Home Economics and Agriculture in Third World Countries

a three-part seminar

May 14, 16, 23, 1980
Earle Brown Center
University of Minnesota
St. Paul, Minnesota
Home Economics and Agriculture in Third World Countries

Edited by:
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Center for Youth Development and Research
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Agriculture traditionally has held the pivotal position in work or research germane to the economic development of the low income areas of the world. At times other subject matter areas were and are acknowledged and even involved, but the major perspective comes from the several aspects of the agricultural sciences present in most land grant institutions in the United States: agricultural economics, agricultural engineering, agronomy, animal science, entomology, horticulture, plant pathology, and soil science.

Low income areas are viewed as rural, poor in terms of income and Gross National Product, limited in natural and material resources but having an abundance of human resource and having little expectation for change without an infusion of large amounts of capital and technological know-how from more technologically advanced places.

The success of agriculture in economic development in the United States and abroad is well known and well documented. That success includes the education and training in agriculture of persons in developing areas and assistance in the establishment of agricultural training institutions in such areas as well.

But for all the research, technical assistance capital expenditures, education and training, it is apparent that more (and/or less?) may be required to meet more effectively the unmet needs for increased food production, improved food distribution, and augmented consumption by the poor in the less favored areas of the world.

Among other considerations this has led to recognition by some that women's roles in developing areas may need to be acknowledged and dealt with directly in any attack on the food problems of the poor. Women and their children are, in fact, the poorest of the poor and clearly integral to agricultural production in most of the rural areas in which they live.
The question or challenge in development then may have to change from: "How can advanced agricultural expertise be applied to improve agricultural production?" to: "How can the experts--agriculturists with others--help the people in the low income areas of the world help themselves to increased production, better methods of distribution, improved consumption?"

Operationally this could mean that attention would have to be paid to a number of chronic, omnipresent problems heretofore neglected or described as too peripheral to agricultural production to be considered--problems, e.g., of family planning, family nutrition, education, alternative employment opportunities for household members, housing, health, "absent" men, sanitation. Seed, machinery, irrigation, soil conservation and erosion, crop rotation, credit, roads--yes, those, too--but in relation to the total life span and style of all of the persons on whom food production, distribution, and consumption falls.

It is this more holistic approach to development in the low income areas of the world (born of an initial concern for the poorest of the poor in those areas--women and their children) that led to the three-part seminar which generated the papers and reactions reprinted here. If indeed there is a need for the broader perspective on development sketched above, then what are the contributions to the development process coming, in this instance, from that body of knowledge identified as home economics? In the case of the University of Minnesota, that body of knowledge includes food science and nutrition, family social science, textiles and clothing, housing and design, youth development, and home economics education.

That same question could and should be asked of anthropology and public health, but for the purposes of this seminar attention was turned to home economics.

Not that aspects of home economics have not been and are not now involved to some extent in development activities. Home economics has a long and successful history in development, much more limited but paralleling in many ways what agriculture has been doing in research, technical assistance, education and training. Each discipline on its own has been doing its work with little acknowledgment of the other in the process.

This suggests that if agriculture needs a broadened perspective to render its disciplines more viable in confronting and working with the poorest of the poor in developing areas, so too does home economics. And if the areas in which home economics may need to extend itself are primarily identified as "agriculture," just as areas in which agriculture may need to be more aware are called "home economics," why not put it all together?
Which is what happened on May 14, 16 and 23 from 9 a.m. to 12 on each of those days at the Earle Brown Center on the St. Paul Campus of the University of Minnesota. This three-part seminar was sponsored jointly by the Colleges of Home Economics and Agriculture. It was funded under a Title XII Strengthening Grant from USAID. The purpose of the seminar was to involve faculty and students of the two colleges in an examination of applications of home economics expertise to economic development, with particular concern for women.

The objectives of the seminar were:

- to develop a heightened awareness of the several disciplines in each college most relevant to development;

- to identify successful development activities involving disciplines from the two colleges;

- to consider the situation of women in developing countries as it relates to economic development;

- to consider ways in which cooperation and/or collaboration can be undertaken in teaching, research, or in-country projects.

The seminar was organized into three parts:

Part I: The New Home Economics

Part II: Women as Agricultural Producers, Consumers and Distributors

Part III: New Directions in Teaching, Research and In-Country Projects

These three parts were considered to be interrelated, interdependent, and basic to realizing the objectives of the seminar.

The papers presented are reprinted in their entirety as are the remarks of the discussants invited to respond to them. What could not be caught in a manner to do justice to them were the questions and remarks from the audience. Readers are left to their own reactions to the information and ideas presented, similar perhaps to those of the audience.

Each of the three parts is introduced by a brief abstract of what is included.

Vern Ruttan, Department of Agricultural and Applied Economics,
served as the moderator throughout the seminar and provides a brief concluding note to this publication.

Remarks by Keith McFarland, Dean, College of Home Economics, and James Tammen, Dean, College of Agriculture, provide apt openings for this three-part seminar.
Remarks:

Keith McFarland
Dean, College of Home Economics
University of Minnesota

An editorial comment in the December, 1979 issue of the IFAP (International Federation of Agricultural Producers) News, characterizes a frame of reference for this seminar.

Perhaps because women's work is only marginally reflected in labor statistics and because the proceeds of cash crops have usually been controlled by men, development programs have largely ignored the vital role women play in food production, family maintenance, and the quality of life. In consequence, women are often excluded from educational assistance planned to improve their basic skills in agriculture, food storage and marketing. Moreover, while major attention has been given to the improvement of agricultural technology to increase crop yield, with male extension workers working with male farmers, little concern has been shown for ways of improving living conditions of rural families which would reduce both the labor of women and the incidence of ill health among family members.

This limited attention to the role of women in agricultural production is not found only in developing countries. In reporting on recent "listening sessions" around the state, Dr. Norman Brown, newly appointed Director of the Minnesota Agricultural Extension Service, noted questions as to when Extension field staff members are going to channel information on crops and livestock production technology directly to farm wives as well as to their husbands, since wives share in so many of the farm tasks and planning activities. Suggestive, too, was the absence in the USDA publication "Structures in American Agriculture," distributed in advance of Secretary Bergland's heralded series of meetings in the Fall of 1979, of papers going beyond the economics and the technology of agricultural production to the socio-psychological-emotional climate of the farm
family. It was as though these facets were of little consequence in the assessment of features significant to the success of American agriculture.

A 1978 conference on "The Role of Women in Meeting Basic Food Needs in Developing Countries" asked the question "Does meeting the basic food needs of all people have special meaning to women?" (Draft Report on the Conference on Woman and Food: The Role of Women in Meeting Basic Food Needs in Developing Countries. Tucson, Arizona, February, 1978, pp. 1-2.) Conference discussion noted that in developing countries women provide 40-60 percent of the agricultural labor, make many vital food production decisions, process and store most of the food, and are important traders. When basic food/nutrition needs are not met, women suffer disproportionately, depriving themselves in favor of other family members or, because of low status, having no choice in the matter. The conferees noted that often strategies in developing countries reflect inadequate understanding of the role women traditionally have played in the food cycle. Some policy makers have designed policies and projects that have upset the culture balance between male and female decision making in production. Women, especially among the agrarian poor, have lost much of the productive power they had in an earlier era, hence real income. As they lost their source of income, they have also lost control of their own destinies.

We are reminded of the complex, often tenuous and fragile, structure of relationships, and of the need to be thoroughly knowledgeable before being too free with counsel and advice.

The College of Home Economics has a place in the University's development program. It may well take the form of cooperative and/or supportive endeavor as well as that of independent programming. The faculty has concern for families and the human condition generally, hence efforts to meet food/nutrition needs in developing countries is of direct interest. Faculty members also have wide ranging interests including resource management, human relationships, foods and nutrition: all important to the development process. They can draw on research competencies and a reasonable fund of international experience. Their skills and insights could contribute to planning in the agricultural sector. Moreover the faculty is interested in enriching its own curriculum and climate.

Restraints on participation, however, do exist. These include limited personnel and fiscal resources; the demands of the current program of work; limited foreign language proficiency; a student population with limited international travel/work experience; and "image problem" stemming from earlier, less successful international endeavors, coupled with a lack of
understanding by many of the scope of the field; and a history of limited interaction in programs shared with agriculture.

What should emerge from this joint exploratory endeavor? It is hoped that planners of projects designed to increase food production and assist in its storage, processing, and distribution will assess the social, psychological and economic implications of program outcomes on rural families and their individual members. Where agricultural production and the roles of women are inextricably intertwined, the College of Home Economics and the College of Agriculture could and should seek to combine the individual elements of each that could contribute to training programs and research efforts relating to the development process. It is clear that agricultural knowledge and skills should go hand in hand with good nutrition practices, effective management of home resources, awareness of income producing possibilities, and effective distribution and marketing procedures. Those who will teach this range of competencies might well be prepared in a joint endeavor by the two colleges. And, where it will be helpful to the wives and families of those "professionals in training" who spend extended periods of time on this campus, some special programming interpretive of American society might well be developed for them by the home economics faculty. In addition to its direct benefit to the student families while here, such programming might also contribute indirectly over time to improvement in the role and status of women in their home countries.
Remarks:

James Tammen
Dean, College of Agriculture
University of Minnesota

Two questions come to mind when I think of the development of home technology and the development of commercial agriculture: (1) What does it mean to increase agricultural production? and (2) What does this mean to social structures in a larger sense?

I'll comment first on cost benefit risks. I think all young people in this country, and perhaps over the world, learn something very early about cost benefits. In my day, uncles were important people in terms of household income, particularly as it related to children. I remember the time my Uncle Ralph came to town and gave me a nickel. He suggested that I might want to buy an all-day sucker. It really caught my imagination, so I went to the candy store and asked the fellow if I could have an all-day sucker. He said certainly, and he pulled a sucker out of the cabinet. Since I wasn't about to buy a hoax, I asked him if the sucker would last all day. He assured me it would. Well, of course, the sucker only lasted ten minutes. I went back to him and complained bitterly because I had not received my money's worth. He simply explained that I hadn't handled the situation properly and should have timed myself a little better. That is what I would call a beginner's lesson in cost benefits. Most of us had a general idea of cost benefits and benefit risks. If your parents were like my parents, you very soon learned the trade-off between the benefit and the risk.

To go back a bit and generalize, I think you all understand what has happened to agriculture in the past 50 to 100 years. For agriculture and elsewhere it has been an era of revolution and a time of remarkable success, especially when expressed in cost benefit terms, i.e., cost percentage income allocated to food purchases.

When we talk about the dislocations of our society that affect the agricultural revolution we begin to see it as a problem of the whole society. My first point is that in terms of food, fiber, and production there is a very definite benefit to all of us as a result of our societal dislocation. My second point is that given the
past 50 to 100 years of tremendous technological change, we are well aware that the changes we will face in the coming two decades are even greater. I think we are reasonably aware of economic constraints and resources. The time of our greatest success was when there were few economic restraints. We used water as if it would be endlessly available. We used energy as if there were no problem. We used phosphates as if there were no difficulty. Now, we are reasonably aware that we cannot proceed for the next two decades without economic constraints. We have begun to see that in our research. For example, in my own field of integrated plant protection, integrated pest control, benefit risk, cost benefits, and the economics of plants, we are well aware of this. We are much less aware of what I will call our sociological history. This, of course, is the point of our discussion today. Most of our scientists need to be much more aware of social constraints than they are at the present time.

I would also like to comment briefly on the relationship between the Colleges of Home Economics and Agriculture. I did some homework, not necessarily for this discussion today, but because the good Dean of the College of Home Economics and I had a discussion in his office a few weeks ago in which he tried to instruct me on certain realities of life in terms of home economics and agriculture. If we go back close to the beginning to the time of the Smith-Lever Act and examine the linkage between research and extension, we can see at least two dozen definite thrusts. Some obvious ones were related to education, to the adoption of new technology, and to research in the extension programs related to improvement of the household. I cannot help but believe that the people who are on the cutting edge of this activity are indeed very close together. In the intervening 50 to 70 years we have lost that togetherness and have begun to move in segments, though we are beginning to come back together. But why? I think we are back to household economics. Our focus probably comes more from our attention to international programs in developing countries than it does from our own. That is to say we are becoming aware of the interaction between the needs of agricultural technology and the needs of our social organizations. We are coming to a new awareness. But one qualification, speaking from the standpoint of agriculture, is that the major thrust of the programs in agriculture will continue to increase production of food. The question that we have in mind is how to do that within the current economic constraints and in the face of social constraints which we are only beginning to understand. The imperative is stronger now than it has been in the last two to three decades. The imperatives for the next 20 years are twofold: to increase production in a much more sophisticated management sense, and to reduce losses. The long term imperatives are related to environmental stress in the production, not in the social sense.
I think it is fair to say that the Food and Agriculture Act of 1977 had some language in it which focused on the sorts of things we are discussing here today. But I do not believe there is any action in the programs. My observation, based upon brief studies, is that we have a long way to go. Students in agriculture take very few credit hours a year in home economics. I have been unable to get definitions as to what those particular courses of study might be. But it would appear that students in agriculture, both graduate and undergraduate, are taking little advantage of the opportunities being offered in home economics. I think I may understand the reason. Also, students in home economics are taking little advantage of programs in agriculture. Now I am speaking about technical courses. I would like to raise the question that if individuals in home economics are going to impact upon individuals in agriculture might it not be wise to develop a course of studies in agricultural technology which would illustrate the need we have to move in interdisciplinary ways, not at the cost of the disciplinary strength or thrust, but in the realization that interdisciplinary programs will help us utilize all of our resources better?
PART I:
The New Home Economics

Presenter: Robert Evenson
Economic Growth Center
Yale University

Response: G. Edward Schuh, Head
Department of Agriculture and Applied Economics
University of Minnesota
Comment:

The "new home economics" has universal application to both the developing and the developed areas in the world.

The new home economics provides policy makers and others with a frame of reference for analyzing the household and home production as one might analyze the farm and farm production. This in turn creates, among other things, the potential for bringing the household into deliberations regarding the farm, laying the foundation for the integration of all aspects of the farm and the household into a single production unit.

The new home economics thus can be--is--a bridge between agriculture and home economics, and for this three-part seminar it emerged as the organizing framework.

In his "Notes on the New Home Economics," Robert Evenson looks at the structure of the new home economics, placing it in historical perspective and defining five of its major tenets. He discusses the significance of home production and reviews new home economics perspectives on leisure, work, food supply, children, health and schooling. Lastly, Evenson sets forth both indirect and direct policy actions suggested by the new home economics which he hastens to add is in its infancy as a tool of analysis and judgment.

Ed Schuh, in response to Evenson's paper, takes a hard look at the new home economics and asks what it can do for us as well as what some of the problems or difficulties are in working with it. He then notes, briefly, substantive contributions of the theory, now and in the future.

MBS
Economists have generally neglected activities undertaken within households in their analysis of the behavior of households and firms. The dominant models of consumer expenditure behavior do not explicitly consider food preparation and processing activities in the home. Analysis of the supply of labor from households to labor markets generally does not consider the demand for labor within the household. The neglect, however, has not been total. A small literature, sometimes referred to as the "new home economics," has been produced in the past 15 years or so. This literature does explicitly treat many activities undertaken in the home as economic in nature. While the bulk of this literature has been concerned with economic questions in the developed countries, a sufficient base now exists for an assessment of the implications of this perspective for several important development policy issues.

My task in these notes will be to discuss several of these implications. In my discussion I will be referring primarily to recent empirical work undertaken in the Philippines. I will attempt to draw some parallels between the policy perspective toward household activities today and the policy perspective toward farming activities in developing countries two decades ago. In this earlier period the general perception of the farmer as an agent unresponsive to economic forces signalled by prices and new technology was dominant. Policy makers designed fertilizer and credit allocation schemes and other policies on this premise. Small farmers, for example, were often excluded from programs on the grounds that they would not use resources efficiently. Extension programs were designed as though farmers were not capable of making allocative decisions.

The policy perspective toward farmers has changed dramatically in recent years. T. W. Schultz's classic work, "Transforming Traditional Agriculture," and many related studies showed the farmer to be price responsive and to have a capacity to make efficient decisions. The perspective towards households has not undergone a parallel change. Family planning programs, and other policy activities which affect household behavior, have generally not attempted to take advantage of the systematic household behavior identified in recent studies.

The Structure of the New Home Economics

Economists have not always neglected economic activities in the household. Margaret Reid and others writing in the 1930's produced an impressive literature on the economics of the household.
A body of more recent literature by home economists also exists. The changing importance of food processing activities in rural households in the United States, for example, has been well documented. The aspects of this literature which are "new" are the broadening of the base of topics considered and progress toward the development of a more systematic theory.

The basic structure of the modern theory can be described as follows:

1. The objects from which utility is derived by households are generally not market goods. Instead they are "home goods" which are "produced" from market goods, labor time of household members, and household capital.

2. The home production processes are economic in that they utilize resources which have real costs, i.e., they could be devoted to alternative income generating pursuits. These production processes are quite diverse in nature. Some are relatively simple value added activities, others are more complex. The production of ready-to-consume meals from market goods (rice, fresh vegetables, etc.), food processing and preparation time, and household capital illustrates one of the more important of these processes.

3. Home goods can be and are rather broadly defined. Perhaps the major advantage of this methodology is that it allows the analysis of household consumption of home goods which are not traded and do not have market prices. The major employment to date of this type of analysis has been in the analysis of determinants of family size. Home goods such as "child services" which are produced from market goods (food, medicine clothing, etc.) and home production time (child care, food preparation, etc.) can be accommodated within these models.

4. Income takes on a quite different meaning in this approach. The conventional definition of income is oriented to market goods. Income accounting methods seek to insure that monetary payments to factors (labor, land, and other assets held by households) are equal to spending on market goods (both consumption and investment). In the new home economics perspective home resources (time and capital) receive implicit factor payments, and the value of home goods consumed in a household exceeds the value of the market goods used in their production by the value of these home resources. This expanded definition of income is referred to as "full income."

5. In the conventional analysis of consumer expenditures, a consuming unit is postulated to choose that set of market goods which results in maximum utility subject to a budget constraint. The only endogenous or choice variables are the quantities of
market goods. The exogenous factors which impact on these choices are the prices of market goods and the income levels of the consuming units. The modern treatment explicitly recognized that household units are the basic decision making units. Treating the individual consumer as the unit has analytic convenience but glosses over issues which cannot be set aside in any analysis of home production. In the new home economics models the household not only chooses the optimal combination of home goods, it also chooses the minimum cost way of producing these home goods.

This choice process can be conveniently divided into a cost minimizing process of the type postulated for producing firms and a simple choice process of the type postulated in conventional consumer choice models. For any given combination of home goods the household will allocate the time of its members between market activities (wage or self-employment, home production activities, and leisure (which is a home good). A particular combination of market activities (which allow, along with non-labor income, the purchase of market goods) and home production activities will minimize the cost of producing each home good. The added or marginal cost of producing an additional unit of any home good is termed the "shadow price" of that good. Shadow prices are not market prices and may differ from household to household. They can be expressed as weighted averages of the value of home production time and the prices of the market goods used in the production of the home good. The weights depend on the home time intensity and the goods intensity of this production.

Households then choose the combination of home goods which provides maximum utility subject to these marginal costs or shadow prices which form part of the full income constraint facing the household. This means then that the household jointly chooses the quantities of home goods, market goods and the allocation of time resources. This joint choice is influenced by several exogenous variables in addition to market goods prices and income from market activities. These variables include the value of home production time (the wage which could be earned in alternative market activity), the quantities of home capital, and the factors influencing the efficiency of home production.

The Quantitative Importance of Home Production

Since the central feature of the new home economics is the treatment of home production, it is useful first to obtain an appreciation of the quantitative significance of home production. The concept of full income allows a rough approximation. For practical purposes one cannot actually measure the value added to full income by home production directly. One can, however, measure home production time inputs and a value can be placed on these resources.
A recent paper by the author surveyed a number of studies which measured home production time for samples which included employed women and housewives. A summary is provided in Table 1. It is important to note here that these studies attempted to measure time only for those tasks that the households would actually hire someone else to undertake. Recall, diary and participant observation methods were used in these studies. One notes very significant differences in household work and leisure for employed women and housewives. In general in appraising these studies it appears that different investigators using different procedures produce measures of home production time which are reasonably consistent across studies. There are, to be sure, problems of separating leisure activities from work activities and problems of differing intensities of work. These studies also reported time allocation for men and for children. They show that adult men specialize in market work while children engage in both home and market work.

