic methods which are probably not suitable for purposes of project planning.

4.6 Use of Participant-Observation

Several researchers have argued that it is essential to have a fundamental understanding of a culture, such as can only be obtained by living in it, before more specific research questions can be addressed or interventions developed (e.g., Haugerud, 1979). Certainly, project experience has demonstrated the danger of treating, as it were, one symptom rather than the whole patient. One can view household dynamics as the

fundamental and complex expression of a culture, requiring integrated study of its various dimensions.

Epstein (1975) has suggested that the aid agencies make greater use of the relatively cheap resource of anthropological studies, and argues that ordinarily there is sufficient lead time for such studies to be carried out in an area which has been targeted for aid before specific projects are planned. An effort should at least be made to seek out those who have already worked in the target area and to review the work which has been done in light of the specific questions which pertain to household dynamics. In this way, specific knowledge gaps can be identified, so that resources can be most efficiently concentrated on obtaining the missing pieces of information. An awareness of the need for this information is probably the most important first step.

5. Directions for Future Research

The study of household dynamics in relation to development policy is a relatively new field. There are still a number of important empirical questions to be answered. Among these, perhaps most relevant to AID's objectives, are questions of the effect of changing income-earning opportunities on the behavior and well-being of household members. This relates

to the ways in which the form, period, and reliability of income, as well as who earns it, influences the way it is spent, and how it alters household decisions about consumption, investment, and fertility. Another important question relating to AID's concerns is the balance between market work, home production, and the care of children. A third area of exploration is how to influence patterns of control over productive resources, specifically, how to forestall limitations on access as a result of increased productivity.

As important as these empirical questions are, it is perhaps even more important to identify timely and low-cost ways of obtaining the necessary information to analyze the household dimension of development programs. Such information has seldom been sought outside an academic or research context, and, as a result, the development of innovative and efficient data collection methods has not been a priority. Now that the relevance of these questions is being recognized by the aid community, the development of systematic, practical approaches to answering them should be placed high on the policy agenda.

References

Abdullah, T. A. and S. Zeidenstein 1975
Socio-Economic Implications of High-Yielding Variety Rice Production on Rural Women of Bangladesh. Paper presented for Integrated Rural Development Program seminar, Dacca, April.

Alamgir, Susan Fuller 1977
Profile of Bangladeshi Women: Selected Aspects of Women's Roles and Status in Bangladesh. USAID Mission to Bangladesh, June.

Alberti, Amalia 1982
Some Observations on the Productive Role of Women and Development Efforts in the Andes. Paper prepared for the Women in International Development Workshop, Women, Work and Public Policy, Center for International Studies, M.I.T., Cambridge, Mass., March 26.

Becker, Gary S. 1965
A Theory of the Allocation of Time, Economic Journal 75 (September), 493-518.

Bender, B. D. 1967
A refinement of the Concept of the Household: Families, Co-residence, and Domestic Functions, American Anthropologist 69, 493-504.

Brown, J. 1970
A note on the division of labor by sex, American Anthropologist 72, 1073-78.

Burfisher, M. and H. Horenstein 1982
The Differential Impact of an Agricultural Development Project on Women and Men, USDA Economic Research Service. International Economics Division, August.

Carloni, A. S. 1981
Sex Disparities in the Distribution of Food Within Rural Households, Food and Nutrition 7:1, 3-12.

Chaudhury, Rafiqul Huda 1983
Determinants of Intrafamilial Distribution of Food and Nutrient Intake in a Rural Area of Bangladesh. Draft mimeo, Bangladesh Institute of Development Economics, Dacca.

Cloud, Kathleen 1978
Sex Roles in Food Production and Distribution Systems in the Sahel. Paper prepared for Women in International Development, International Conference on Women and Food, University of Arizona, Tucson. Distributed by USAID/OWID, Washington, D.C.

Colvin et al., 1980, cited in E. Chaney and M. Lewis 1980
Women, Migration, and the Decline of Smallholder Agriculture. USAID, Office of Women in Development, Washington, D.C.

Dey, Jennie 1981
Gambian Women: Unequal Partners in Rice Development Projects? Journal of Development Studies, 109-22.

Dorjahn, Vernon 1977
Temne Household Size and Composition: Rural Changes Over Time and Rural-Urban Differences, Ethnology 16: 2, 105-27.

Epstein, T. Scarlett 1975
The Ideal Marriage Between the Economist's Macroapproach and the Anthropologist's Microapproach to Development Studies, Economic Development and Cultural Change 24:1, 29-46.

Evenson, R., B. Popkin, and E. King-Quizon 1979
Nutrition, Work, and Demographic Behavior in Rural Philippine Households. Economic Growth Center Discussion Paper #308, Yale University, New Haven, January.