The valuation of this home time is a more difficult matter. When women work in the home and in the market, the market wage is a measure of the opportunity cost of home time. Gronau has argued that this wage understates the value of home time because women first allocate this time to home activities with high productivity in the home and do not engage in market work until they have exhausted these highly productive activities. He has developed a procedure for estimating the value of home time from market wage and home time data.

When women do not engage in market work it is even more difficult to impute a value to home time. In the Laguna survey in the Philippines, an effort was made to obtain wages for household tasks by asking what a household would pay to hire household workers. These data enabled the calculations reported in Table 2. Home production is valued at these household wages which are slightly lower than market wages.

Even if one allows for some differences in measurement procedures, it is clear from this table and from the time allocation data tables that home production activities are of economic significance. For a typical Philippine rural household, full income valued in this way is approximately twice the magnitude of conventionally defined market income. Home production activities are as important as market (including farm) activities. Furthermore, the distribution of full income across households differs significantly from the distribution of income conventionally measured.

It would appear that agricultural policy-makers generally do not perceive home production to be of comparable importance to farm production or to wage earnings in the rural sector. Rural development, credit, irrigation programs, and agricultural research
<table>
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<tr>
<th>Employed Women</th>
<th>Developing Countries and Developed Market Economies</th>
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<tr>
<td>Number of Women</td>
<td>99</td>
</tr>
<tr>
<td>Child Care</td>
<td>.68</td>
</tr>
<tr>
<td>Food Prep.</td>
<td>1.30</td>
</tr>
<tr>
<td>H.H. Maint.</td>
<td>1.32</td>
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<tr>
<td>Total Household Production</td>
<td>4.40</td>
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<tr>
<td>Market Labor</td>
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<tr>
<td>Housewives</td>
<td>99</td>
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<tr>
<td>Child Care</td>
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</tr>
<tr>
<td>Food Prep.</td>
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<td>H.H. Maint.</td>
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<td>Total Household Production</td>
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<td>0.11</td>
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<td>Leisure</td>
<td>16.71</td>
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## Table 1: Employed Women (Continued)

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<th>Employed Women</th>
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<td>Kazanlik</td>
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<tr>
<td>Number of Women</td>
<td>440</td>
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<tr>
<td>Child care</td>
<td>0.35</td>
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<td>Food Prep.</td>
<td>0.93</td>
</tr>
<tr>
<td>H.H. Maint.</td>
<td>1.55</td>
</tr>
<tr>
<td>Total Household</td>
<td>2.83</td>
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<tr>
<td>Production</td>
<td></td>
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| Housewives      |            |          |             |       |        |       |           |           |          |          |
| Number of Women | 40        | 107      | 185         | 230   | 308    | 50    | 432       | 247       |            |           |
| Child Care      | 1.03      | 1.68     | 1.77        | 0.87  | 1.23   | 0.98  | 0.57      | 0.78      |            |           |
| Food Prep.      | 2.58      | 2.50     | 1.95        | 2.58  | 2.48   | 2.55  | 2.68      | 2.88      |            |           |
| H.H. Maint.     | 5.10      | 5.00     | 5.70        | 6.33  | 5.48   | 5.32  | 4.15      | 7.07      |            |           |
| Total Household | 8.70      | 9.18     | 9.42        | 9.78  | 9.19   | 8.85  | 7.40      | 10.73     |            |           |
| Production      |           |          |             |       |        | 8.70  | 8.45      | 7.19      |           |           |
| Market Labor    | 0.02      | 0.40     | 0.12        | 0.92  | 0.05   | 0.07  | 0.20      | 0.22      |            |           |

Source: R.E. Evenson, Women's Time Allocation: An International Comparison, mimeo Economic Growth Center, Yale University, New Haven, CT, 1979
Table 2: Value of Market Production, Home Production
Full Income Based on Laguna Intensive Data

<table>
<thead>
<tr>
<th></th>
<th>Pesos per year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market Income</strong></td>
<td></td>
</tr>
<tr>
<td>Father</td>
<td>3334</td>
</tr>
<tr>
<td>Mother</td>
<td>1148</td>
</tr>
<tr>
<td>Children</td>
<td>1301</td>
</tr>
<tr>
<td>Total</td>
<td>5783</td>
</tr>
<tr>
<td><strong>Value of home production</strong></td>
<td></td>
</tr>
<tr>
<td>Father</td>
<td>668</td>
</tr>
<tr>
<td>Mother</td>
<td>3287</td>
</tr>
<tr>
<td>Children (excluding school time)</td>
<td>2061</td>
</tr>
<tr>
<td>Total</td>
<td>6016</td>
</tr>
<tr>
<td>Children (including school time)</td>
<td>3599</td>
</tr>
<tr>
<td>Total (including school time)</td>
<td>7554</td>
</tr>
<tr>
<td><strong>Full income</strong></td>
<td></td>
</tr>
<tr>
<td>Father</td>
<td>4002</td>
</tr>
<tr>
<td>Mother</td>
<td>4435</td>
</tr>
<tr>
<td>Children excluding school time</td>
<td>3362</td>
</tr>
<tr>
<td>Total</td>
<td>11799</td>
</tr>
<tr>
<td>Children including school time</td>
<td>4900</td>
</tr>
<tr>
<td>Total</td>
<td>13337</td>
</tr>
</tbody>
</table>

and extension programs are oriented to market production. Curiously, many programs which are directed toward home production, health, family planning, nutrition, are seen as "welfare" or service programs. Home management extension programs, for example, are not viewed in the same context as farm management extension programs.

If we return to the definitions of home goods and relate these to the time allocation data, it appears that a rather large part of home production is associated with children. This is particularly true in poor households with large families. (In the Philippine data, families with 7 or more children had a value of home production approximately twice as great as did families with 3 or fewer children). In other words, home production activities are central to the provision of health and nutritional status of children, to schooling and other training investment in children and to contraceptive behavior. Policy makers do have clear, strong interests in these outcomes but have not generally approached them from an integrated economic perspective.

New Home Economics Perspectives on Leisure, Work and Food Supply

Most studies of labor supply by rural households are usually not concerned with the supply of labor by household members to the farming activities of the household. The concern is generally with the supply of labor to agricultural and non-agricultural labor markets. Almost no attention has been given to the supply of labor to the household's own home production activities. Yet there are important policy questions here. A policy, for example, which leads to a reduction in home production and/or farm production may have serious consequences for the health and nutritional status of children.

The modern treatment of home production does provide the basis for an analysis of the allocation of time, not only to organized labor markets and leisure, but to home production and farm production as well. As noted earlier, each household is subject to a set of exogenous constraints over which it has no control. It chooses that combination of home goods, market goods, and time allocation which maximizes its utility in a minimum-cost fashion. To derive these effects for married women the economics of specialization with the household must be considered. Basically, the specialization within the household occurs because 1) market wages offered to men are generally higher than wages offered to women and 2) women are probably more efficient than men in some household production tasks. If the husband's wage is higher than that of the wife, the husband could work one hour more in the market and one hour less in the household without changing leisure. The wife could work one hour less in the market and one hour more in the household without changing leisure. If husband and wife were equally productive in the home, household production
<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Non-farming Households (101)</th>
<th>Farming Households (124)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wife</td>
<td>Husband</td>
</tr>
<tr>
<td></td>
<td>Home time</td>
<td>Market time</td>
</tr>
<tr>
<td>Non-wage Income</td>
<td>-.00004</td>
<td>.00006</td>
</tr>
<tr>
<td>Wife's Market Wage</td>
<td>-1.085&lt;sup&gt;x&lt;/sup&gt;</td>
<td>.983&lt;sup&gt;xx&lt;/sup&gt;</td>
</tr>
<tr>
<td>Husband's Market Wage</td>
<td>.091</td>
<td>.015</td>
</tr>
<tr>
<td>Home Capital</td>
<td>.0018</td>
<td>.0018</td>
</tr>
<tr>
<td>Farm Capital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hired Farm Wage - Women</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hired Farm Wage - Men</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dependent variables:  x Coefficient 1.5-2 times standard error; xx Coefficient more than twice standard error

Equations also include dummy variables for family structure, years married, days sick, and education of wife and husband.
would not change but total earnings would be higher by the extent to which the husband had the higher wage. These gains from specialization are generally sufficient to explain why men spend very little time in household work in all societies. Some empirical evidence is now available which provides estimates of the impacts on time allocation of several exogenous constraints which are subject to policy influence. Table 3 reports regression coefficients measuring the impact on time allocation of non-wage income, the wages of both husband and wife, home capital, farm capital, and hired farm labor wages for male and female laborers. The estimates are based on a sample of 101 non-farming households and 124 farming households in rural Laguna Province in the Philippines.10/

The expected and estimated results are summarized below:

1. The effect of an increase in non-wage income.

A program which transfers earning assets (land, financial assets) to a household or raises the value of presently owned assets will not affect the price of leisure. It will have a pure "income" effect. If both husband and wife are working in the market they will take more leisure by reducing labor supplied to the market. They will not reduce time devoted to home and farm activities. If the wife or the husband is not working in the market, both home and farm time will be reduced as the household takes more leisure.11/

2. An increase in the market wage offered to the husband.

An increase in the market wages offered to the husband will have two and possibly three effects on his own time allocation. It will also affect his wife's time allocation. First, a rise in wage rates increases the price of leisure and causes substitution of work time for leisure, i.e., more work. Second, it increases real income, and this leads to an offsetting effect. The husband wants more leisure as income rises. In most labor force supply studies the substitution effect dominates. However, a third effect is important if the husband is engaged in farm or home work. A rise in his market wage will cause him to reduce his home and farm time. (and farm and home production). His wage increase will have two effects on his wife. First, the income effect will tend to increase her leisure. Second, any displacement of his time away from the farm and toward the market will lead her also to displace her time away from market activities to replace his home and farm time. Strong support for these effects is obtained from the Philippine data.

3. An increase in the market wage offered to the wife.

An increase in employment opportunities for women in developing
countries has rather strong and important effects (not only on time allocation, but on nutrition and contraception as well). A rise in the wage of the wife has an income effect on her own and her husband's leisure and a substitution effect on her market time provided that she engages in market work (otherwise it has no effect). More importantly, it will cause her to displace home and farm time in favor of market time. Available data suggest that this effect is quite important. Employed women do reduce home time, especially if older children and other substitutes for this time in the home are available. (The Philippine regressions include the number of older siblings as control variables). This means that a reduction in child care activities, and possibly in nutritional inputs, may take place. The supply elasticity of labor to the market for women then tends to be much higher than it is for men in non-farming households. Table 3 bears this out and also indicates that husbands in non-farming households gain leisure when employment opportunities for women are improved.12/

4. An increase in wages paid to agricultural laborers.

In farming households an increase in wages paid to hired agricultural laborers generally will be expected to cause family labor to be diverted from market to farm and home time. This will primarily affect the wife, however, since she is generally the "marginal" member who must adjust her time to allow the husband to specialize in the highest paid activity. Again, this is borne out by the data.

5. An increase in home and farm capital.

An increase in home capital has three effects. It increases income, it lowers the cost of home production, and it increases the productivity of home time.

The effect on home time is not clear because capital substitutes for home time in home production. However, because home production costs fall, the household will employ more total home production. The Philippine data suggest that the home production time of the wife does not fall.

Farm capital will have similar effects on home and farm time. The Philippine evidence suggests that an increase in farm capital does reduce market time of both husband and wife.

These empirical results, of course are based on a single Philippine sample and should not be construed to hold in other rural settings. They do indicate, however, that policies which influence wages in particular will alter farm production and home production in important ways.
Perspectives on Numbers of Children and on Health and Schooling of Children

Children are nourished and raised in households and require scarce resources. They also provide enjoyment and satisfaction to other household members. Thus treating child services as a home good is not unreasonable.

Consider first the simplest case where child services require a constant amount of market goods per child (food, clothing, medicine) and child care time per child. Suppose further that child care time is a substantial component of child service costs to the household, i.e., they are "time intensive" goods. Then as real wages of mothers (who specialize in child care) rise, the costs of child services will rise relative to the costs of other home goods (which are relatively goods intensive).

In fact, it is generally the case that these costs rise more rapidly than income. Since wages are a major component of income, the observed relationship between income levels and family size will include both a pure income effect and a cost effect. The theory indicates that the pure income effect is positive, i.e., more children are desired when income rises. The cost effect will be negative, i.e., fewer children are desired when income rises.

We do, of course, generally observe that as per capita or per household income rises, average family size declines (although at low levels of income it appears that family size rises with income). We also observe that the health and nutritional status and schooling of children rise with rising income levels. The home production models have recognized this by noting that health and nutritional status and schooling are themselves home goods.

Most recent literature in economic demography employs a version of the home production model where both numbers of children and investments per child in health and nutrition are desired. The costs of child-related home goods now become more complex because the goods and time intensities of child services with low and high levels of investment may differ substantially. Furthermore, what we might call home technology may be much more complex for high levels of investment.

Consider the nutritional status of children. To date very few studies of the behavioral aspects of the demand for good nutrition have been undertaken. We observe that as income changes, and as relative food prices change, food consumption changes. As a consequence, nutrient intake and child health may change. But this tells us very little about the household's behavior toward the nutrient content of foods. If the households in fact desire good health for their children, this will alter their behavior toward consumption of nutrient-intensive foods.
The simple relationship between income and family size becomes more complex when child investments are considered. Some of these child investments are intensive in expensive goods (medicines and higher priced foods) and require technologically complex home production methods. It is not surprising that poor households with low time values and low levels of parental schooling tend to choose a combination of home goods weighted toward child services with a low investment content. An increase in income will change this combination toward a higher investment component because health and schooling may be superior goods from an income point of view. An increase in the value of home time will, in addition to having an income effect, make child services generally more costly relative to other consumer goods and to most child investments. This will shift the home good combination toward fewer children and more child investments. This shift will be strengthened by what might be called the "per child effect." Most child investments enter the utility function in per child terms. Thus when the household is motivated to alter investment per child, there is added incentive for fewer children.

A change in the prices facing households for market goods will also influence behavior. A decrease in the prices of "nutrition-intensive" foods, for example, will result in more nutrition investment. A decrease in the prices of schooling services or health services will result in more schooling and health investment.

Finally, if we enrich the model to allow for differences in technical efficiency in home production and for technical change, we can postulate further behavioral changes. Demographers sometimes attempt to measure "desired" family size and note that data on desired family size for many families is below actual family size suggesting that families lack the contraceptive technology and knowledge to achieve the desired outcome. While it is difficult to know how much of this desired family size is influenced by desired (but unrealistic) investments per child, it is quite clear that contraceptive knowledge and availability are important. We observe that a demand for contraceptives and contraceptive knowledge exists in all societies and that it is highly correlated with investments in children.

Similarly, the technical knowledge regarding nutrition and health varies across households. Households are not equally efficient in the production of home goods. In fact, there is a natural parallel between home production and farm production. Just as farmers often lack technical knowledge, so do homemakers. Technical change in agriculture sets in motion a learning process which requires substantial marginal resources of farmers and the provision of information through extension services. Changes in
contraceptive and health technology set a similar process in motion.15/

We now have a substantial body of empirical evidence on determinants of fertility, or completed family size, and on schooling investments in developing countries based on these models. The evidence regarding nutritional status and investment in child health is relatively sparse, however. Evidence from the Philippine studies will be summarized below according to the major exogenous policy-related variables:

1. The impact of non-wage income.

Income from sources other than wages (particularly the mother's wage) is free of a price or cost effect on home production. This effect is expected to be positive on numbers of children, on investments in child schooling and health and on child leisure. This is generally borne out by the Philippine studies which show that income and wealth variables impact positively on nutrient intake and child health (measured by weight as percent of normal).16/ The effects on completed family size are also positive (but confounded with an agricultural productivity effect since land is a source of non-wage income). This is in contrast to studies which show that income which includes wage income is first positively, then negatively, associated with completed family size.17/ Non-wage income also has a significant positive impact on the number of years of schooling completed by children and on the quality of that schooling (measured by private expenditures per school year.) A negative effect on child work is also observed.18/

2. The impact of the mother's value of time (wage offer).

Given the importance of the mother's time in home production, it is not surprising that the value of the mother's time turns out to be the most significant factor, other than income, influencing home and market goods choice. The Philippine studies are not unique in reporting estimates of a significant negative impact of the mother's wage on the number of children ever born.19/

A rise in the value of the mother's time will, in general, raise the costs of home time intensive goods. Some investments in children are relatively home time intensive (e.g., breast feeding and infant care) others are not (e.g., schooling). The income effect of a rise in the value of the mother's time will cause an increase in the demand for all child services and investments in children. The home time cost effect appears clearly to dominate the income effect and causes a reduction in family size (and an increase in the demand for contraceptives). Whether it also causes a decrease in investment in early child health remains an unsettled question, however.20/ The Philippine
studies indicate that a rise in the value of the mother's time does have a positive impact on the quality of schooling completed by children although it appears that it has a negative impact on the quantity of schooling of girls in these households. A study in India indicates a positive effect on schooling investment and on child leisure. The child leisure impact is also supported by the Philippine data.

3. The impact of the father's wage.

As expected, since the father tends to devote relatively little time to home production in most rural households, an increase in his wage rate has essentially a simple income effect on the variables in question.

4. The impact of the employment and work opportunities for children.

Evidence from both India and the Philippines provides strong support for the hypothesis that increased earning opportunities (wage offers) to teenage (and younger) children has a positive effect on completed family size and a negative effect on child leisure. The effect on nutritional status, health and schooling is not as well documented.

5. The impact of parental schooling.

A number of studies have treated parental schooling as a proxy for the value of time. When alternative measures of the value of time are available, and controlled for, parental schooling variables have rather uncertain effects. In the Philippine studies, as in many others the schooling of fathers does not have strong effects on household choices. The schooling investments of mothers in the Philippines had a positive impact of completed family size and on the quantity of child schooling. Since schooling, particularly low levels of schooling, reflects parental decisions which include factors other than the expected effect on productivity, one has to be careful in interpreting even the expected effects of parental schooling.

6. The efficiency of home production.

The most significant and important consequences of the mother's schooling appear to be on the efficiency of home production. The Philippine studies provide evidence that the mother's schooling has a strong positive impact on the nutritional adequacy of the diet and on child health in the lowest income households. These effects are somewhat weaker for higher income households. A study in Brazil also provides strong support for the proposition that the mother's schooling causes households to purchase more nutrient-intensive foods. Mothers who had completed primary
schooling purchased food with significantly higher levels of nutrients than mothers who had not completed primary schooling.22/ A direct measure of home technology used in the Philippine households indicated that households with higher technological knowledge and use have smaller families and invest more in schooling.23/

Policy Dimensions of the New Home Economics

In discussing the policy implications of the new home economics studies, it is useful first to make a distinction between direct and indirect policy actions. Direct policy actions, such as family planning, nutrition education, and rural health programs affect household behavior by lowering the price of certain services and by changing knowledge and possibly tastes. Indirect policy actions affect household behavior by altering prices and incomes. For example, by this definition, a policy which improved earning opportunities for women would be an indirect policy action.

As the preceding review of a rather small part of the literature indicates, many, and perhaps most, of the studies in this field have not been designed to measure direct policy effects. The central concern of these studies has been to understand the impacts of prices, incomes, and fixed factors on household behavior. These studies have employed the distinction between exogenous and endogenous variables to infer causality, i.e., changes in exogenous variables are interpreted as causing response in terms of endogenous household choices. Very few of these studies have relied on an experimental or quasi-experimental design methodology.

It should be noted that the field, in its modern form, is still in its infancy. The volume of work on home management and production, for example, is small relative to the volume of studies of farm management and production. It is not unreasonable to state that more studies are called for in order to understand better the policy effects. This is particularly true of experimental and quasi-experimental studies designed to measure direct policy effects.

1. Indirect Policy Actions.

Indirect policies which change wages income, property income, parental schooling, and household technology or household behavior are moderately well understood.

In general, wage incomes of household members who do not specialize in home production and income from assets owned by the household have clear income effects. The home goods of particular concern, numbers of children, investment in child health
and schooling, and child and parent leisure, are all affected positively by income. It is probable that the income effects on child investments are actually quite high.