Foster, B. L. 1978
Socioeconomic Consequences of Stem Family Composition in a Thai Village. Ethnology 17:2, 139-56.

Greenhalgh, Susan 1982
Income Units: The Ethnographic Alternative to Standardization, Population and Development Review 8 (Supplement), 70-91.

Grewal, T. et al. 1973
Etiology of Malnutrition in Rural Indian Preschool Children, Environmental and Child Health 19, 265.

Gurney, I. M. and A. Omolalu 1971
A Nutritional Survey in Southwestern Nigeria: The Anthropometric and Clinical Findings, Journal of Tropical Paediatrics and Environmental and Child Health, June, 50-61.

Guyer, Jane 1980
Household Budgets and Women's Incomes. Working Paper #28, African Studies Center, Boston University, Boston.

Hanger, Jane and Jon Moris 1973
Women and the Household Economy, in Chambers and Moris, eds., Mwea: An Irrigated Rice Settlement in Central Kenya. Weltforum-Verlag, Afrika Studien, Munich, 209-44.

Hart, Gillian 1982
Seminar delivered at Tufts University School of Nutrition, Medford, Mass., fall semester.

Haugerud, Angelique 1979
Methodological Issues in a Study of Resource Allocation Decisions Among Embu Farmers. Working Paper #357, Institute for Development Studies, University of Nairobi, Kenya, July.

Haugerud, Angelique 1981
Economic Differentiation Among Peasant Households: A Comparison of Embu Coffee and Cotton Zones. Working Paper #383, Institute for Development Studies, University of Nairobi, Kenya, July.

Hogan, J. and Tienda, J. 1976
Zinacanteco Women: Prediction for Change in a Mexican Village. Land Tenure Center, Madison, Wisconsin.

Horowitz, Grace 1980
Intrafamily Distribution of Food and Other Resources. Report to the Nutrition Economics Group, USDA International Development Staff, Washington, D.C., July.

Huggard, Marianne 1978
The Rural Woman as Food Producer: An Assessment of the Resolution on Women and Food from the World Food Conference, 1974. Paper prepared for Women in International Development, International Conference on Women and Food, University of Arizona, Tucson. Distributed by USAID/OWID, Washington, D.C.

Jelín, Elizabeth n.d.
Daily Lives of Urban Woman: Needs, Resources, and Women's Work. Centro de Estudios de Estado y Sociedad, Buenos Aires, Argentina, July.

Johnson, Alan 1975
Time Allocation in a Machiguenga Community, Ethnology 14.2, 301ff.

Jones, Christine 1983
The Impact of the SEMRY I Irrigated Rice Project on the Organization of Production and Consumption at the Intrahousehold Level. Paper prepared for USAID (PPC), Washington, D.C., September.

King-Quizon, Elizabeth 1978
Time Allocation and Home Production in Rural Philippine Households, The Philippine Economic Journal 17:1-2, 185-202.

King-Quizon, E. and Evenson, R. 1978
Time Allocation and Home Production in Rural Philippine Households. Paper prepared for the conference on Women in Poverty, Belmont Conference Center, Washington, D.C., May.

Kumar, Shubh 1979
Role of the Household Economy in Child Nutrition at Low Incomes: A Case Study in Kerala. Occasional Paper #95, Department of Agricultural Economics, Cornell University, Ithaca, New York, December.

Kumar, Shubh 1982
Personal conversation, International Food Policy Research Institute, Washington, D.C.

Laird, Judith F. 1979
Rural Woman in Paraguay: The Socioeconomic Dimension. Office of Women in Development, USAID, Washington, D.C.

Lambert, Julian 1979
The Relationship Between Cash Crop Production and Nutritional Status in Papua New Guinea. History of Agriculture. Working Paper #38, University of Papua New Guinea, Port Moresby. Cited in Lambert, Effect of Urbanization and Western Foods. Food and Nutrition Bulletin 4:3, July 1982, pp. 11-13.

Lancaster, Kelvin, J. 1966
A New Approach to Consumer Theory, Journal of Political Economy 74, 132-57.

Levine, R.A. 1966
Sex Roles and Economic Change in Africa. Ethnology 5:2, 186-92.

Lipton, Michael 1983 (forthcoming)
Poverty, Undernutrition, and Hunger. World Bank Staff Working Paper, Washington, D.C.

Longhurst, Richard 1980
The Sexual Division of Labour: A Case Study of a Moslem Hausa Village in Northern Nigeria. World Employment Programme Research Working Papers, Rural Employment Policy Research Programme, International Labour Organization, Geneva.