Policies which result in an increase in these income components for poor households will have favorable effects on child investments, but will probably not reduce family size unless they also affect the value of home production time. Rural development programs, credit programs, employment programs, and land reform programs have been utilized in varying degrees to attempt to increase the incomes of small farmers. Their effectiveness has been quite variable, however. If an effective land reform program actually results in the conversion of tenant farms into owner operated farms and increases farm size for small farms, it will have the wealth effects noted above for the household. The Philippine study measured a rather large impact of child employment opportunities on family size (an elasticity of .75). It also indicated that farming does provide improved work opportunities for children and has a further positive impact on family size. In general, this range of agricultural programs would be expected to be pro-natalist, i.e., to lead to an increase in family size as well as to an increase in investment in children.

The dynamics of labor markets in rural areas may well mean that the pro-natalist elements of rural development programs could ultimately undermine the pro-investment elements. A growing rural population and rural labor force puts pressure on cultivating opportunities and on employment opportunities and rural wages. Unless employment opportunities outside the agricultural sector (whether in rural or urban areas) are growing, this rural labor force growth will have serious consequences. Rural development and small farmer strategies may produce some apparent benefits for a few small farmers in these situations, but could have negative impacts on rural laborers because of pro-natalist effects. (Of course it should be noted that child services per se increase family welfare because they are valued home goods. From an individual household's perspective, a large family is desirable).

If employment opportunities in the non-agricultural sector are growing, and if migration to these sectors is not discouraged, these effects will be ameliorated. As we examine the range of indirect policy options in use, the major, and perhaps only options which are not pro-natalist are those which increase the opportunity cost of home time. Programs which increase the market and farm earning opportunities for women have important negative effects on completed family size. They also have important negative effects on some home time intensive investments in children, but since they have positive income effects on most child investments the general result is that total investment in children increases.
Employment opportunities for women have not been given priority in rural and agricultural development programs. Even where attention has been given, it has stressed crafts and home-making and has done little to discourage discrimination against women in more general market activities. In many developing countries women are severely proscribed in terms of employment outside the home. If these restrictions are not changed, almost all programs designed to increase incomes will be pro-natalist. Where expanded employment opportunities for women can be achieved as part of these programs, significant reductions in family size can be realized.

Employment opportunities for children also have rather clear pro-natalist effects. Market earnings of young children are an important part of household income in low income households. Policies to restrict employment of children will reduce both fertility and household income. In the short run they would almost certainly reduce the welfare of the poorest households. A related direct policy action which will have similar effects on fertility without the negative income effects would be to reduce the private cost of schooling opportunities to the household. This will encourage less home and market work by children and more investment. A desirable shift in the mix of home goods, i.e., fewer children and more investment may thus be obtained.

2. Direct policy actions

I now turn to those policy actions which more directly affect behavior. In general, such policies are implemented through the public sector. They include the provision of schooling and health services, contraceptives and family planning extension education, nutritional supplements and nutrition education programs, the development of new home production technology and home management extension. In general, all of these programs have unequivocally desirable outcomes, i.e., they result in better child health and schooling and in lower family sizes. The policy issues turn not on whether they should be undertaken but on the efficiency of such programs and on the level of funding justified by the benefits. The degree of reliance on markets and on the private motivation of households is also important.

We have, as noted earlier, very few studies which have investigated the consequences of direct policy actions on the household in the context of behavioral models. Many programs have been designed as though households are, in fact, not very responsive to cost factors. The household has often been seen as having inappropriate tastes which can be changed by proper educational methods.

The perspective often afforded the contemporary household has its parallel in the perspective afforded the farming enterprises of
many developing countries two or three decades ago. Farmers were then generally regarded as tradition-bound and unresponsive to prices. This perspective has changed considerably in recent years as economic studies have shown price responsiveness. Even the small farmer is today regarded to have allocative capability. We are probably not experiencing change to the same degree in perspectives toward households today, however. Even in the modern economies, we have only recently emphasized household production behavior. Public programs directed toward the household are still often seen as service or welfare programs. Work in the home is not seen to be equal to work in the market. Nonetheless some change is evident.

Experience with programs, particularly those relying on an educational or extension component, appear to be verifying the proposition that the provision of information, per se, has desirable consequences. It is not necessary to "indoctrinate" and alter tastes in a program to achieve desired consequences. Even the poorest of households has an interest in reducing mortality and malnutrition and improving the welfare of its members.

The role of schooling, particularly of women, is important in terms of creating allocative and technical skills in home production. We have a fair amount of evidence that schooling creates these skills and that they are important in market production activities. As we begin to understand more how these skills affect home production, we will have new policy implications for public sector schooling investment decisions. It should also be possible to design more effective compensatory adult education programs especially regarding nutrition and child health as we learn more.

It would not be accurate to say that the new home economics literature has, at this point, yielded a clear and well developed body of policy implications and guidelines. We are in some danger of expecting too much from a relatively new field of inquiry, however. Policy makers have clear interests in the behavior of households and in the behavioral response to policy instruments. The new home economics perspective has further potential for improving our understanding of these issues.
Footnotes

1/See R. E. Evenson, B. Popkin and E. King-Quizon, Nutrition, Work and Demographic Behavior in Rural Philippine Households: A Synopsis of Several Laguna Household Studies, Economic Growth Center Discussion Paper, 1979, for a full discussion of the Philippine studies. This paper describes the sampling base for surveys undertaken in 1975, 1976 and 1977. The 1977 survey also resurveyed a sample of households originally surveyed in 1963. Detailed data on time allocation, dietary intake and child health were obtained.


5/Conventional demand analysis treats the individual as the consuming unit. The definition of a joint utility function for several members of a household presents analytic difficulties. The conditions, however, under which such a utility function can be specified are not too unreasonable. Perhaps the main point to be made is that households are the central units of social organization.

6/A home time intensive good is one which requires a relatively high proportion of home time in its production. A goods intensive home good requires relatively little home time.

7/See R. E. Evenson, Women's Time Allocation: An International Comparison, mimeo Economic Growth Center, Yale University, 1979. This paper reviewed the data from more than 30 studies from a number of developed and developing countries. The studies summarized in Table 1 are the subset where a distinction between women employed in market work and women who work in the household could be made.

9/Home production is actually quite equally distributed among household. In per capita terms full income is even more equally distributed because families with large membership have high home production income.

10/See R. Evenson, Time Allocation in Rural Philippines, American Journal of Agricultural Economics, for a fuller discussion of the Philippine data and the theoretical issues.

11/A rise in the wage rate for a member not currently working in the market could be sufficient, of course, to induce the person to begin working. This effect is being ignored here.

12/Leisure sharing between household members is not very clearly understood. The effects in the Philippine data are asymmetric. An increase in the wife's wage appears to affect the husband but the reverse effect doesn't hold.

13/For a discussion of the behavioral aspect of nutrition see D. Alves, R. Evenson and M. Rosenzweig, Nutrition and Taste in the Sao Paulo Diet, Economic Growth Center, Yale University, 1979.

14/Alves, Evenson, Rosenzweig, op. cit., footnote 13

15/This, of course, is the basis for investment in home management research and extension. The comment that policy makers tend to view this extension as qualitatively different from farm management extension does not imply that this is justified. In fact, it is quite plausible that home management extension may be more productive in terms of its input on full income.


19/See Schultz, op. cit., and Birdsa, op. cit., footnote 4
20/ Banskota and Evenson, 1979, op. cit. footnote 20
21/ See Rosenzweig and Evenson, op. cit., footnote 18
22/ See Alves, Evenson and Rosenzweig, op. cit., footnote 13
23/ See Banskota and Evenson, op. cit., footnote 23
Response:

G. Edward Schuh

Let me begin my comments by commending Bob Evenson on his presentation. This topic is complex, and I appreciate what a difficult task it is to take it in all its complexity and make it reasonably comprehensible while at the same time covering the full richness that Bob tried to cover in his presentation. It was a remarkable performance.

The second opening comment I would make is to assert that the new household economics should have a major impact on what Land Grant Colleges do and on how they are organized. Unfortunately, to date it has had virtually no impact on either element. In this context I would like to commend Miriam Seltzer for arranging this seminar. It should at least get us to address some of the questions.

The new household economics should also have a major impact on what economists do. Unfortunately, again, it has had only a marginal impact. We still produce large numbers of Ph.D.'s who have never heard of the subject, who never heard of the economics of time, or who never thought about how this new perspective affects the theory of demand or other fields in economics. This failure to realize the potential of this new analytical framework is indeed troublesome.

The remainder of my comments are divided into three parts. In the next section I will attempt to pull together what the new household economics might do for us. In the following section I will focus on some of the difficulties in working with this new perspective. And in the third section I will discuss the substantive contributions of this new theory. At the end I will have some concluding comments.

What the New Household Economics Might Do for Us

Bob touched on many of the things I want to discuss under this rubric. But it is still worth attempting to review them in a systematic way.

First, it gives us a conceptual framework for a great deal of what we already do on the household. The advantage of that, of course, is that it provides a means whereby we can integrate our knowledge. This integration will enable us to make better use of the intellectual resources we have. In a very real sense, the whole
of our work will be larger than the sum of the individual parts if we all use or recognize this new analytical perspective.

The second contribution is that it will give a sharper focus on some of the economic research we do on the household. A great deal of what home economists have done in the past has had to do with the technology of the household. It is somewhat of a paradox that although they call themselves home economists, they really make very little use of the neoclassical economics. There are obviously important exceptions, but for the most part, home economists have not addressed questions of economics. Instead, they have focused on technological problems of the household.

Undoubtedly, many of you are familiar with Margaret Reid's book of many years ago in which she attempted to develop an economic perspective to the household. But this important book had little impact on the profession or discipline of home economics.

Now, however, we have an even richer framework from which to work—in part because of other developments in economics. We now have an appropriate framework for examining and understanding the economic dimension of the household. And the beauty of it is that it enables us to separate analytically the technological problems from the economic problems. In this process of separating these problems analytically, I suspect that eventually we will be able to deal with them in a more integrated fashion, rather than in the rather fragmented and segmented way in which we now deal with them.

The third contribution of the new perspective is that it re-establishes the family as a unit of analysis. This contribution is very important, especially at this point in the development of the United States and other countries. Bob said quite a bit about this in his remarks, but I want to emphasize it. His discussion was developed in the context of the utility function that one uses for analyzing household behavior. I would go one step further and argue that what economists have done to date on the side of demand theory is atrocious. We pride ourselves on the simplicity of that theory. But in its simplicity it is sterile. We really haven't been hard enough on ourselves on this issue. The new theory enables us to move on and to do something more sensible.

From a societal standpoint, the new theory puts the emphasis back on the family as a unit of analysis, and on the particular roles of the woman, the husband, and other members of the household. These are important issues in modern society.

This point is probably more important to economists than it is to sociologists. The sociologists have always kept the family as an important element of society. But they have not been able to
deal in a systematic way with the economic issues within the household. Perhaps we now have the means for more collaborative work among economists, sociologists, and technologists of the household.

The fourth contribution of the new household economics is that it focuses on the technology of the household and on the efficient use of time within the household. Both of these are obviously the key to producing household goods and to participation in the labor market. Women would not be participating in the labor force on anywhere near the scale they now do in the United States if it were not for the household technology we now have.

The truth of the matter is that economists have badly neglected the importance of the production technology in the household. One can understand a great deal of the development of the United States in terms of the technology of the household. In the same way, one can also understand a great deal of the differences between the United States and other countries in terms of the differences in this technology.

An important concern I have in this regard is that the many estimates of the rates of return to investments in production technology in agriculture are biased due to our neglect of this technology in the household. I have a very uneasy feeling that at least some of these estimates are picking up the imputed returns to household technology--a technology that to my knowledge, has not entered any of the analyses in an explicit way.

The Difficulties in Working With This New Perspective

The new household economics gives us a richer, much more comprehensive framework for dealing with reality. But it does this at a considerable cost in terms of analytical and empirical complexity. It is these difficulties which I would like to address in this section. Bob mentioned the difficulties in dealing with a utility function that presumably refers to all members of the household. He also mentioned one way that one can deal with that problem.

A somewhat different way in which I deal with it in the development course I teach is as the Samuelson "finesse." With this approach one assumes that the family acts as if it had a single utility function. There are good reasons for taking this approach. One does not observe a great deal of conflict in households, and one does observe households making rational decisions. Hence, it is probably not a bad assumption.

In any case, however, there are difficulties in knowing how to deal with the utility function. Additional research is needed on this problem.
The second difficulty is that in many cases we need to work with shadow prices or implicit prices. This problem arises because many of the goods produced in the household are not bought and sold in a market. The analytical framework enables us to deal with these goods and services. But obtaining empirical estimates of the shadow or implicit prices is a difficult task.

The third difficulty is in measuring full income, a key analytical concept in the theory. Although one can define this concept with a great deal of rigor within the theory, measuring it empirically is quite another matter. To date, analysts have used various proxies for the concept.

A fourth difficulty is with the production function assumed by this theory. These are rather more complex than those specified in the conventional theory of the firm, in part because of the nature of the household as a social unit and in part because of the constraints that one places on the behavior of the household. This is not the place to go into these technical issues. But we do need to remind ourselves that we are still very much at a preliminary stage in working out this conceptual framework, and that a great deal of work still needs to be done before we have a reasonably satisfactory, complete, and operational mode.

Finally, much of the theory involves a trade model. Consequently, one has to work with what is in essence a general equilibrium theory at the household level. Again, that makes the analytical framework a bit more complicated.

The Substantive Contribution of the Theory

My emphasis here is on new problems that we are able to deal with as a consequence of having the new household economics, and the new perspectives it gives us to some old problems we have been working on for some time.

The first area in which it makes an important contribution is on the economics of time—a badly neglected area. The economics of time was brought to our attention by Gary Becker in the article which really gave rebirth to the economics of the household. It is difficult to overstate this contribution, for it turns out that if you understand the economics of time, you also understand a great deal of what happens in a society as it experiences economic development. Let me mention just a few areas in which the economics of time provides new perspectives.

The first is in the area of demand analysis. Bob mentioned the significance of convenience foods. But it turns out, for example, that you cannot explain the large increase in the demand for beef in the United States these last 20 years in terms of
what has happened to relative prices and to per capita incomes. But if you take account of what has happened to the opportunity costs of time to the household, especially with the increased participation of women in the labor force, you can.

The same thing is involved in the switch, in many less-developed countries, from the consumption of rice, corn, and other staples, to wheat as development proceeds. Many observers describe this as an unwonted Westernization of tastes and preferences in those countries, or as an undesirable consequence of our food aid programs. I would hypothesize that we can explain much of the shift by what is happening to the value of time in households in those countries, especially in urban areas.

One of the implications of this contribution of the theory is that most of the demand analysis economists have done over the years needs to be redone in the context of the new household economics. The new perspective requires that the opportunity costs of time be added as an argument in the demand equation. Economists have been careless in not picking up on this implication sooner.

The economics of time also gives us a new perspective on the labor-leisure choice and participation in the labor market. We now have a more rigorous framework for understanding these phenomena, and for understanding not only the increased participation of women in the labor force but changes in the participation rates of other members of the household as well.

As one thinks about the importance of the opportunity cost of time and its impact on society, the whole issue of child care centers and their role in society comes to the fore. With more women working in the labor market, child care centers become more important. The problem of institutional design is still not completely resolved for the functions which child care centers provide, and we need to give it a great deal more attention.

The second substantive contribution of the new household economics is the much richer body of data we are able to understand with it. One important phenomenon for which it provides important insights, for example, is the division of labor that takes place between households and the market economy. Some of the changes in this division of labor are very important. Some of the changes over time have been dramatic.

When I was a child, for example, my parents phoned the grocery store with their order and the groceries were delivered to our home. There was that much of the labor services employed in the grocery store. Now we wouldn't dream of phoning our order to the supermarket. Instead, all of those labor services are internalized in the household, including assembling the groceries from
the shelves and in some cases now, even sacking them. This shift in economic activities is understandable in the context of the new household economics.

And if you think more generally about the world around us, there are all kinds of spin-offs and transfers from the household into the market place, and in some cases back to the household at a later date. For those of you who have worked in various countries with different levels of per capita income, these differences in where economic activities take place are quite familiar. The specialization that one gains from such transfers of activities out of the household, as well as the gains in efficiency when some of them are transferred back to the household to take advantage of low opportunity-cost time, must be an important source of growth as a country develops. Yet, until recently we had little theory to help understand these phenomena.

Economists are also now able to understand a great deal of sociological data that they have neglected in the past. I suspect that we will be able to understand a great deal of psychological data as well. These increases in the range of our theory increase the explanatory power of that theory, while hopefully enabling us to collaborate more effectively with these other disciplines.

The third substantive contribution of the new household economics is that it leads to a more comprehensive theory of economic development than we have had until now. Much of what we have been calling a theory of agricultural development, for example, is not really that at all. Valuable as it has been in guiding both our thinking and policy, it has for the most part been only a theory of technical change.

To stress this point is not to depreciate the importance of understanding the process of technical change. The point, instead, is that obtaining technical change is only part of the problem. What one is ultimately interested in is understanding what happens to per capita income as society develops. And this involves more than technical change.

Recent developments in the new household economics give us the basis for a more comprehensive theory. We can say more systematic things about participation in the labor force as development proceeds. We can say a great deal about the critical investments in human capital that are needed to sustain development, and that are the key to determining the level of education, health, nutrition, and income in a country. We can say a great deal about the division of economic activities between the household and the labor market.
We can pull all this together by calling your attention to a paper by Professor Schultz\(^1\) in which he attempted to work out the implications of the new household economics in terms of a long-run equilibrium theory of development for a society. This is a very preliminary paper, but also one that is quite suggestive.

The fourth and final substantive contribution of the new household economics is that it gives us a valuable analytical framework for understanding poverty and for developing policy to deal with it. My colleagues and I at Purdue did a major study of rural poverty in Brazil in which we used the new household economics as the conceptual framework.\(^2\) This perspective focuses on a very different set of issues than those which came from the conventional development approach. The efficient use of time again comes to the fore, as does all the investments in human capital—nutrition, health, education and training—a major share of which take place in the household. The theory has been vastly under-exploited for understanding this problem.

The results from the negative income tax experiments in this country are also quite insightful. Many of the results are quite consistent with what one might expect from the perspective of the new household economics.

Concluding Comments

Let me close by posing the question, "Where does this take us in the future?" To be brief, it opens up challenging new perspectives, and provides the means to deal with problems that we have hardly touched to date in an effective way. Evenson mentioned the theory of marriage that was evolving from this perspective. There is also a theory of crime and punishment, and a theory of suicide. Although many observers judge these papers to be "far out," my notion is that they indicate what an integrative force the new household economics can be.

The integration I am referring to here goes beyond that referred to in my comments above, however. Here, I refer to its power for integrating the social sciences. Viewed historically, we have gained a great deal from the disciplinary specialization of economics, sociology, psychology, home economics, and so forth. But I suspect that this specialization has gone about as far as we can take it, and that what we really need at this point is a

\(^1\)Schultz, T. W.

\(^2\)Poor Rural Households, Technical Change and Income Distribution in LDC's, Brazil, Draft, by Ram D. Sighn, Earl W. Kehrberg, George F. Patrick and G. Edward Schuh, June 1979
reintegration of the social sciences so that we have one comprehensive social science theory. I believe the new household economics gives us the means for taking a larger step in that direction.

But it also has the potential for going beyond that. Given the emphasis it provides on new technology in the household as well as in the firm, it also provides the means whereby we can more closely integrate the social sciences with the biological and physical sciences. That, indeed, would be a major contribution.
PART II:  
Women as Agricultural Producers, Consumers and Distributors

Presenters: Gloria Scott  
World Bank  
Washington, D.C.  
Hanna Papanek  
Center, Asian Development Studies  
Boston University  
Elsa Chaney  
Consultant  
Rockville, Maryland

Response: Terry Roe  
Agricultural and Applied Economics  
University of Minnesota  
Jean Kinsey  
Agricultural and Applied Economics  
University of Minnesota  
M. Geraldine Gage  
Family Social Science  
University of Minnesota
The linkages between the new home (or household) economics and agricultural production, consumption and distribution are most apparent through women. With few exceptions the roles women occupy in developing areas, for example, merge the farm, the home, the family. What has been missing is a way to analyze and evaluate those roles for decision-making purposes.