Loose, Edna 1980
Women's Time Budgeting in Rural Senegal. Paper presented for the Workshop on Sahelian Agriculture, Department of Agricultural Economics, Purdue University, May.

Loufti, Martha 1980
Rural Women: Unequal Partners in Development. A World Employment Programme Study, International Labour Organization, Geneva.

McFie, John 1967
Nutrient Intakes of Urban Dwellers in Lagos, Nigeria, British Journal of Nutrition 21, 257-68.

McSweeney, B. G. 1979
Collection and Analysis of Data on Rural Women's Time Use, Studies in Family Planning 10:11/12, 379-83.

Mies, Maria 1982
The Dynamics of the Sexual Division of Labor and Integration of Rural Women into the World Market, in L. Benería, ed., Women and Development, Praeger, New York.

Murdock, G. P. and C. Provost 1973
Factors in the Division of Labor by Sex: A Cross-Sectional Analysis, Ethnology 12, 203-55.

Nag, M., B. White, and R. C. Peet 1978
An Anthropological Approach to the Study of the Economic Value of Children in Java and Nepal, Current Anthropology 19, 293-306.

Navera, E. R. 1978
The Allocation of Household Time Associated with Children in Rural Households in Laguna, Philippines, The Philippine Economic Journal 17:1-2, 203-23.

Nicol, B. M. 1959a
The Calorie Requirements of Nigerian Peasant Farmers, British Journal of Nutrition 13:3, 293-306.

Nicol, B. M. 1959b
The Protein Requirements of Nigerian Peasant Farmers, British Journal of Nutrition 13:3, 307-20.

Nieves, Isabel 1979
Household Arrangements and Multiple Jobs in San Salvador, Signs 5:1, 134-42.

Nutrition Economics Group, USDA 1982
Intrafamily Food Distribution: Review of the Literature and Policy Implications. USDA, Office of International Cooperation and Development, Washington, D.C.

Pala, Achola 1978
Women's Access to Land and Their Role in Agriculture and Decision-Making on the Farm: Experiences of the Joluo of Kenya. Discussion Paper #263, Institute of Development Studies, University of Nairobi, Kenya, April.

Reynolds, D. R. n.d.
Appraisal of Rural Women in Tanzania. USAID/REDSO, Washington, D.C. Mimeo.

Reynolds, D. 1982
The Household Divided: Competition for Cash Between Husbands and Wives in West Pokot, Kenya. Paper presented at the 81st Annual Meeting, American Anthropological Association, Washington, D.C., December.

Roldán, Martha 1982
Intrahousehold Patterns of Money Allocation and Women's Subordination. Paper prepared for Rockefeller Foundation Conference on Women and Income Control in the Third World, Columbia University, October.

Rosenzweig, M. R. and T. P. Schultz 1981
Market Opportunities, Genetics Endowments, and the Intrafamily Distribution of Resources: Child Survival in Rural India. Mimeo.

Safilios-Rothschild, Constantina 1969
Family Sociology or Wives' Sociology? A Cross-Cultural Examination of Decision-Making, Journal of Marriage and the Family 31, 290-301.

Sajogya, P. et al. 1979
Studying Rural Women in West Java, Studies in Family Planning 20:11/12, 364-70.

Schofield, Susan 1974/5
Seasonal Factors Affecting Nutrition in Different Age Groups and Especially Preschool Children, Journal of Development Studies 11, 22-40.

Spencer, Dunstan 1976
African Women in Agricultural Development: A Case Study in Sierra Leone. Overseas Liaison Committee Paper #9, American Council on Education, Washington, D.C.

Stoler, Ann 1977
Class Structure and Female Autonomy in Rural Java, Signs 3:1, 74-89.

Taddesse, Zenebeworke 1982
The Impact of Land Reform on Women: The Case of Ethiopia. In L. Benería, ed., Women and Development. Praeger, New York.

UNECA (United Nations Economic Commission for Africa) n.d.
The Role of Women in Population Dynamics Related to Food and Agriculture and Rural Development in Africa. ECA/FAO Women's Programme Unit.

Watts, H. W. and F. Skidmore 1978
Household Structure: Necessary Changes in Categorization and Data Collection. Paper prepared for conference on Issues in Federal Statistical Needs Relating to Women, Bethesda, Md., April 27-28.

Addendum

Ahmad, Perveen 1980
Income Earning as Related to the Changing Status of Village Women in Bangladesh: A Case Study. Women for Women Study and Research Group, Dacca.

Singh, Andrea Menefee 1977
Women and the Family: Coping with Poverty in the Bastis of Delhi, Social Action 27:3.