The new home economics has the potential for aiding such analysis in ways that economists as well as home economists can relate.

But before much can be done, all of women's roles must be acknowledged and fed into the process. A realistic data base must be generated to undergird the analysis.

Gloria Scott in her paper focuses on the variety of ways in which women affect and are affected by policies, decisions and actions in food production, distribution and consumption—ways either ignored, neglected, or not known by persons concerned with food strategies. She calls women in low income rural areas invisible; her concern is that their contributions be taken into account when ways to achieve the level of food activity such areas require are being explored.

Hanna Papanek raises a series of questions that should be addressed in any focus on women in development, beginning with questions concerning the origin of our interest in development, the differential impact of development on men and women, the unaddressed issue of "development for whom?" (irrespective of the consequences to some?), the limitations of conventional analysis, failures to value and view women's work in economic terms, and lastly, the limitations of women specific or women only projects. Again, all questions that point to the work that must be done to develop and operationalize a perspective that can and does integrate women's roles, issues and concerns into the developmental process; to make useful, if you will, the new home economics!

Elsa Chaney examines the strategy of an "add on" or patchwork approach to ongoing agricultural in-country projects as a way to integrate women's concerns, issues and needs in development. She describes in some detail her experience as director of a women's component that was added on to an integrated rural development project in Central Jamaica. She concludes with four observations on how to build a meaningful women's component and deals
with some questions about home economics at work in Jamaica.

The discussants as a group raise the kinds of issues all disciplines, separately and together, will need to address in working though the natural and created obstacles to attacking realistically the needs of women in development. They ranged from Terry Roe's warnings about the limitation of oversimplifying firm household variables to conform to conventional disciplinary work to Jean Kinsey's concern that we not strip people--women--of their power or status or control, however limited it may be. Geraldine Gage emphasized the importance of the holistic approach of home economics to development. Still another set of cautions emerged regarding what is being done in the name of development and how complex and interrelated such efforts are, requiring the depth of the disciplines but the breadth of inter-disciplinary approaches.

The new home economics is still very much with us in this part of this three-part seminar but it has become a greater challenge to "do" and to "use" than might have appeared to be the case after the first session in the series!

MBS
I am going to talk a bit about what women are doing in agriculture and food production and then attempt to highlight a few of the important points which I think decision makers, policymakers, University teachers, University students, the development assistance community, in fact, everybody should know in order to make women less invisible. Everybody is talking a lot these days about the availability of enough food to feed the growing world population. We are talking about the fact that agricultural production needs to double every 20 years from here on in order to feed the growing numbers, requiring an annual increase in agricultural production of between 3½ and 4½%. This would close the food gap and contribute significantly to closing the present nutrition gap. Up to the present, agricultural productivity has been growing on average by around 2½% a year. We have to bring into cultivation new acreages of land, and it would be exhorbitantly expensive to cultivate much of the idle land. Like the vast areas in Africa unused at present because of sleeping sickness. It is agreed that only by producing significantly more of their own food can developing countries hope to approach food security over the next 30-40 years. The provisioning of the growing urban market requires an agricultural surplus the size of which we have not yet seen. Particularly among the very poor as more children who are born are living and the sizes of their families grow, there would be increasing pressure on their limited food supply. Food management, the avoidance of waste, particularly the avoidance of post-harvest losses, more efficient marketing, more efficient distribution of food will become critical.

Land tenure, the control of land, sufficient authority over land use to make decisions to introduce innovations which would increase agricultural productivity, all this is important. To increase productivity, we need to develop technical packages of agricultural input which are affordable by the small farmer, and we need to train the small farmer to use these packages efficiently. And above all, we need to get the information to the small farmer who will choose whether to introduce them. These are all very obvious facets of any strategy to increase the productivity of the agricultural sector.

What is much less obvious because of our habit of thinking of the farmer as "he" is the contribution that women are making, have been making over centuries, and will continue to make to agriculture and food availability. In most of the developing countries women are already playing a very significant role in agricultural production, a role which is completely invisible to
most policy makers and advisers. I would like to touch on some aspects of these roles of women and by discussing them, bring out some of what I think needs to be done here and elsewhere to make sure we understand better the food chain and its actors, and avoid wasting a lot of the investment that is now going into increasing agricultural production.

I should start by noting that nowhere are women a homogeneous group and that for our purposes here, we are going to be generalizing. The changes that are affecting women, the changes that are accompanying development and modernization affect women differently according to their socio-economic group, according to their culture. Even within cultures, at different times these changes affect women differently. What is universally true is that women are affected by these changes differently from men, and that in general women are disadvantaged by the changes. And among the many reasons why women are disadvantaged are two important ones I would note:

First, women's roles have been defined by culture in relation to child bearing and are much more rigorously controlled than the roles of men. And second, because of their household, child rearing, domestic function, women are much less mobile than men, much less able to go out and seek any new opportunities that may come and so they are not able to take advantage of innovations to the same extent that men do, and as a result they are losing their economic status. Women provide between 50 and 80% of the labor in small farming agriculture in most of the developing world. In addition, most of them have home gardens on which they grow the subsistence food. Home gardens are not gardens; rather, they are agricultural plots that are frequently located near to the house because women are responsible for them; they are farmed by hoes and spades; they are seldom tilled deep enough; seldom have fertilizer applied to them; they seldom introduce anything but seeds from the previous year's crops; they have been ignored by extension experts. These factors naturally predict that their productivity is extremely low. There is sex division of labor by task in the field. In addition to growing their home gardens, women assist men frequently with seed bed preparation, with selecting seeds for the next crop, with transplanting, weeding, and harvesting. As more land is brought under cultivation to increase agricultural production, naturally women are required to do more work, more weeding for instance. I recently saw a report which correctly stated that the small farmer seldom plans more than "his weeding capacity." It did not mention, however, that the weeding capacity of the small farmer is the labor of his wife and children: a very important fact if one is going to expand the scope and productivity of the family farm.

As more land is brought under cultivation for cash crops and to increase the food surplus to send to the urban market, the fields
that women had been farming for their subsistence to feed their families tend to be absorbed. This means that their subsistence farming has to be transferred to the less good agricultural land, land frequently unfit for agriculture and often much farther away from home. As has been happening in some places, a woman may have to farm three scattered fields to replace the one she had before. And in addition, she has to weed and transplant and harvest a much more extensive acreage under cash agriculture of her husband or of the family. In addition to affecting the labour required of women, the competition between cash crops and food crops is affecting food consumption and nutrition. This bears on women particularly since they are largely responsible for nutrition. For instance, in parts of one country decreasing amounts of peas were grown in favour of the expansion of soybean for the world market. As a result of growing fewer peas, the staple protein of the poor, their price rose significantly and instead of a diet reasonably well balanced with a significant amount of peas for protein, malnutrition is increasing because of eating mostly starch. Did the planners anticipate this effect of the expanding soybean market?

There is the division of labor by crop. There are some crops that more or less universally are grown uniquely by women. There are some crops that are grown in one place by women and another place by men, and one needs to know who is growing each crop and how the responsibilities of each sex interrelate. In a West African country where swamp rice is grown by the men, the hill rice is grown by the women. Innovation was introduced to increase the productivity of the swamp rice (for the men). After the first crop in which the men did very well, the next year the men's fields were less productive, the year after productivity declined even more, while that of the women was rising, although the women had not benefited from any improvement inputs. The men relied on the women's labor in their field, and what had happened was that the women had decided that since they were not getting any help in their fields, and had not got any share of the increased production of the new fields, the men would have to pay them to weed their fields, and part of the payment was that the men would work in the fields of the women. As a result, for a change the women's fields were well plowed and men were working on the women's fields, and their productivity went up, while the productivity of the men's fields remained low despite significant investment in improving the seeds, in technical packages, in extension advice and so on. Linked with increased rice production, milling capacity has been increased and is frequently unused because it was overlooked that the women decided whether the rice went to the mill or not. Women store a lot of their crop. They keep it against emergency. They decide when it is to be used, selling some when they need cash to buy shoes for the children, etc. Further, the women preferred not to send their rice to the mill because when it went to the mill, they lost the
by-products which they used to feed their backyard chickens and rabbits and other small animals. The idle mill capacity represents a significant wasted investment.

Mono cropping has been introduced in many places as part of changing land use. In the previous less "efficient" system of agriculture, where food crops were interplanted with the cash crop, women were largely responsible for the food crop interplanting. When this practice is discouraged and farmers are advised to be more efficient by growing only one crop, the displacement of women's food growing efforts is seldom an issue nor is the question of how the family lives while they are waiting for the new crop to grow addressed. A rather interesting case was one where coffee growing was introduced in a hill area where the population was growing opium poppies with intercropping. There is a good coffee market now as we all know, and the coffee will yield very high returns for the people of this area. But there is also a ready market for poppies which brought a lot of money into the family, and how would they live in the five years between planting the coffee and selling the first bean? More land is being cleared to bring it under cultivation, the ecological disadvantages of which have finally become a focus of concern. One effect that is redounding very seriously to women is the destruction of forests, particularly of depleting the fuel wood supplies: women everywhere are responsible for cooking and they are responsible for bringing the fuel which they now seek at ever increasing distances. Also, bringing more land under cultivation is destroying the traditional system of fallow which over centuries has been the way in which farmers managed to keep the fertility of their soils relatively intact. With the fallow is going a lot of the wild food which in many places, such as in the hills of southern Africa, were the only source of minerals, particularly iron, in the diet of the poor. The introduction of maize which was not indigenous to this region has compounded the nutritional imbalance, and there is increasing malnutrition.

Food Management is an important aspect of any strategy to improve food availability, to ensure that we don't waste any of the food that is being grown. It is important that the harvest is efficient, that we take the crop to storage efficiently, and that we store it efficiently. Everyone is silent on the fact that in small farm agriculture, which is what we are talking about, it is largely women who are doing the growing; it is women who are dong the harvesting, and women who are doing the storing. There are widely divergent estimates of the extent of post harvest loss. A fairly reasonable assumption is that there is between 10 and 15% of grain lost after the harvest, that between 30 and 40% of fruit and vegetables are lost, and that the loss of animal products is significant. For one country it was estimated that if they could eradicate post harvest loss, they would meet by 1990 at least a half of their food deficit.
Women market and distribute food. Elsa will talk about the higgler's in Jamaica where I come from. They are the women that market most of the food. With efforts to increase production, there is concern about how the production will be marketed. Efforts to strengthen produce marketing are directed at marketing associations of men, seldom at the higgler or any other market women. It has been little noted that feeder roads to open up the new lands bring in middlemen who buy from the male, the farmer "he," at the farmgate and this removes from the woman her control over the resources that she got from selling her products. It may be good that she doesn't have to carry the produce to the market on her back or in trucks. The nutritional aspect of food management is of such obvious concern to women that I will not discuss it here.

Much effort has been devoted to land reform programmes. For women's efforts towards food security, it is important to note that in many cases women have no legal personality, and therefore cannot own land. Since they cannot own land, they cannot control its use; they cannot use it as security, to get credit, to buy farm implements, to buy seed. In many places they cannot make any decisions concerning its use without a male presence. In many places a woman gets use rights over land while her husband lives, and on his death, she and her girl children have no further claim on it. Only the sons can inherit the land. I know of only one project which, recognizing the problem of women's lack of control of land, the amount of effort that they have to put into the agriculture, and that it was going to demand more time and effort from women, required that a proportion of the increase in earnings the project would effect be paid directly to the female members of the family. Women cannot decide on the use of the land. These days extensive migration in many countries leaves only the women and children to manage and work on the farm. Yet if an innovation is proposed, the women have to send a message, or with a not very efficient postal system, they have to write to their husbands overseas, hope he gets the letter and hope that they get a reply, because he alone can decide whether e.g., the cropping pattern can be changed. The remittances which the migrant sends have potential for improving the family's level of living, but he dictates the use of the money (how much is to be paid for children's education, how much may be paid for hiring farm equipment, etc.), and the money comes sporadically and with no certainty. Among the consequences this has for farming is that the women cannot anticipate and contract for plowing their fields at the most appropriate time and so this lessens their efficiency.

Technical packages are the last aspect of a food security strategy that I will mention. Women play a very important role in family decision making, a role that most of us from the outside don't see and so in proposing changes we allow neither for the consultation with women, nor for the aspects of the changes which
depend on women. For instance, with the poppy growing farmers it was the women who resisted giving up a ready source of income. In such circumstances it is difficult for the male farmer to accept the innovations without the agreement of the woman. We should note that although women appear to the outside to have little status, within the family they do wield a certain power from which development assistance may be detracting. A lot of research money is spent on improving strains of wheat, rice and maize. Relatively little is directed at the tubers and other food crops grown by women and which poor people eat. There are very few technical packages developed for family gardens and I mentioned already how they are ignored by extension services.

The illiteracy rate among females is much higher than among males, some 40% females being illiterate compared to 28% males, a fact which training in use of technical packages for agriculture does not sufficiently recognize. Even if the training is offered to women, frequently it is not offered in a way in which they can easily understand, adapt and accept, for instance, because of language. In many places because girls don't go to school they know only their tribal language or local dialect which not many development assistance personnel speak, so automatically women are barred from direct access to information on these technical packages. For women, time, both to absorb the information and to use it, is a real constraint (a view in a film made by a woman about women called "Women's Double Day"). Women need time to fetch water, to fetch fuel, to cook food, to bear and mind children, to be the nurse and the doctor of the family, to be the source of information and to socialize the next generation of human resources. That is their domestic day and one with which we are familiar. The problem is that we fail to see women's economic day and the range of production activities to which women contribute, e.g., in agriculture.

These scattered thoughts have merely scratched the surface of some of the things that I think are important for us to know about what women are doing in agriculture, and of the things that we need to understand better if we are going to plan development assistance better, design more relevant training for development assistance personnel, and offer realistic extension advice.

In the two minutes that remain I would like to suggest two actions in this particular university setting. The first is an endorsement of the importance of discussions such as this series of seminars that bring together, across disciplines and faculty lines, a number of interests that should relate to each other in a well integrated approach to development. The reflection on such discussions in your curricula will help young graduates to focus attention on information about the sociocultural background of the people with whom they will deal, whether these are farmers in the United States or farmers in a developing country. These graduates can help to develop mechanisms to feed
back and share information about results of interventions, to identify particular bottlenecks and, as we are talking about women, particular problems that women are having. They should also reflect on the university's research agenda identifying technology needs as well as needed socio-cultural and agro-economic research. All this I see as one important set of actions.

The second set of actions is related and would use the information derived from the first to develop new ways of approaching farmers; new ways of defining the system for education in its broadest sense, and fitting it in with what people really need to know, what is functional for them in their particular society. Important aspects of our efforts would be to ensure that as far as possible we recognise the interrelationships and intersecting links between activities, and that we do not permit our own elite perceptions to dictate our interpretations of what we see and hear.
Implications and Questions From the Perspective of Women in Development

Hanna Papanek

There is beginning to be a body of knowledge about women in development and we are beginning to gain a degree of consensus. Yet let me raise some questions for you and not answer them, but raise them in order to disturb you sufficiently to find your own answers.

The first point that I'd like to make is that the problems of women in development that we're talking about today aren't new problems at all. They're quite old problems, but they are coming up to our consciousness again for a number of reasons. I think the least important reason why we are now thinking about women in development—the least important one—is Western feminism. The most important ones are changes in the economic relations among countries and in the economy of developing nations. Now I'm a feminist and a very outspoken one, so why do I say that Western feminism is the least important thing in introducing the question of women and development? Don't be trapped by thinking that attention to questions of women and development is simply a fad, don't think that it's going to go away, and don't think that it's a trip that we are laying on people in other countries. It's not, and don't be trapped into thinking that this is simply one more way of exporting our changing ideas about women to other countries. That's not really the most useful perspective.

Instead, the perspective that I'd like to suggest to you is something quite different. I think that the reason planners are beginning to think more about women is that there has been an awareness that planners and policy makers have an ethical responsibility to the needs of unrepresented constituencies. Women are among the most important of the unrepresented constituencies but they are not the only ones. Poor women are among the most crucially important unrepresented constituencies, and it's they who should be at the focus of our attention when we think about women and development questions. That is, we should think not only about differences between men and women, we should be thinking about differences among classes because differences between men and women don't exist in a vacuum. They exist only within a social context. Class distinctions are one of the most crucial elements in the social context. And here the most important factor is the differential impact of change on poor women and poor men, or middle class women and middle class men. That is, gender differences matter in the context of class. That's a major point that we're beginning to think about with more clarity.

Now in addition to the change in our awareness of the ethical responsibilities as planners, I think a few of us are beginning
to understand something else, namely that the conventional social sciences are really not very useful in thinking about women and development. And why is that? I have a private hypothesis which remains to be proved—that the conventional social sciences reflect the life experiences of middle class white men in Western Europe and North America in the late 19th and early 20th centuries. And I think, as was said before, home economics as she is taught here reflects the experiences of rural America. Well, my hunch is that social theory, economics, home economics, reflect the social visions of North America and Western Europe, and don't reflect the reality of India or Indonesia or Lesotho. So I think we have a great deal of rethinking to do in applying the conventional social sciences to problems of development and particularly to issues that involve women. If you have read a lot recently about time allocation studies, that may be because time allocation studies are a very small and very half-hearted move toward redefining the conventional categories with which we look at women and men in society.

So having laid out for you the kinds of things that are in my mind, let me come to a couple of examples that are perhaps of interest to people concerned with rural women and men. As I said earlier, some of these are very old problems that policymakers have been thinking about for a long time. Let me give you a couple of examples. One is a charming little anecdote that I stumbled across in my research on Muslim women in Southern Asia. It appears that in the 1830s, about 150 years ago, the king of a small state in northern India, the Kingdom of Awadh, was approached by some English friends who noted that this was a wheat growing area, and they had seen all these women grinding grain on grinding stones. They asked, "Why don't you import some milling equipment? Mills speed up the grinding of grain." The king thought about this for a while and then refused. He is quoted as having said, "My poor women shall never have cause to reproach me for depriving them of the use and benefit of their chaki, their grinding stone."

Now the dilemma of the King of Awadh was a little different from the dilemma that people face today. The King could turn down a technological innovation because he didn't really have to worry very much about increasing productivity. He could worry about the immediate income of the poor in his kingdom. Also he didn't have to worry about a growing population. But the answer of the King of Awadh is not available to contemporary planners. You cannot expect planners to turn down a technological innovation just because it will displace women from their traditional work. But that is, in fact, one of the major dilemmas of development. Under what circumstances should one introduce an innovation, and how do you come out on the calculus of benefits and cost?
Let me give you a more contemporary example from Indonesia that some of you may have read about. In the early 1970s, the Indonesian government made a political decision to introduce small rice milling equipment for use in milling rice, using small, one or two horsepower mills. Indonesia had had large rice milling equipment before that was largely Chinese owned and stood idle for a long time. When the small mills were introduced, they were an immediate success. It turned out, however, that there was an annual income loss on this job alone of roughly 50 million dollars as a result of the introduction of this new technology. And quite by accident, because planners were not looking for these answers, it turned out that this income loss was suffered by thousands of women. What are the elements that go into that kind of a decision? Do you think that the Indonesian government should not have introduced the rice mills? Probably they were a good thing, all things considered, because they made it possible for productivity in food grains to increase more rapidly. What should the planners have done? Well, for one thing, they might have realized more quickly that the loss would hit women and men disproportionately. If you had asked any Indonesian, "Who grinds rice?" everybody would have said, "Of course, that's a woman's job." It's an onerous, difficult, and dangerous job. I tried it once and the villagers were amused because I did it so awkwardly. You stand with your bare feet on the edge of a stone mortar, and you have a great big stick and you keep pushing the rice into the mortar with your bare feet and you keep pounding down with the heavy stick and you could smash your toes very readily. It's not a very efficient way of grinding rice, it's arduous, and the women were awfully glad not to have to do it again. But what about that 50 million dollars loss of income per year? What kind of a problem for development planners in agriculture is presented by that dilemma? I don't know the answer to that, but I think that it was not considered in advance that there might be this major displacement effect on women.

And mind you, this is a question of income distribution; it's not a question of giving women something to fill their time. The women who did the rice pounding did this not for their main income, they did it as part of the crazy patchwork quilt of jobs by which the Javanese poor survive. So they had plenty of other things to do, cooking palm sugar, watering sugar cane, weeding sugar cane, but they had lost a very significant traditional source of income.

How do you think about those questions, how do you factor it in? I think this represents one of the first dilemmas of development for women. Is it acceptable to introduce changes that harm some people because they are intended to benefit the greater good? There are ways of thinking about it that are not really very satisfactory. There is, for instance, the assumption built into conventional social plans that women are supported by men in
households. That's a very seductive notion because you figure, well if women lose that source of income, some man will take care of them. It really doesn't matter as long as the household income goes up, what difference does it make after all? It makes a lot of difference as many of you have undoubtedly thought out yourselves.

Let me give you some of the figures from Indonesia, the country where I have done most of my recent work. As it happens, in Indonesia the divorce rates are almost as high as in the United States. There are also very high rates of remarriage, so that at any one time lots of children are supported by their mothers. With increasing poverty, it's often difficult for divorced women and their children to go back to the grandparents. With increasing rural poverty, lots of men are moving to bigger cities to become rickshaw peddlers. The women often stay behind and you probably have a great deal of family breakdown associated with poverty. So this comfortable assumption that it doesn't matter if women lose a source of income because men will support them, that assumption just doesn't wash. There's increasing evidence from other countries, Bangladesh, for example, that the traditional bonds of obligation between men and women are weakening under the impact of poverty. So it is not an idle assertion to say that development policy affects women and men differentially. We cannot assume that possible increases in household income will compensate for the differential displacement of women from traditional tasks.

And yet there is very little in the social sciences you are using that enables you to make that imaginative leap. There are very few concepts available to you to say, "There is no such thing as a single model of the household." There are only many different culturally and class-defined household models. And let me suggest to you here that a key issue in using the concept of the household is how income is shared within a household. We know from studies by anthropologists that there are major regional differences among cultures in the extent to which a household is an income sharing unit. For instance, in the West African societies where women and men have very differently defined tasks in agriculture, there is often only a very limited degree of intrahousehold income sharing. On the other hand, in Bangladesh where women have very limited access to earning opportunities outside of the household, you have very clearly defined income sharing within the household. But the household expenditure and earning decisions are governed by the interests of the patri-lineage. Essentially the interests of the senior male prevail. If a decision has to be made in the household concerning female education, that may not be where these men want to invest family resources, in part because the payoff for female education is very limited. These things work circularly, reinforcing each other. If you say "the household," speaking about southern

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Cameroon and western Bangladesh, you're talking about two very different social structures.

Any concept or any conceptual system that does not allow you to build that into its assumptions is faulty. That is, it's not a matter of whether it works pragmatically in predicting, it is really a question of the social vision that animates the model with which you examine the economy or the society. It has to be factored into your starting assumptions and not patched up afterwards.

Now, this brings me to another dilemma of development for women. If we are going to be serious about implementing the United Nations commitment made in 1975 to implement the "integration of women in the development process as equal partners with men," should these programs emphasize women's family roles, or their roles as earners? Is that a sensible distinction to make?

We've been reading a great deal in both feminist studies and in women's movement literature about the "work and family role conflict." Now, my hunch is that this is a dilemma peculiar to advanced industrial societies. You find it in analyses of North American middle-class families. You find it equally in studies of the Soviet Union, and in the time allocation studies of families in Eastern Europe. In Eastern Europe there is what is called the "second shift" problem or what Gloria has spoken about as the double day. But if you are going to focus on the question of work roles versus family roles, you should be aware of the fact that this is very specific to advanced industrial society. For most of the world, work and family roles are very closely intertwined. I tend to think that this division is an artifact of our own situation. You may disagree with that, but it leads me to rethink the meaning of the term work.

When somebody talks to you about "non-working" women, what do you think of? My private vision, reflecting my own vices, is that of somebody who lies comfortably at home all day reading interesting novels and eating chocolates. That is my vision of the non-working wife or the non-working woman. I once asked a colleague who had used the term what it meant to him. Well, it turns out, of course, that a "non-working" woman is one who doesn't earn a wage or a salary, but think about it for a minute. Is that woman idle? No. Some are, but not many. Now secondly, does that woman lack economic significance? No. And it's not only that she is a consumption manager. She has an economic significance that goes far beyond the management of household consumption.

I've coined a term about that which I find congenial and you may not; I've called it "family status production." That is, the so-called non-work of women in many societies is directed toward enhancing the family's social position in the community through a
variety of activities that involve skill, time and energy. Those of you who are human capital economists can play with that as you will. That's your job, not really mine. I am simply asserting that this might be a useful way of thinking about women's activities. The non-work of women has its economic consequences in the jobs that children have in the future; it has its economic consequences in the promotion of men and the earnings of men; and it has its economic consequences in a variety of other ways.

For example, if you are a farm wife and you and your husband hire a lot of day workers for the harvest, one mode of payment is the food that the workers get. Does the wife's effort in providing food to the hired workers appear in the Gross National Product (GNP)? Probably not. The wife's activities in the local system of gift exchange which is so important for capital accumulation: does that work appear in the GNP? Probably not. But you ask any of these people why the woman is not in the paid labor force, and one of the answers is because she does a great many things that are important to the family. So when you are looking at the opportunity costs of a woman shifting from family-centered work to work in the market economy, some of the elements in calculating that opportunity cost are to be found in the social and economic value of women's "non-work."

Don't forget that you are hampered in your analytic capacity to see the reality by the terms that social science has imposed on us. I think we have a responsibility to rethink concepts. So what has been called the work and family role conflict creates a dilemma for us in thinking about development because this usually is a specific characteristic of advanced industrial societies and takes a very different form in societies that are largely agricultural. We need to think about what those forms might be.

Now let me finish up by raising some questions about development projects and policies for discussion. It's my conviction that we need to think more about macro policies and their relation to projects. If you think about the position of women, it is at least conceivable that some of the problems that so-called women's projects are supposed to remedy are the direct results of macro policy. One has to be alert to that possibility. A great many problems faced by women cannot be understood without linking them to overall policies that may have no apparent relationship to women's needs and interests. If you stick to a ghettoized way of thinking about women's needs, you may be blind to the fact that a new import policy in the textile industry may throw a great many women batik makers out of work because they work in cottage industries. If you are focused only on women's projects, you may forget to look at some of the price policies. You should also be thinking about ways in which projects build in the possibility of changing policies.
Let me give you a couple of concrete examples of projects that might be of interest. I hope this will generate some controversy among home economists. The Indonesian government established in 1978 an Associate Ministry concerned with the roles of women. This ministry operates through other ministries. Its implementing organization consists of the Association of Family Planning Acceptors and the Wives' Association of the Ministry of the Interior. The first crash program (it has since then been extended) essentially emphasizes activities that have been familiar in women's projects elsewhere. It includes family planning, self-help delivery of social and health services, self-help programs for house renovation and provision of drinking water, provision of information about the new marriage law, nutrition information and extra feeding for young children, illiteracy programs, and intensification of home gardening.

Now these are all excellent in themselves but I want to juxtapose with this program a bit of empirical material from studies of the Indonesian poor. I think Gillian Hart will talk more about them next week because she has done one of them. These studies suggest the following: that if you examine the contribution of women and men to household income by class (or "asset group," ) you find the following: among the poorest, that is those people who did not own any land, women and men contributed about equal amounts of household income and spent roughly equivalent amounts of time on wage labor. Among the upper asset group, that is households self-sufficient in rice land, you find that women spend much less time overall on earning activities. In her study, Gill Hart found that women contribute about 20% of total household income. That average is high because a few women in her studies were market traders with good earnings. So on the whole, among the poor, women contribute a much larger proportion of household income than among the better off. However, as you would also expect in all asset groups women did almost all of what was defined as housework, and men did almost none. Also as you would expect, among the upper asset groups women spent a much larger amount of time on what was defined as housework, about 75% more hours than among the poor.

Now, the question that comes to my mind is: if a project to assist rural women concentrates entirely on women's domestic functions, will it be more appropriate to the upper asset group because women in that asset group already perform these functions? They spend most of their time on activities defined as housework. They will be helped very much by this new program because that is what their work consists of. The women of the upper income group also have somewhat more leisure time than the poor, so to the extent that these assistance programs require time to attend classes and clinics, the women in the upper asset groups have more of it than the poor. So there is at least the possibility that this very good and very welcome program is going
to exacerbate the class distinctions that the green revolution may have possibly contributed to. That is, if you think about it, the income groups that have benefited from fertilizer, new seed varieties, new agricultural technology, may be the same ones that benefit from women's programs that address women's domestic work. At least that is a possibility. Fortunately, the next thing on their agenda is to look for ways of enhancing earning opportunities for women, so there is a good deal of hope there. But I think one has to consider very carefully what the effects of women's projects are going to be and which class they are going to reach. Whose needs are being addressed? There is always the danger that if you do not pay attention to the division of labor with respect to earning and income, that the needs of the poor will not be met.

And let me close by saying that, given the importance of women's contributions to survival particularly among the poor, any development policy that neglects the needs of women hurts the poor more than the better off.
The Strategy of a Women's Component: The Second Integrated Rural Development Project in Jamaica

Elsa Chaney

Sometimes it's hard to be the third speaker because a lot of the things have been said. What I'm going to try to do is be that "feedback" we were talking about earlier, and to describe and analyze what we did in a very specific project which brought together an interdisciplinary and intercultural team to build a women's component into an on-going rural development project in Jamaica.

Let me proceed to do two things: to describe the project to you so that you can see how it worked, not with the idea that it should necessarily be replicated everywhere in exactly this form, but as a possible model. Then to draw out some generalizations about building women's components as a strategy. And it's the strategy that I'm interested in, more than the facts about the project in Jamaica.

We were working in the mountainous center of Jamaica, in a very beautiful place where it's green all the year round. The II Integrated Rural Development Project is a Ministry of Agriculture effort covering two areas, the Two Meetings and Pindars River watersheds, right in the center of the country, covering about 10 square miles. The project encompasses something like 5,000 families, most of whom are small farmers--not small in stature!--farming on small hillside holdings.

Through the initiative of the Project Director, a Jamaican, and the Rural Development Office of USAID, Dr. H. Pat Peterson, we received funds provided by the Women and Development Office at AID and were challenged to come to Jamaica to "do something for the women." We worked closely with the women on the hillside farms and with something like 21 Jamaican experts; from the first day we began incorporating them into what we hoped to do. We built in about 11 months a "women's component" in an on-going project, and we trained a corps of young women-in-development home extension workers, many of them from the area. I'll say more about them later. And we got going a project-within-a-project which revolved around gardening. We gave it a fancy name, however: we called it the Family Food Production Plan. This was to mystify and impress the men a little bit. And also to get the women's component linked back into the main project goal, which is to increase agricultural productivity.

Now the II Integrated Rural Development project is primarily--and must remain--a soil conservation project. This part of Jamaica shares with approximately 30 other watershed areas the common
problem of tremendous soil erosion. So the principal project activity is to analyze, farm by farm—for everyone who wants to participate, there is no obligation to do so—the soil and crop mix. There is great interest in the project, once you get beyond a certain skepticism on the part of the farmers who are very sophisticated people. Many of them have spent long years away from Jamaica. They've seen London or Montreal or New York and have come back to farm the family land. The project hopes to reach them in three main areas: soil conservation or treatment which can range all the way from very intricate terracing to perhaps simply rearranging the way the water runs off—not every farm needs, although many of them do need, drastic attention; crop analysis, that is, what are you growing and what else could you grow that would bring in more income to raise the standard of living, and finally, credit so that the soil conservation treatments can be carried out and any changes made in putting in new crops. By the end of four years, it is estimated that the project will have incorporated perhaps 70 percent of the farm families in this area.

The work had been going on for about four or five months when we arrived. The idea was to come in and talk with the women first, before doing anything. It was very good that the project advisors stressed this with us; they really didn't want us to come in and impose our ideas. They wanted us to come in as a kind of catalyst, to work with several of the women who had been hired with the title, "Home Economics Officer." But when I say "to work with the women," I don't mean just work with the Officers, but to climb up and down the hills and talk with the farm women themselves.

Now the farm women are really of two kinds in the IRDP, which is what I'm going to call the Integrated Rural Development Project—the name is such a mouthful. There are female farm operators—it's interesting that in Jamaica, almost a quarter of the farm operators in the small farm sector are women. This statistic is related to Jamaica's history; it's almost part of the life cycle for men at one point or another to "go a foreign," as they say, and to leave the women behind on the farm. The men migrate within the region or, as I'm sure you know, until around 1965 there was a large influx to Great Britain. Now the flows have changed direction; and many Jamaican men and also women are going to Canada or coming to the United States.

So there are women farm operators, but there are also the women whom the project leaders felt somewhat uncomfortable about because they thought the project was not reaching women who were the wives of farm operators. (I'm glad to say that the project was not ignoring those women who were the nominal heads-of-household and were doing the farming. I went through a pile of Farm Plans to satisfy myself, and saw there that a good proportion of the participating farm operators were women.) There was
an uncomfortable feeling that somehow the project wasn't really reaching all the women, integrating their contribution, taking advantage of what they had to give and, in turn, affording them some benefits. So that was the challenge: to try to figure out how we could link these women in. All along we emphasized that we did not want to create a little sub-project off on its own, taking advantage of the fact that in the first year of the project there was some degree of flexibility and even some finances available.

We were very aware that building an effective women's component meant linking the women to the main project goals and activities. Frankly, this is a "patching" operation. So more than ever we wanted to link back into the main project what the women were doing, and not have them off doing their own thing, out of the public eye—not contributing to nor benefiting from the main project.

So what did we notice, with the help of the farm women, as we began our planning? Here I have to give you some background so that you can see how the women's effort ties into the other project activities. The small farm sector in Jamaica is extremely important in the whole economics and politics of the country. The project was very much keyed to enhancing that importance. The small farmers provide a great deal of the food for the cities, and food is a political issue. The sector also provides—and this is not always the case—about 25 percent of Jamaica's exports, principally bananas, nutmeg, allspice, and other things, too. Although only 13 percent of the acreage is devoted to the small farm sector, something like 60 percent of the Jamaican population still lives in the rural areas, and about 30 percent of the work force is in agriculture. So numerically agriculture is important, and economically it's important.

Agriculture in Jamaica also is important because Jamaica spends large amounts of its foreign exchange on food imports, and I know that I don't in this group have to go into all the implications of that fact—what food imports mean for a country's balance of payments situation and for the availability of foreign exchange for other uses. Because the project is intended to be a model, and the hope is to replicate it in other watersheds throughout Jamaica, the project goals are significant outside the project area: to increase food for the non-farm sector, to improve Jamaica's trade balance by cutting down on food imports; to provide an important source of foreign exchange, and to create a rural market for industrial goods.

In spite of the emphasis on food production, the project had an almost exclusively outward focus. You can understand why from what I've said. It's the most normal thing to say, "What are we going to get out of these hills for the rest of Jamaica, to provide food for the cities and for export?" Now it became evident
in our initial assessment in talking with the women that nobody
had thought very much about these particular 5,000 families, those
in the project, the people who were going to do all these wonder-
ful things for the rest of Jamaica. They had been forgotten,
except for some future "trickle down," when their income was
going to increase and their standard of living was going to
improve and they were going to get some good out of the project--
if it all worked out.

We took this as our starting point. We said, "What about the
families here? What are they going to eat? What do they eat
now?" It didn't take us very long--going around with the
district nurse to make a brief survey--to find out that the
people were eating part of their starchy cash crops, and almost
nothing else: yams, cassava, Irish potatoes, bananas, plantains,
and breadfruit. This diet was pretty much what the children got
twice a day. In the evening, they might have a meal with a
little more--perhaps a stew with chicken backs--but for some the
first two meals of the day were even more restricted: bananas
and tea.

How does this translate in terms of nutrition? It means that 20
percent of the children under 4 years of age in Jamaica are
significantly underweight for their age. Mortality rates for
1-to-4-year olds are twice that of Barbados, Puerto Rico and
Trinidad-Tobago. Forty-five percent of women are anemic; weights
and heights of school children from low income families are
significantly lower than average, and agricultural workers lose
weight during periods of heavy labor. These are all indications,
certainly not of acute malnutrition, but of definite dietary
deficiencies.

We know from a growing number of studies that consumption in rural
households is not necessarily related to production--you may be
producing crops which are going to be sold, and the proceeds are
not necessarily going to be invested back in better food for the
family. So to make a long story short, we asked how we could
link back into the project, which has increased productivity as
its main goal, something which also would be productive. So we
invented the Family Food Production Plan which is gardening by
another name. But it had a sort of cachet. We wanted to have
the word "production" included, because we wanted to give the
idea that these women were not knocking on the door of the pro-
ject director and saying, "Give me, give me," but that they had
something to contribute to the project, that they could help
further the project's goals.

The Family Food Production Plan, to pin it down, is a cycle of
nine nutritious vegetables which, if planted in roughly the order
laid out, and combined properly with the starchy foods, will give
a family pretty good nutrition with only occasional animal pro-
tein. The Plan was carefully worked out by a gardening expert who collaborated closely with the project horticulturalist. Those of you who know something about nutrition know that if you put rice with peas (kidney beans), you get a release of the protein in the red pea, and the dish is very nutritious. And so it is with a number of food combinations. We built in a very strong nutrition education program because you not only have to grow vegetables but you have to see that they get inside the children and the other family members. If the gardens get going on any scale, there's going to be some temptation to sell the vegetables which command a good price in Jamaica. So we built the women's component around gardening and nutrition education.

Then came the question: How are we going to implement this? We then set about recruiting and training 34 young women, most of them from the project areas, in a month-long course, depending very much on the good resource people in Jamaica. We also had several home economists who were recruited for us by the American Home Economics Association. We brought in four U.S. experts because if you are not in your own country, you can concentrate and get something accomplished in four weeks. The Jamaicans were so busy we could only entice them out for two or three days apiece. So with a combination of U.S. and Jamaican experts, we carried on a month's training course which gave these young women the rudiments of gardening and a rather superficial education in nutrition. Now a core of them have been hired by the project; there are 15 at work. The training is going on in order to deepen their knowledge in these two areas--one afternoon a week and several longer term courses planned for later on. We are aware that the training is somewhat fragile and that was one of the reasons we wanted to stick to only two activities--gardening and nutrition--at the beginning. Later on, there are other activities outlined in the objectives which may be added.

In our initial assessment, we also were careful to estimate whether we were just laying on a lot of extra work--whether the women would find the Family Food Production Plan a burden. The women already are involved in the cash cropping. About 47 percent go regularly "to the bush," as they put it, to work on the cash crops. Another 21 percent collaborate at least in planting and harvesting. So this means that you have a lot of the women regularly involved in the cash cropping. In that part of Jamaica, the women are certainly busy, but on the other hand they don't have the sort of housekeeping associated with cold climates. Many live in the open, with sleeping sheds and a cooking shed around a central yard--two or three families sometimes sharing a central space.

So we ascertained that if they could get the help of older sons and their menfolk, the gardening would be feasible. The men need to be involved because you can't really put in the garden unless the men say, "All right--you can have a piece of the terraced
land" if it's very hilly land, or unless they say, "You can have this land, I won't need it for bananas." You do have to get the men in on this, too, because otherwise it doesn't work out. They need to do the initial spading sometimes. They also need to understand the nutrition aspects.

In our initial survey, then, we satisfied ourselves than the women really did have time to grow family food without killing themselves. And, in fact, the gardening is beginning by demonstration effect to catch on. We have more clients than we can handle. The women are saying, "When are the young ladies (as they are called in Jamaica) coming to help me start my garden?"

We linked these young women back into the main project in another manner--by not creating a separate home extension service with a vertical chain of command. The project looks something like this: the Project Director is at the top and there are two Assistant Directors, one for each watershed. Then there are 20 subwatershed offices in the two project areas, each with a team consisting of an ag extension person, a soils conservation person, maybe a couple of field assistants, and now these 15 extension officers to work on the women's component. The project could not hire 20 because the Minister of Agriculture didn't have the money. These women have been placed in the subwatershed offices; they report to the Assistant Project Directors, they work in teams with the other project personnel, and they do not report to the women in development/home extension coordinator. She is their trainer, resource person--and I can imagine that she has a good shoulder to cry on, but she's not their supervisor. That was another way we tried to link the women's component into the total range of activities so that what the women were doing would not be an effort off on its own.

Now let me finish up because I think we all would like to have ample time for discussion. I want very quickly to say something about bulding a women's component in an on-going project as strategy. Now if you think about the way assistance agencies usually do projects, the host government first has to make a request, and then there are feasibility and baselines studies. After that, projects are designed and various project papers go through a number of stages involving rewritings and negotiations. Unless and until we have more people who integrate women's role in their heads, so that women are included in the project process all along the line from the very first planning, we will not truly "integrate" women in development. What I am suggesting today is really a kind of patching, if you'll excuse the homely expression, a "repair" of a project where we hope the seams won't show too much. But such a patching could be an important strategy because it is a way to get something going rather quickly.

Some of us are convinced that what we need now are some demonstration effects of women participating in projects and
contributing to them. So often we have an attitude of—"Oh, those poor women. In equity, we have to let them in, include them, even though that will use up project assets. But we have to do it, because after all, the poor women..." What we were trying to emphasize in Jamaica was that the women were going to help the project reach its goals, and that's very important in this strategy. There may be valuable feedback from actually seeing women involved and contributing, feedback to the beginning of this process so that women will gradually be included in the planning and after a while we won't have to do it this way, as a patching, and "add-on."

There are four or five requirements for successful building of women's components or add-ons. First of all, intervention probably has to come in the first year, so there is time to get something going. Projects in AID go through a first-year evaluation, mid-term evaluation and end-of-project evaluation, and it's important to get something going before these things happen. In the first year of a project there is some flexibility, there are funds; as someone has put it, there is often fat in a project, and there is the possibility of getting something going without having to wade through the whole project cycle.

Second, there should be some possibility, it seems to me, of making a significant impact. Since resources are not large, I think we have to choose our projects carefully. By a significant impact, I mean either the possibility of blunting negative features of a project on women, or of women making a positive contribution towards enhancing the project's goals (rather than simply the women will benefit, or the women have needs). Another requirement is the possibility of institutionalizing the gains, for continuity. I don't think we should go in and do things that are not going to be carried on. In the Jamaica project, we were very careful that the young women we trained had the prerequisites for going on in the Ministry of Agriculture's extension service. Now Jamaica is perhaps one of the few places where you could do this--find young women in the rural areas who were high school graduates with the proper school-leaving examinations. We checked this out very carefully. We wanted this to be the first step on their professional career ladder, and we did not want to leave them dangling after the project was over. Continuity also means building on local people. We recruited all the help we could get from the local Jamaican experts and resource people. They were busy, they were strapped, but they were very generous in their help. It's very important not to carry out such a project on one's own, but to link and to lock in with the on-going extension service, health service, local experts in nutrition, gardening, women's income-generating. In the case of Jamaica, the women concerned were very valiantly trying to extend the horizons of their extension service, and for that reason provided another means of institutionalizing the gains.
Fourth, it seems to me that there should be some chance of replicating what we do. I don't think that with the small resources available we ought to do things that aren't demonstration projects. The Jamaica IRDP, in itself, is intended as a model project. So we were sort of building a model within a model. Another requisite: some positive signs of support from project personnel. We went in under the best of all possible conditions: an enthusiastic invitation. Of course, you have to have some kind of approval even to get into a country and a project, but I think we have to check out ahead of time whether there is going to be real collaboration. We had to draw on the resources of the Jamaican project personnel and of the U.S. advisors. We had to make ourselves very visible, deliberately sit around and shoot the breeze, in order to learn what was going on and to establish our own legitimacy. We had to woo them a bit, in the right sense, because we could not have built the women's component without getting them involved in our effort.

I think that our Jamaica project did fulfill these requirements. Now it remains to be seen how it will work out, but in the 11 months which elapsed between the first visit to appraise the situation and the hiring of the core group of workers, what was only a glimmer in our collective minds--the Jamaican minds, too, I should emphasize--became a reality. We began in March, 1979; by the following February 1, there was a corps of young women out on the hillsides implementing a women's component. I think I'll stop here, and I hope someone will ask me during the question period about some of the obstacles and difficulties we faced, and how it was working in an interdisciplinary team with home economists.

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QUESTION: I THINK THAT WHAT I UNDERSTAND FROM WHAT YOU ARE SAYING IS THAT IT IS VERY, VERY IMPORTANT NOT TO GO IN FIGURING WE KNOW WHAT IS WANTED: HERE IT IS. BUT TO INVOLVE THE WOMEN VERY CLOSELY, AND TO OPEN STRONG COMMUNICATION. I HAVE SEEN THIS OPERATE SUCCESSFULLY IN WOMEN'S GROUPS: GIVE THEM A STAKE IN WHAT GOES ON, BUT MOST IMPORTANTLY, TALK TO THEM AND FIND OUT WHAT THEY DO WANT.

The Women in the Development Office with which I was associated made that a kind of condition--to go out to Jamaica without any preconceptions. That was Dr. Peterson's idea, too. We said, "We know the issues, we know the problems in a general way, but we're not going to lay out any kind of program until we have a chance to talk to the women." And we spent two weeks tramping up and down the hillsides, fortunately with the district nurse who knew all the people and how to get us around. What we did
grew out of many conversations with the women in the project area plus many more with Jamaican experts, the coordinator for home extension in Jamaica, several women in the Scientific Research Council who deal with nutrition, women who really know the scene there, such as Evadne Ford who has been working with rural families forever. One day we said to her, "Gee, a lot of what we are doing sounds a lot like what you did years ago. Are we sitting here reinventing the wheel?" And she said, "No--not exactly like what we were doing. Moreover, I'm not going to tell you what we did before. Conditions are different now, we start from what's here, and we don't hearken back to the past too much."

QUESTION: I THINK YOU DEALT WITH A PART OF MY QUESTION, BUT YOU DID ALLUDE TO PERHAPS SOME DIFFERENT PERCEPTIONS THAT MIGHT HAVE EXISTED BETWEEN YOUR GROUP AND THE MORE CONVENTIONAL HOME ECONOMIST WHO, AS I THINK I HEARD, WERE ALREADY ON THE SCENE. WHAT WERE SOME OF THE PROBLEMS, AND HOW DID YOU ACHIEVE BETTER ARTICULATION FROM THOSE GROUPS?

Well, we really were an interdisciplinary team. We had three U.S. home economists who came principally to structure the course, but also had a lot to do with the planning, because of course, you can't plan a curriculum unless you know the objectives of the program for which you're training the people. Plus the help of nutritionists, horticulturalists, rural experts, just the people I've mentioned. And also some of the IRDP personnel; the horticulturalist who had to work with us to figure out the cycle of the vegetables. Another expert who could tell us all about the growing characteristics of vetetables, but unbelievably didn't know the nutritive value of any of them with the exception of some of the beans and peas. And someone to give sessions on pests. We called on very practical and very conceptual people who could guide us. I think the initial uneasiness with some of the home economists had something to do with the fact--can I be a little bit brutal, will you hate me?--or with my perception, in any case, that the traditional home economists, and that included some of those who came out from the U.S., really fought us somewhat on the gardening. They were not used to considering food production as part of "their" concern. They were used to starting with food as a "given"--somehow, God delivers food on the doorstep, and then the demonstrator takes over and talks about nutritious ways to prepare it--a very old-fashioned idea. But I do think that they did come to some understanding and appreciation of the gardening, and they did take it up and incorporate it into the course.

The women in the project areas simply will not put vegetables into their families' diets if they have to walk six or seven miles to the market. They don't have the money anyway, and the
vegetables lose a lot of nutritive value by the time they're eaten. No one has refrigeration, and there is no transportation in much of the project area. You bring from the market, where you go perhaps only two or three times a month, what you can carry back on your head. So it became very evident that there wasn't going to be anything nutritious to put into the pot in the way of vegetables unless the women grew them. So we pushed back the horizons of home economists that way.

The other difficulty we had revolved around who were defined as "household." Now I don't think that any of the American home economists, if you faced them with it, would not have acknowledged the fact of the female-headed household. A lot of the women in the project area and elsewhere in the Caribbean are managing alone, and this is a West Indian syndrome. Of course, I don't mean exclusively West Indian; this is a world-wide trend, but it's particularly marked in the West Indies. The fact is that many of these women are coping very well. I had the chance to be present recently at the launching of a two-year study of Caribbean women being carried out by the Institute of Social and Economic Research in Barbados. When the researchers came to framing hypotheses about West Indian women for that study, it was evident that nothing we have generated internationally to explain women's situation really fits. You can't start talking about oppressed women. West Indian women are poor, they struggle, but they are not oppressed even though they may even collaborate sometimes in maintaining the "formal" superiority of the male. The system may oppress them, but in the household, in the family, they are often in charge. What you have to try to explain is how West Indian women became so autonomous and so good at coping.

However, all through the training course, we were getting an implicit picture of the household from the American home economists as father (present), mother and children, a nice nuclear family. Everything in their teaching came out that way. The U.S. home economists had difficulty in adapting to these young women in the training course who were going to be dealing with families that are structured very differently (in fact, two of the students were single mothers). And so the household--how to conceptualize the household--became very difficult. If you don't have the correct picture in your head--and for the Caribbean, the term "household" simply doesn't net in everyone who is important to family survival--then you are not dealing with reality.

In the West Indies, as many of you know, there may be very crucial family members hundreds of miles away, sustaining a household by their remittances as migrant laborers. There may be households in which a grandmother has been left with young children--five years ago, ten years ago. A typical pattern of migration has been for the family to take the older children and to leave the younger ones behind. There may be completely female
households: a mother, her sister, a couple of older people, the women's children, informal adoptees. But it's very hard to fight the nuclear family stereotype. I used sometimes to "get it" from them--they were always lecturing me. "Elsa, you are talking about the women too much, you separate them out too much, but we deal with families." I could have bought that, if they somehow could have changed the picture of the family in their heads--always, implicitly, it was the father, mother and kids--period.

But please also allow me to emphasize the other side of the picture, to say something about what I think the strengths of home economists are, and how these might be made even more positive assets. Because I think such an exercise might have some curriculum implications. Let us see if we can "build" our ideal home economist for this sort of interdisciplinary work. What might he or she look like? This is very presumptuous of me, but let me have a try.

I think one of the biggest strengths of home economists is the fact that they know how to organize. That is an absolutely essential skill; how to manage. Home economists also know a lot about how adults learn, and this was very evident as our home economists got across the course content to the young women in our training. Home economists know how to teach people how to teach. That was really very illuminating for me. They know a lot about the psychology of learning, and how to take very complex information and break it down so that it is absorbable not only for young workers who are not very knowledgable themselves, but who also are going to have to teach others. That was very scary for our students: "My God, I'm going to have to get across information to those women out on the hillsides!" The home economists were superb in being able to calm fears and to make the idea of teaching others seem a manageable and do-able enterprise.

Home economists also are very good at constructing all kinds of teaching devices--that goes along with their ability in knowing how to teach, and how to teach others how to teach. Sometimes I wished that there were fewer flannel boards and posters around, and more gardening in the curriculum, but the Project Director came down one day to see what our young women had produced, and he went back to the project headquarters declaiming, "I have seen the most beautiful things!" And he really had--what our home economist team got out of those young women was miraculous--my mouth was open at the kinds of things they built which are going to be extremely useful. During the month, they constructed from practically nothing a whole series of teaching devices.

And that leads to something else--they are awfully good at making something out of nothing. I was impressed that our U.S. people, who had had experience in developing countries, insisted that we not take anything with us in the way of materials, that we buy on
the local market everything that our students were going to use. Otherwise, they said, the students will say, "Oh well, we can make these things while the Americans are here, but we'll never be able to carry on afterwards." So we didn't use anything that we didn't get as scrap, or that was not available in that little town. And that meant adapting a lot.

The U.S. extension experts also were very insistent that the teaching and the practice teaching be done on a hillside, not in the home economics center which had a stove, refrigerator and other equipment which women out in the bush will never have. Most of them are cooking on three stones. So I think those are some of the strengths of home economists.

Now what would I add if I could "build" my ideal home economist to invite out again? I think that Jean Kinsey illuminated something for me that I've been struggling with with her idea that there are "inner" and "outer" worlds, and that the home economist is very good at dealing with the former, but doesn't focus on the latter. The world outside somehow doesn't impinge. Perhaps it's because so many come out of the Middle West—perhaps unconsciously there is a hope that the world somehow will get back to the nice kind of world we think we knew: of families intact, collaborating together, and making the home a peaceful, well-managed and attractive refuge.

That kind of mind-set makes it difficult, because the West Indian and Third World realities may never be like that. Home economists can't handle the father in London, who long ago abandoned his family. The implicit picture in their heads is father present, father as principal provider. And that's simply not the case for a lot of the women, in rural Jamaica or anywhere. So I would hope that my ideal home economist would absorb a lot of information about the differences in households, families and kin networks, the different family patterns, the different cultural ways that women use in coping. There are families: people seem to have the urge to form family-like groupings. Even little Colombian street urchins in Bogota form little surrogate families. But it's the different kinds of families and the varied functions of the family that seem very, very hard for home economists to deal with.

I also found a certain reluctance or resistance among home economists to talk about women organizing, to see that women in these countries must (and do) organize survival networks, and that it might be legitimate to encourage groupings which go beyond getting together to watch a cooking demonstration. Women may have to organize in some countries to extract anything from the system. Home economists, I think, somehow would rather see the women at home in their little households—maybe organizing to get together to learn something—but not to pressure the system. There was a
certain fear of that, I think. And that's the outside world
impinging again, the idea of changing structures, which home eco-
nomists prefer to stay away from. The whole income-generating
topic, too, was hard for them. Their world view does not permit
the idea that often women must work outside the home out of
necessity, that many women are sustaining their families economi-
cally. Fathers do that. There also was a rejection, a real
disinterest in the agricultural side (apart from the home
gardening), almost an "I don't want to know that much about
agriculture." I think that's something we are going to have to
remedy in "packaging" the new home economist. She is going to
have to get out and find out what's going on in agriculture. So
many of the women that she's going to have to reach are farmers.
I'm not saying that the male extension agents shouldn't also
reach the women. But in some cultures, it's only possible for
women to teach women. And since so many women are engaged in
agriculture, in cash cropping, the home economist has got to
learn something about agriculture. In the curriculum of the
Jamaica School of Agriculture, the home economists are not
allowed to take any agriculture courses. We somehow have to
start breaking this down in our own universities, and then in the
institutions in the Third World with which we collaborate.

QUESTION: I CAN'T IMAGINE THAT IF YOU HAD THE PICK OF THE CROP
OF ALL THE PEOPLE IN HOME ECONOMICS IN THE UNITED
STATES, YOU SHOULD END UP WITH SUCH PROVINCIAL AND
SEEMINGLY NOT INVOLVED PEOPLE, AND THE OTHER THING
THAT IS PART OF THAT IS WE'RE DEALING RIGHT NOW WITH
THE "IDEAL" HOME ECONOMIST. WHO IS THAT, WHAT IS
THAT, WHO IS HE?

Yes, I got your point. Just as I don't want you to think that
I'm advocating replicating this project in exactly the form
described here, certainly no one should think that I'm genera-
lizing about all home economists. I think that I appreciate the
strong points of those with whom I worked. I will not soften
what I have said too much, because I think it's good if home eco-
nomists all are challenged. They have a lot to give in the Third
World. People have heard about home economics, and when they
think of women, they often think, for better or worse, of a home
economics program. There may be a lot of demand for technical
assistance in setting up women's programs, and home economists
have something to contribute. Internationally, home economists
have been at work for a long time; they've built up a body of
accepted knowledge, they're "legitimate." They are going to be
called upon, and I'm really only trying to say that what they
have to give can be better, without detracting from the fact that
there is a legitimacy about the profession and a body of knowledge
that everybody respects, all over the world.
Response:

Terry Roe

Time precludes adequately addressing the issues presented. Hence, I shall briefly mention two problems that I feel are fundamental to approaching women in development.

In order to affect the welfare of women as allocators of resources, women as low income segments of the population and/or women as comprising a segment of the population who will suffer the greatest loss with the introduction of new infrastructures and technology, LDC authorities at the policy decision-making and planning levels must recognize and understand the problem. The objectives of national and sectorial development plans rarely recognize this specific segment of the population, i.e. women. The objectives of these plans are often stated in terms of economic growth, food self-sufficiency, the expansion of infrastructure, etc. Perhaps, a more significant role of women in the political process may lead to planning objectives more consistent with their needs. There are, however, other problems that most LDC planning processes are likely to face in addressing the needs of women in development. The policy instruments at the disposal of policy decision making authorities seldom permit the targeting of programs and projects to this segment of the population. Furthermore, the implementation of programs and projects is often easier to carry out when they involve infrastructure (such as roads, canals) or when they are designed to focus on a limited number of, for example, large farms where literacy is relatively high and where more adequate endowments of resources exist. The problem of women in development is that they comprise a large diverse group, making the program and project implementation problem severe and one which will very likely overtax the program and project implementation capabilities of most LDC's. I would like to hear our panelists comment on what institutional and other changes may need to occur at the policy decision making and implementation levels in LDC's if LDC authorities are to more adequately design and implement programs and projects which address the role of women and their problems in the development process.

Another related problem is the relative weight policy decision-making authorities should place on, for example, growth versus the distribution of income to
this segment of the population. In the case of Haiti, where average annual caloric intake of the rural population averages somewhere between 1,200 and 1,700 calories, IBRD loans and grants for road construction has clearly led to the displacement of the "madam sara" as the middle person in the marketing of agricultural products and market arbitrage. She has been displaced by men who, having access to capital, use trucks in the performance of the marketing services historically performed by women. On the one hand, new and improved roads have been an inducement to growth in a very poor and over populated country, while on the other, roads appear to have led to the displacement of labor, namely women. In the case of countries such as Haiti, should the first priority be given to growth and the second to these types of externalities? I will appreciate any comment our panelists might have on how we proceed to deal with tradeoffs of this nature.

Finally, I wish to emphasize the need for modifications to and adaptations of the classical paradigms employed in economics to more adequately conceptualize the decision making structure of the firm-household—in which women commonly play a dual role. While the contributions of Evenson and others have expanded our conceptual capability and provided important insights into the economics of the firm-household, the empirical results typically explain a small proportion of the total variation in firm-household choice variables. In order to better define problems confronting women in the development process, to better analyze and prescribe more appropriate courses of action, greater requirements will be placed on our skills as scientists and more cross discipline considerations will need to be taken into account if we are to understand the dual role of women in firm-household decision making processes. I think that these are important issues to address, and I feel that they are in urgent need of being addressed.
Response:

Jean Kinsey

First of all I would like to thank and commend all our speakers this morning for some very stimulating thoughts along the lines of the problems of women and how they are affected by development activities in all countries. I think one of the things we are concerned with this morning is the extent to which we can work in an interdisciplinary fashion to help solve development problems and specifically the problems of women in developing countries.

One of the questions which has come up within the last two or three days is, "What is home economics all about these days; how are they thinking, and what are they doing?" Having worked on both sides of the fence, so to speak, in both home economics and economics, I have given this some thought, not just in connection with this series of seminars. It seems to me that one of the major differences between home economics and other social sciences, specifically economics, is the direction in which they work and the parameters of society they seek to influence. It seems to me that home economics, at least in the past, (and there are certainly going to be major exceptions to this, and some of you are welcome to take them) have looked primarily at the household or the family and asked the question, "How can we best help the members of this household to improve their levels of satisfaction, their levels of utility, given the parameters of a world in which they exist; given the legal structure, given the political structure, given the economic structure in which this household exists?" Home economists have focused primarily on the internal role of the family members and tried to help them to maximize their utility or their happiness in that situation. In contrast to that, other social sciences have asked questions like, "How can we change the parameters that constrain the household? How can we move the political system in a different direction? How can we change the institutions that impinge on the household?" Or, alternatively, "How can we devise incentives that will change the behavior of individuals and households such that ultimately the political or institutional system will change?" From where I sit, it seems that some of the major differences between the way home economists and economists have looked at their role in helping individuals and families lie in their treatment of social and political parameters.
Now, if there is any validity at all to this line of thinking, this also defines the two horns of the dilemma that we've got in the developing countries in terms of how are we best going to help women. It is possible that from the point of view of women who are in those developing countries, we can best facilitate a rise in their utility level through domestic kinds of education, and domestic kinds of programs; by programs which allow them to give up arduous labor in the market place, and allow them the leisure or the luxury of being in the household. (I probably should put a footnote here that some of these comments don't necessarily reflect the view of the speaker.) If we can do that it may, in the short run, do more to raise those women's levels of utility than if we go in with another approach designed to change the political system. Programs which change the legal or political system, and give more power to women than they had before, will in the short run probably cause some very big dislocations. However, in the long run women may be better off. And so it seems to me, in some cultures at least, what we may be looking at is a tradeoff between facilitating a rise in short run utility, or improving the overall stature and status of women in the economy and raising levels of satisfaction over the long run.

Let's push this idea of the long and short run effect a little bit further. If we look far enough down the road in the long run, we will eventually have to give in to a kind of project/program/education or whatever tag you want to use that is truly asexual. The question I have in mind is, "Why is it that we seem to be concerned about increasing women's education in terms of further participation in the labor force, while I have not heard anyone say that we want to increase men's education in terms of helping them to be educators and socializers of their children, or to become more efficient in household production?"

It seems to me that ultimately where we want to go (and now I guess I am reflecting the views of the speaker) is where both men and women in these societies and in our own for that matter, have equal choices and are free to make these choices. And if we end up with women in the labor force and men in the home, or both of them in each half of the time, that's okay. The important thing is that they have that choice and they each have equal information about what the ramifications of those choices are. I think that if we continue in that line of thinking that we are not only going to provide women with "domestic education" but also technical and vocational skills and political education, we are fostering an image which is coming up in our own country; that is the image of the super-woman. The woman is going to be able to do all of these things and ought to do all of these things, whereas men don't have to do all of these things. I think that is something that we need to at least be aware of.

I have just one other thing that I would like to comment on in terms of what has already been said here this morning, more in
the way of emphasis: in helping women we are not just trying to
give them ways to fill their time. I think that's extremely
important. I think it's extremely important that whatever we do,
we do not strip women of whatever status or power or control they
have traditionally had in their society. Psychological studies
about the way people behave and what makes them more satisfied
with their life style indicate that one major variable is the
ability to have control over their own destiny. I suggest that
no matter what kind of program, project or education is insti-
tuted, we ensure that all people, but particularly women, maintain
or increase their sense of control over their own destiny in the
culture they are in.
Response:

Geraldine Gage

In a book I am reading on development in Southeast Asia there is a phrase that sticks in my mind. The phrase is, "If you're standing in water up to your nose, a small ripple will drown you." The author used the phrase to suggest why even beneficial changes may be resisted by those involved.

Any change, of course, is likely to produce ripples. Changes, even those with clearly discernable outcomes, may seem very risky to all of those people in water up to their noses.

Hanna Papanek's comment about the status of women throughout the developing world has to cause real concern. She points out that the persons most likely to be standing in dangerous waters are women, that women are the least able to control changes to their advantage, that the economic situation for most women is so precarious they are the most likely to be hurt by the ripples of change. It is an illusion to think only targeted change will occur. In light of what we know about social and economic relations, it seems quite clear that if any aspect of a culture is changed, every other aspect of it may be changed also, and somewhere in the chain of events there will be costs borne by women.

A great deal of what I have heard at this seminar implies that we don't know how planned change will affect other parts of an integrated socio-economic system. Surely greater research effort ought to be directed toward identifying both simultaneous and long-range effects of development.

Even if we had full knowledge about the first and second order effects of change, the question about who should make the decision to initiate change remains. Many of the comments made here this morning reveal that we hold quite divergent views about what changes are desirable. Much of the difference may be related to second order effects. For example, everyone would agree that introducing technological change to increase food supplies and thereby improve nutrition would be desirable. But if this technological change has the effect of weakening a family system that has structured the life of the people for 200 years, then it may be harder for us to agree.
Making decisions under conditions of risk and uncertainty is difficult. Making decisions about change also involves an ethical dimension that I wish we might have addressed more comprehensively.

My other comments on the papers deal with home economics, or specifically, with home economists and what they are really like. Home economists are a differentiated group representing a variety of disciplines. There may be some who feel it's important to iron dishtowels but the characteristic of home economists that stands out is that they are holistic, that is they view people and settings as mutually interacting. Home economists are, by training, ecologically oriented and aware of the effect of change on social and biological systems. A trained home economist would be invaluable in situations demanding sensitivity to the rippling effects of change.

I am interested in the experience reported about colleagues in the field who were unable to recognize family units because they did not display the patterns typical of middle-class Americans, i.e., husband, wife and their children. On the contrary, most home economists recognize families on the basis of what they do: for example, the exchange of support. They know that families exist regardless of where family members are, and that they matter. Even if the man has gone to London to work or is up in the country with the cattle and won't be home for three months, there is a family and it must be considered. However they may be arranged in time and space, family members are important with power and influence.

Lastly, I would like to say something about the closet research of home economists. In particular, I would like to call on something that I know something about, and that is "time study." Home economists have studied work done at home, in households, in families, whatever you want to call it, for a number of years. These studies have in fact become one of the critical tools in changing public policy as it relates to women. The upshot by the way of what these home economists have been hammering away at for 30 or 40 years is that what Hanna is suggesting is happening, these activities are getting into the GNP. There has now opened up in the Department of Commerce, an Office of Economic Studies which is looking at the methodology developed by home economists to assess use of time and patterns of time use with the result that within ten years, collecting data on what families are doing with their time will be a regular part of the GNP. There are some home economists who are very interested in "internal" family activity. There are some home economists however who are looking also at the constraints on families and are working at changing some of the constraints in society that impinge on families. It seems to me home economists are one of the more ecologically multi-variantly oriented people we have, and I would think in any situation where every change is related to every other change, home economists would be a good group to have around.
PART III:
New Directions in Teaching, Research, and In-Country Projects

Presenters: Francille Firebaugh
Associate Dean, College of
Agriculture and Home Economics
Director, School of Home Economics
Ohio State University
Gillian Hart
Department of Economics
Boston University
Elinor Barber
Ford Foundation
New York

Response: Margaret Doyle
Professor Emeritus, Food Science and Nutrition
University of Minnesota
Comment:

Though each of the three parts of this seminar had a different focus as reflected in their titles, there was substantial attention paid in each to each of the foci. Thus it was that all three presenters in the second session had much to say about "New Directions," the topic of the third and last of the sessions in the seminar.

Gloria Scott, in the question period in the second session, emphasized the need for interdisciplinary communication and breaking away from rigid, divisionary disciplinary barriers to work and research that must of necessity cross arbitrary, culture-bound disciplines: the need to venture out of our boxes and into a broader arena--using, adapting and interpreting our disciplines, not abandoning them.

Hanna Papanek expressed substantial concern for emphasis, in Universities particularly, on the data base on which teaching, research, and technical assistance programs involving women in development rest. Because the base is so slim, faculty and students will have to struggle with "relating to the real world without ready-made models and ready-made data banks" and will have to generate their own; university administrators must give direction and assistance to this process.

This concern ties closely to something heard throughout the seminar: the need for interdisciplinary teaching, research, and in-country projects in any program designed to improve food production, distribution, and consumption for the poorest of the poor. Here, too, University administrators and colleagues must be involved if it is to happen. They must support interdisciplinary approaches through value assigned to such work, and this support must be reflected in salaries and attention paid for writing and research from such a perspective.

The papers in the last of the sessions in this three-part seminar considered 1) specific directions for home economists in work/research in development, 2) an example of research to produce data on which models such as the new home economics must rely, 3) a not-frequent-enough emphasis on style and methods for communicating knowledge directly to the users/adapters of it.

Francille Firebaugh suggests eight specific actions or approaches home economics can take (must take?) for more
effective work or research in Third World Countries. Central to her point of view is the family and closer ties with agriculture: "a focus at the interface of agriculture production and household production." Interspersed also are directions for administrators of academic home economics programs to consider.

Gillian Hart draws on her research in Java in her discussion of models of analysis provided by the new home economics and the "theory of peasant economy" associated with A. V. Chayanov in The Theory of Peasant Economy. Essentially, based on her findings, she finds both models wanting which leads to comments about what she would do differently now in her research. These comments become suggestions to proponents of either model. This is not to imply that the models are without value and use in analyzing household behavior; it just may be that a broader context for that analysis may have to be developed.

Elinor Barber looks at pedagogy in transmitting information and insights to women, particularly in developing countries. Though she did not relate her pedagogical concerns to the new home economics, any model that assumes a fair degree of objectivity and autonomy on the part of those involved must assume something about the knowledge base from which such persons operate. Thus, the question of how and what information is transmitted becomes of critical importance if indeed there is active concern for (if not an assumption of the existence of) rational behavior in decision making and resulting behavior.

The discussants reacted out of their long and rich experiences in development. Themes becoming increasingly clear and compelling were heard again, in this case, in the context of nutrition and community development with emphasis on broad, interdisciplinary perspectives in work as well as in University teaching and research.

MBS
New Directions: Teaching, Research and In-Country Projects

Francille M. Firebaugh

1) Carefully consider the interrelationships of the family, other systems, and the environment of the systems.

"Past programs and policies for women have recognized, indeed concentrated on, their roles as reproducers to the exclusion of the broader productive roles... Such programs have involved mainly welfare services (health, family planning) and instruction in nutrition, child care, and home economics (in the traditional sense of flower-arranging and cake-baking, taught even in the countries where there are few flowers and no ovens." (Germain: 4) How could such a statement be made? Probably on the basis of actually seeing it--much to my dismay.

Consideration of the many systems in which families and family members operate is essential to teaching, research, extension, or in-country projects. Many solutions which have been proposed and even tried have viewed only one aspect of a system without examining interrelationships. That's the heart of the complaint: projects have been undertaken without considering their impact on women, or on men and other family members, or on villages. From the Tucson conference, "It is through the analysis of the entire system, i.e., not piecemeal analysis, that methods for improvement can best be determined."

Viewing the family as a system can help one deal with market and non-market interrelationships. One proposal suggests a "credit policy which embraces both marketed and unmarketed family production. Thus credit might be withheld from commercial crop production until credit for a solar energy cooker has been accepted. In this way, the whole family would be regarded as the basic 'accounting unit' in which profits on commercial crops are used to subsidize the raising of labor productivity in unremunerated lines of family production." (Palmer: 106)

What does home economics have to offer? A view of the family system and methodologies for measurement of non-market productive activities. (The latter is not developed in this paper.)

2) Strengthen our relationships with agriculture

"Rural women's access to channels of information and to training is not the same as men's. Although administrative services are ostensibly provided to farmers without regard to their sex, in practice,... women have less access to male-staffed extension systems or to extension systems which focus on cash crops rather than food crops." (Chaney, Simmons, Staudt: 121, p. 120) "... the systematic neglect of one group at the expense of others
results in lower productivity, whether it be among nations, ethnic and racial groups, or women and men."

It seems to me that I have heard for at least 15 years, that women in developing countries do not receive training in agriculture production methods, storage facilities, or marketing. And writers today continue the hue and cry.

Many in home economics in the U.S. have struggled for years to break away from agriculture connections (except for the extension and experiment station relationship). Because we have felt the domination of agriculture, we have not voluntarily sought academic relationships with agriculture. Reaching women has been a strength of home economics, but when we are trying to assist with the full scope of development, we must join forces with agriculture in a full partnership to seek solutions or approaches.

3) Consider the strengths and weaknesses of women-specific projects

Considerable differences exist in what "should" be done in economic development with particular concern for women. Just as is true with women's studies, there are some who do not accept the need for women-specific studies and projects. I am inclined to believe that women-specific efforts may well be necessary to help bring about the economic development most of us can agree is sorely needed.

It has been suggested that one myth related to development is "Take care of development and women's roles and status will automatically be improved." (Germain: 11) Germain notes: "History suggests that, in the course of development under various socio-political systems, unless deliberate efforts are made to the contrary, men's alternatives expand and women's alternatives remain the same or decrease as the modern sector replaces their traditional roles (Germain: 11)

Arvonne Fraser has argued for a two tiered system which would include women-specific projects and the inclusion of women in "all projects." Michigan State's WID efforts include monitoring projects for their impact on women when appropriate.

4) "The Family is an important income-earning and consuming decision making unit in all developing country societies, and it should be a focal point for efforts to put adequate food within reach of all people." (Tucson Conference)

The centrality of the family is at the "heart" of home economics. Recognizing, researching, and developing in-country projects with a strong family emphasis is a contribution home economics should be making.
With a systems view, it is important to recognize that change in one part of the system will bring change in another part. We need an awareness of the costs and benefits of change related to families; we must make the effort to work with the in-country personnel to try to develop cost/benefit models.

5) Focus on pressing needs that we can help to solve.

The most pressing need in an institution of higher education may be a research base for instruction, an improved library, assistance in identifying what the real problems are. I had to resist the request to write an instruction booklet for an Indian made vacuum cleaner--the need seemed pressing to the teacher of home equipment, but in the scheme of India, and home science in India, the need somehow did not stack up as a first priority.

The most pressing need in research may be for equipment which is in working order--or transportation to a village to collect data. But again we must resist the temptation to accomplish only the less complex--we must ask ourselves and our colleagues--why do this research? What will happen to the results of the research? Can anyone else use the methodologies to be developed for the research? The very questions we raise in the U.S. must be raised even more earnestly in settings with limited resources. The conduct of research in other countries can be beneficial to the host country and to the U.S. professionals. Many countries and government agencies are not inherently interested in "cross-cultural" research, and indeed, often the topic is not a pressing need.

The delineation of pressing needs depends on the vantage point--the planners, university administrators, teachers, and village men.

Only through careful examination of the purposes and expected accomplishments of teaching and research can we avoid the charge of dealing with the unnecessary, or worse still the inappropriate. We must also examine whether or not home economics and other fields are responding to the pressing needs of a few or of many.

Many of you have read Perdita Huston's book, Third World Women Speak Out. An analysis of the content of the interviews she conducted isolated several themes and subthemes expressed by the 123 village women.

Economic problems: lack of cash
    household problems (men spend income on themselves; strains associated with double roles of working both within and outside the household)
lack of resources
unemployment
sex discrimination
lack of food, clothing and shelter

Other themes were family relations, education, health nutrition and family planning, perceptions, aspirations. (Huston: 194)

It seems to me that home economics, especially in conjunction with agricultural economics, has much to offer in solving economic problems as well as in solving other familiar problems. The interface of the household and work outside the home must be carefully researched and action programs must be designed long before research is completed.

In the same analysis, women suggested a number of solutions to their problems and to those of others: The women mentioned work first--some kind of work that will bring in cash; education; family planning; improved distribution of household resources; and a few (10 or less) mentioned control over land and capital, organization, and technology. (Huston: 194).

Work for cash often means work away from the household unit, and distance from household responsibilities means that someone else must assume some of the responsibilities--either a member of the family or extended family--or a facility for child care must be developed, or the woman must take the child to work. Other quality of life aspects, including nutritional states of children, may change with employment outside the home.

6) Carefully consider the level of technology which is appropriate for households and development in general.

Home economics can assist in analysis of technological changes. We no longer have the attitude that the machine is the answer to all our needs, but alternatives to exceedingly hard work, especially that of women, need attention.

In the U.S. we have certainly provided no model of needed and appropriate technology in households. We must take new directions and carefully consider technology which is appropriate to the household. The level of technology required to ease the responsibilities of women in households, and thus allow greater involvement in the labor force, needs attention.

Many of you have followed the work of Ruth Dixon and have considered some of her approaches for creating employment for women in the rural sector. She notes, among other things, determining needs for technology to reduce domestic burdens, which makes me think immediately of the interface of employment outside the home and the responsibilities in the home. Home economics should be
making a contribution at this interface. For a long time we have focussed on the home and families, and we have already extended our concerns to systems with which the family interrelates.

7) Institution building.

We are probably most at home with institution building and conceptually that is one of our areas of greatest contributions. If we can assist in the development of an educational system which contributes to building knowledge and to solving the practical, applied problems of the country, that is an accomplishment that can have lasting benefits.

When graduate programs accommodate the breadth and depth of the academic needs of international students, I believe we make major contributions to higher education in other countries. We do have the continual problem of students not wanting to return to their country, but I believe we will see less of that as countries are able to provide an acceptable level of living for the faculty.

One of the greatest stresses I find in working with international students is not having funding for students to collect data within their country. The myriad studies of Indians residing in three metropolitan areas in Ohio or attitudes toward the sex roles of Nigerians living in a college town are interesting, and the experience in research methodologies may be great but the critical facts of the real world "back home" can never be captured through using data already collected or through collecting data from a limited number of foreign nationals living conveniently nearby. If I had my wish for a new direction which has been, incidentally, discussed for years, the student and the student's advisor would go to the country for data collection.

How great is the interest in international concerns in home economics--among graduate students? The titles of theses and dissertations in home economics for 1975-77 included 3% related to international or cultural concerns (160 out of 4,790). Graduate and undergraduate students from the U.S. who come with an interest in international work aside from being encouraged to consider the Peace Corps, find us to be relatively uncreative in seeking support or assistance for them to travel to another country. We, just as you, offer international tours which are the delight of the participants but which are at a high cost. Perhaps we can be more imaginative.

Our international graduates of 5, 10, 15 years ago represent important contacts and an important focus for updating. Many of the graduates do not represent the new breed of home economists--many are, in fact, woefully out of touch with changes and with the concept of meshing programs with needs. Others are keenly in tune with urgent needs in their setting. I think we should encourage contacts through visiting scholar programs.
My visits and my consulting in India—a return after 10 years—revealed some areas of real concern to me. I found an even greater orientation of the home science programs as development of marriage credentials. A few lower income students sought employment in villages, but many continued to stay at home until marriage and some taught at universities before marriage.

There were exceptions—where village living was required—a special project, etc., but the larger problem remains. It is partially a function of the society but it is a changing society; we need to encourage relationships with other professionals, help sharpen the curriculum, and focus on extending knowledge to others.

We have contributions to make in relation to our textbooks, which are translated into other languages without alteration. We can either include country references or we can work with professionals to produce texts usable in particular countries.

8) Develop plans for international participation which can lead to mutually satisfying outcomes for professionals.

The frustration of working in third world countries can be rather great with unrealistic expectations and with the delays that are bound to occur. For the relatively young professional, the international experience in teaching, research, or extension should include some possibility for publication other than a project report. We are anxious for our new directions to benefit from experienced professionals, but also anxious to have the excitement of young professionals. Some working relationships will have to be established which allow a young person to obtain some experience and yet not jeopardize promotion and tenure.
References


Peasant Decision-Making: An Example of Limitations of Household-Level Analysis

Gillian Hart

Over the past 15 years or so economists have increasingly come to realize that many of the decisions conventionally analyzed in terms of individual behavior are far more usefully dealt with in the context of the household. Prime among these is the allocation of time, and Becker's (1965) paper on this topic is generally attributed with bringing the household to the forefront of analysis. The major contribution of this relatively new emphasis on the household has been the explicit recognition of the role of women and children in the domestic economy, which in turn has opened up important avenues of research particularly in the context of peasant societies. In addition to reproductive behavior, education and directly welfare-related issues such as nutrition and health, household studies have a direct bearing on many of the topics which have generally been dealt with in the narrow framework of production theory. Compelling arguments can be put forth as to why questions like patterns of adoption of high yielding varieties, farm households' ability to bear risk, choice of cropping patterns, marketed surplus and so forth are most usefully analyzed within the framework of the domestic economy as a whole.

While much remains to be done, the burgeoning interest in household studies has stimulated a fair amount of recent empirical work by both economists and anthropologists. At this point there seems to be an urgent need for a thorough evaluation and assessment of what has been learned and the potentially most fruitful directions of future research. This paper has no such ambitions. Rather what I plan to do is focus on a particular issue which arose in the course of my own research in Java and which I think has some larger implications--the question of the relationship of the household to the environment within which it operates.

The main point which I wish to stress is the importance of an explicit understanding of the structural relations which bind peasant households to one another and to the larger systems. In order to place the argument in context, the following section contains a brief review of the general characteristics of the household decision models and the particular aspect on which I plan to focus. In Section 2 these points are illustrated with examples from my Javanese study, and in the final section I outline briefly how and why I would do things differently if I were to repeat the study.

The essence of the economic theory of household decision-making is that the household is viewed as maximizing a joint utility function subject to a set of constraints. Within this general framework there are two broad approaches: (a) the New Household Economics (NHE) model discussed by Bob Evenson, and (b) a model which I term the "theory of peasant economy" in recognition of its origins in Chayanov's (1966, orig. 1923) analysis of the economics of Russian peasantry in the early 20th century. While emerging from different contexts and concerns, the two approaches have converged in closely analogous models of constrained utility maximization (Nakajima, 1969, and Gronau, 1976). Becker's "Theory of the Allocation of Time" which formed the basis of the New Household Economics has been criticized by Gronau on the grounds that "it is of little help where it is most needed: in the analysis of time budget data" (Gronau, 1976: 2). The model which Gronau offers in its place is substantively similar to Nakajima's adaptation of the Chayanov model: both set out to explain the allocation of time between leisure, market labor and "home production" (Gronau) or work on the family farm (Nakajima), and to predict how the household is likely to respond to changes in various constraints.

There are two key assumptions which are common to both formulations. First is that the household maximizes a joint utility function, which presumes in effect that each household member attaches the same weight to each family member's happiness as to his or her own and makes decisions accordingly, or that there is a single household decision-maker who internalizes the welfare of each person. The theory does not require that the household be actually a utopian commune or a benevolent dictatorship, but only that it behave "as if" it maximizes a group function. The work of several anthropologists has, however, shown that even this weak assumption may mask some of the most interesting and important characteristics of households. White (1976) and Cain (1979) for instance have drawn attention to severe intra-household conflicts between sexes and generations which are central to understanding various aspects of behavior as well as to policy issues. The whole question of household structures which are more complex than the nuclear family also requires attention. An interesting example of this is provided by Guyer's (1980) study in which she shows that in Cameroun, as well as in a number of other African societies, women often maintain separate budgets and that viewing the household as a single locus of decision-making can be quite misleading, particularly in the interpretation of macro-level consumption data.

The second set of assumptions, and that on which I plan to concentrate, has to do with the nature of constraints under which
household members operate. A central feature of both the New Household Economics and the Peasant Economy models is the assumption that structural constraints and hence choices can be adequately represented by competitively determined wages and prices. The argument which I wish to put forward is that in order to analyze household decision-making, it is necessary first to understand explicitly the nature of the institutional structures within which households operate and which determine the options available to them. In support of this argument, I shall show in the following section how differential access to unskilled labor opportunities in the village where I conducted research is not simply a matter of labor market imperfections, but rather a reflection of the way in which underlying relations of production and power relations govern the terms on which different rural households interact with one another and with the larger system.

Allocative Behavior and Structural Constraints: An Illustration from Rural Java.

One of the main findings of my study of household labor allocation in Sukodono, a densely-populated rice-cultivating village in Central Java, is that the household's control over the means of production is the primary determinant of the activities in which its members engage and the levels of welfare which they are able to attain. According to the standard models of household behavior, assets exert an income effect on allocative behavior—in other words, the income flowing from productive assets influences the labor-leisure trade-off. In Sukodono I found that assets shape allocative behavior in two other important ways. First, the household's landowning status defines its relative position in the village power structure, the nature of relations with other households and hence the choices or opportunities which are potentially available. Second, the household's asset holdings influence its risk-taking capacity; this in turn determines which of the options household members are actually able to take advantage of.

The small average size of holdings in Java masks what is in effect a highly uneven distribution of land. Access to land in Sukodono is probably fairly typical of that in densely-populated lowland rice cultivating villages. Those with more than one hectare—a very large farm in the context of Java—constitute 9 percent of the population and control 60 percent of the village land, while at the other extreme a large proportion of households are either landless or near-landless. The criteria used to distinguish among large landowners, small landowners and the landless are the extent to which the household's control over land (which takes account of renting and sharecropping) enables it to cover basic needs. A large landowning household is defined as one which can meet all basic needs from its own production according to the Indonesian standard of 240 kg of milled rice equivalent per
capita (or 300 kg per consumer unit). Small landowners are those who can at least meet staple food needs (120 kg per capita or 150 kg per consumer unit), whereas a landless household is one which cannot even meet basic food needs. According to these criteria, large-landowners, small-landowners and the landless constitute respectively 23 percent, 34 percent and 43 percent of the population.

The time budget data revealed a number of clear differences in labor allocation behavior among the three landowning groups. First is a strong inverse relationship between landholding status and the duration of work in income-generating activities, particularly in the case of women and children. On average, landless women spent 1535 hours per year in various types of income earning activities, as opposed to 800 hours for the average woman from a large-landowning household; comparative figures for girls in the 10 to 15 year age group are 1380 and 120. Small landowners occupy an intermediate position. Conversely, large-landowning women spent substantially more time in housework than either of the other two groups. In very poor households, girls (and occasionally boys) between the ages of 5 and 9 often cared for younger siblings in order to release the mother to participate in income-earning work. The nature of income-generating activities also varied systematically across asset classes; as one would expect, the proportion of income-earning time devoted to off-farm work increased steadily as the household's asset base decreased. In the instances in which large-landowning men (and occasionally women) were involved in off-farm income generation, these tended to be lucrative trading and brokerage activities. In contrast, both men and women from small-landowning and landless households were heavily involved in wage labor; as will be shown below, however, there were important differences in modes of adaptation to seasonal changes in employment and wage rates. Before going on to examine this, it is important to focus briefly on the nature of relations among the activities of different household members. In the large-landowning class there is a clear division of labor by sex and also by age; in contrast, the type of strategies adopted by the landless revealed a close degree of interdependence among the activities of different household members with strong indications that landless households decided on the activities of individual men, women and children on the basis of opportunities available to the household as a whole (Hart, 1978).

The ways in which men and women from small-landowning and landless households adapted to seasonality is indicative of important differences in allocative strategies. At the time this study was conducted, virtually all farmers were cultivating traditional rice varieties after having suffered pest attacks on high yielding varieties. Irrigation allowed for two rice crops a year, and in both the wet and dry seasons farmers were planting
more or less simultaneously. Consequently there were strong variations over the course of the rice cycle in labor demand and wage rates, in the village, particularly in the case of women. In the peak periods of rice cultivation small-landowning and landless women were actively engaged in wage labor (transplanting and weeding) in the village. When wage rates and work opportunities declined sharply in the slack period, small-landowning women tended to withdraw from the labor force; in contrast, both women and girls from landless households maintained (and in some cases even increased) their work duration by going outside the village to seek work in sugar cane fields. Not only were wages extremely low—in the vicinity of 3¢ per hour—but these jobs involved spending several hours a day walking to and from the sugar cane fields. In general the wage differentials between small landowning and landless women were very small; the major exception to this was rice harvesting, the returns to which are governed by class relations. Similar evidence may be found in the study by Stoler (1977).

The markets for male labor operated rather differently. As in the case of women, peak wage differentials for small landowners and the landless were minimal. In the slack period, however, men from both asset classes remained in the labor force but at sharply different wage rates; on average, landless men were earning in the vicinity of 30 to 40 percent less than small landowners.* What essentially was happening was that small-landowning men were able to continue working within the village (performing miscellaneous rice cultivating tasks as well as working on the fishponds of large landowners) while, as in the case of women, landless men were having to seek work outside the village.

These patterns are attributable in part to the almost complete dependence of landless households on the market for food grains. Given that rice prices vary inversely with wage rates, landless households are in a particularly vulnerable position. Especially in the case of women, the willingness to undertake very low wage but long duration jobs in the off-season is a reflection of the household's need to ensure a constant, albeit low, flow of income into the household. On the other hand, the security provided to the small-landowning household of being able to meet a substantial proportion of rice needs from its own production enabled women to withdraw from the labor force when wage rates and working conditions deteriorated.

*In the slack period of the wet season cropping cycle differentials in returns to labor were somewhat smaller as there were a number of opportunities for ocean fishing on an individual basis; for a detailed discussion see Hart (1978).
The risk phenomenon is, however, only part of the story. It does not, for instance, explain the wage differentials which are at first sight strongly at odds with what one would expect. More specifically, why is it that large landowners were prepared to pay relatively high wage rates to small landowning men in the slack periods, and conversely why did the landless not compete the wage rate within the village down to the level which they were prepared to accept in outside work? The same question also applies to differentials in returns to harvesting. It is precisely in addressing these questions that taking explicit account of structural relations among households becomes critical. What had been happening in Sukodono was that a large proportion of small landowning households had fallen into debt and had pawned their land to one or other of the largest landowners in the village in return for a lump sum payment. The small landowning household was then sharecropping on its own land for a third of the yield and covering all costs production. While losing a substantial degree of control over land, they were provided with some security in the form of guaranteed employment on the land or fishpond of the large landowner. Lacking the assets to enable them to go into debt, landless households were by definition excluded from these types of relationships.

Such intricate contractual arrangements are in part a reflection of interlinkages among land, labor and credit relations, a phenomenon which is increasingly being recognized as having considerable importance in peasant economies. But the forces which provide small landowning households with preferential access to wage labor are more pervasive and deeply embedded within the large political-economic system. In particular, the political and administrative changes brought about by the New Order regime in Indonesia have had an important impact on the hiring behavior of large landowners. For instance, in contrast to the situation in the Sukarno period, large landowners (many of whom are village government officials) no longer need maintain a large client following within the village, for their position depends rather on establishing relationships with supravillage authorities (Sajogyo, 1974; White, 1976). At the same time, a number of non-agricultural opportunities (rice hullers, trading, and so forth) have opened up for those with the appropriate resources. The lucrative nature of these political and economic activities raises the opportunity cost of large landowners' time, and makes it imperative to have a reliable labor force which can be easily controlled and does not require constant supervision. At the same time, the militarization of the bureaucracy together with village-level depoliticization have diverted the possible threat of organized reaction from below to the withdrawal of patronage. This in turn has facilitated large landowners' moves in the direction of a smaller and more stable labor force which is evident from both macrolevel data and a number of micro studies. *

*This evidence is documented in detail in Hart (forthcoming).
While the behavior of different groups in Sukodono and the associated institutional structures have been shaped by particular local conditions, they are a manifestation of institutional changes taking place all over Java which are tending to exclude large numbers of people from agriculture. The question of the interaction between technological and institutional change lies beyond the scope of this paper, although I would like to mention two points. First, the fragility of the high yielding rice varieties and the greater degree of care which they require raise the costs of labor supervision and reinforce the need for a smaller, more dependable labor force mentioned above. Second, I would hypothesize that changes in the seasonal distribution of labor demand brought about by high yielding varieties probably contribute in important ways to institutional change. For instance, at the time when I conducted the survey in Sukodono the marked pattern of seasonality associated with traditional varieties operated to the benefit of the landless in that they were assured of relatively high wage jobs in the peak season. A change to HYV's with shorter growing season requirements is likely to lead to staggered planting, thus generating a far more even profile of labor demand in the village as a whole. Given both the responsiveness of small landowners to job opportunities inside the village, and the system of labor relations which provides this class with preferential work access, it is possible that a widespread shift to HYV's could result in fewer jobs for the landless within the village. Further, it is likely that women would be most affected by such a change, as it is the tasks which they perform which are most strongly seasonal in nature. Once again, however, it is important to bear in mind that changes in labor relations are supported and reinforced by forces external to the village.

In Retrospect.

I have been asked to address the question as to how I would do things differently if I were to repeat the study. For reasons which I will spell out more fully below, given the resources which I had at my disposal and the issues in which I was interested, I would certainly not select a more "representative" sample in terms of number of villages. Rather, I would focus in a far more in-depth and systematic way on learning more about how so-called "non-economic" factors are tied in with modes of gaining a livelihood and hence the dynamic implications of allocative strategies. In particular, I would delve far more deeply into (a) the ways in which people spent their time other than in income earning activities and housework; (b) closely related to this, the nature of the social and political ties which households and individuals maintained with one another and with those outside the village, and how these contributed (directly or indirectly) to access to income; and (c) detailed life histories.
This type of information bears directly on two related hypotheses which arose from the study and which require a stronger empirical base. Both of these pertain to the ways in which allocative strategies are linked in with the long-term processes of structural change. First, I would hypothesize that the patterns which I observed reflect the emergence of a new form of patron-client relationship within the landowning class from which the landless are largely excluded. Proper testing of this hypothesis requires a far more thorough documentation of the relational characteristics of all households.

The second hypothesis (which is in effect a more general version of the first) has to do with the ways in which household-level allocative strategies interact with village, regional and national level political-economic forces. More specifically, I suggest that the nature of the political-economic system is such that the allocative strategies employed by large landowning, small landowning and landless households reflect an immediate adaptation to structural constraints, while over the longer term operating so as to reinforce the processes of differentiation. For instance, in retrospect I realize that the relatively large proportion of non-income earning or household time which large landowning men and women had at their disposal was devoted to activities which directly or indirectly reinforced the relative position of the household in the hierarchical structure of the village and enhanced its future prospects. At one time I was insufficiently aware of their importance and did not document them nearly as thoroughly as I would now do if I had the opportunity to return. Papanek's (1979) concept of "status production" by women is directly relevant in this process, as are the ways in which wealthy men entered into deals with local government officials to obtain credit and various other benefits. The fact that the children of the rich were in many cases able to complete high school is, of course, also very important. At the other extreme of the distributional spectrum, men, women and children from landless households had little choice other than to devote massive amounts of time to low-paying income-earning activities in order to survive, and were thereby caught up in a type of risk-poverty cycle which operated so as to exert a downward pressure on income-generating capacity over time: poor households cannot undertake risky propositions, so that the average rate of return on the propositions which they do undertake remains low, so that they remain poor.* But it is critical to bear in mind that an important part of why the poor remain poor is that their options are circumscribed by actions of more powerful groups both within and outside the village.

*I am indebted to Michael Lipton for this observation
This leads me to my final point, which has to do with the purpose of village studies and the whole question of generalizations from them. I would argue that the purpose of village studies is emphatically not to generalize from a particular set of data and claim for it universal validity. Rather it is to gain a better understanding of underlying causal processes which tend to be masked by aggregate level (and therefore more representative) data, and thereby to formulate hypotheses which can be used in the interpretation of such data. It is precisely for this reason that it is so important to consider the household specifically in relation to its environment. Analysis of how structural relations and the behavior associated with them in a particular village are linked with macro level forces—of which actions by the state are a central part—provides a framework for adapting hypotheses to address different village situations, and for assessing the generality of the hypotheses.
References


Agricultural Extension Education and the Emergence of "Development Woman"

Elinor G. Barber

This paper will argue two points: the first is that women need agricultural extension education that takes fully into account the range of their contributions to food production; the second is that in providing extension to women, perhaps even more than in the case of men, it is important to deal with them as mature, experienced adults who know a lot about the technology that is appropriate to their agricultural activities; who, like men, are quite capable of acquiring information dealing with improved technology; and who, even more than men, may become effective participants in development as a consequence of receiving appropriate education. I shall deal more briefly with the first point than with the second, not because it is less important but because it is my impression that it is now being made more frequently.

It has now been pointed out repeatedly in the literature on women and development (for example, by Hanna Papanek, who spoke here last week) that women have lost ground relative to men with progress in agriculture. Relatively early, Mary Jean Bowman, in an unpublished paper prepared for the U.S. Department of Labor in 1975 (Roles of Men and Women in Development and Education for these Roles), pointed out that, in general, men have had access to more efficient equipment, while women have continued to cultivate food crops by traditional methods; that men, who are more often literate, have had the benefit of wider contacts outside the village in enhancing their knowledge and skills; and that research and related extension services have focused on cash crops, which are in the male domain. A whole range of activities in which women tend to play a major if not exclusive role, i.e., post-harvest activities, have for the most part been omitted from the extension curriculum. The consequences of this are that not only do women fail to carry on their important activities at an optimal level of productivity but also they fail to become capable of what Bowman calls "dynamic adjustments." To quote Bowman, "Development woman, like development man, will have readiness and ability to adapt to change and to grasp or create new opportunities."

"Development woman," as Bowman calls her, is one who not only learns more efficient ways of doing her work but she learns to learn. I would argue that in order that rural women learn to learn, they must be subjected to more than the transmission of relevant information; they must be given a sense of control over their environment, even if that environment is confined to the household and its resources. The pedagogical approach to adult women must be related to women's special conception of themselves as learners and producers.
Researchers in education and psychology have for some time thought primarily in terms of the relationship of pedagogy to individual psychological differences. Thus, they categorize learners, for example, as "constructive" and "defensive" in motivation: as Cronbach describes them (in an article in a volume edited by Robert Gagne, on Learning and Individual Differences, p. 34), "The constructives show their best persistence when led to think they are dealing with problems where there is moderate risk. The defensives are most persistent when led to think the chance of success is very low." Defensives and constructives surely overlap gender categories. Little effort has been made so far to characterize the learning styles of females and males, and even then, they have given attention primarily to female and male children. Carol Dweck, at the University of Illinois at Urbana, has studied the different reactions of female and male primary school students to criticism: the boys shrug off the criticism (they did poorly because the teacher hates them or because the teacher is overconcerned with neatness or because they just didn't try hard enough), while the girls crumple (they conclude that they're just not smart enough to do the work demanded of them). The very fact that the girls are generally defined by the teachers and themselves to be "good" deprives them of defenses against criticism. Dweck's work points to important gender differences in self-concept as it affects learning, and it seems very likely that some such differences obtain among adult women and men as well as among girls and boys. While there are surely cultural differences in the content of gender-related self-concepts, there are sufficient commonalities in gender role socialization all over the world to make plausible the suggestion that there may be widespread among women the lack of confidence in their learning ability displayed by Dweck's little girls in Urbana, Illinois. For rural women more than men, the capacity to make "dynamic adjustments" and become effective participants in development may require careful attention not simply to what is taught about food production but how it is taught.

Since the time of the Greeks, there have been two rather basically different approaches to pedagogy: one consists essentially of telling people what they should know; the other (the Socratic approach) assumes that people have a fair amount of knowledge that can be made explicit and effective through a process of questioning. In more recent time, the two approaches have manifested themselves as traditional educational pedagogy vs. "progressive education." The latter imputes to the student some ability to make judgments about needs for knowledge and concedes to the student the right to understand why certain kinds of knowledge may be useful. Progressive-type education is oriented to the process of learning, to a varying extent at the expense of substance. The effectiveness of these different pedagogic styles has been much debated with regard to young students (children or adolescents), but in recent years it has become an important issue also with regard to the best way of teaching adults.
The attack on the traditional style of education has been led by Ivan Illich and Paulo Freire, both of whom, as Lyra Srinivasan notes in Perspectives on Nonformal Adult Learning, contend that "the teacher-dominated system of education robs the learner of his self respect." While Illich blames the denigration of the dignity of the adult learner on the schools and Freire on the class system, both insist that the traditional teacher deals with the adult learner on the wrong terms.

In the Third World, the matter of adult education has special significance, since many children never had a chance to go to school at all. This is true especially for female children. The response to the need for adult education has been diverse forms of out-of-school "nonformal education": literacy programs for adults, family planning education, health education, training for crafts, training for poultry raising or vegetable gardening. In many cases, nonformal education has been influenced directly or indirectly by Freire's doctrine and has accordingly been imbued with aspirations to do much more than convey new knowledge. Nonformal education has become, explicitly or implicitly, a vehicle for making poor and powerless people aware of their condition and of their collective power to improve that condition. Explicitly or implicitly, nonformal education is aimed at empowerment of the poor and oppressed. This political aspect of nonformal education combines with the Socratic-progressive pedagogic approach to make nonformal education strongly concerned with the process of education.

In considering the suitability of different pedagogic approaches or styles for different populations, it is important to note the special situations of adult learners. Among Third World adults, there are many who have had only a few years of schooling and many others, especially women, who have had no schooling at all. While there is so far only suggestive rather than conclusive evidence concerning the effects of formal schooling on the development of more general cognitive capacity, it is reasonable to expect that adults who have had some schooling will have responses to nonformal or adult education that are different from those who are unschooled. One would expect that those with some formal schooling would find "traditional" education more congenial than those who never went to school. Since women have generally had less access to schooling than men, and since they are usually the poorest and least powerful members of their communities, one would expect, then, that nonformal educational approaches would be especially effective for them.

We now come to the question of the relationship of pedagogical styles to agricultural extension in general and extension for women in particular. I would argue that the "traditional" pedagogical style, embodied in an authoritative and authoritarian teacher, is inappropriate to extension education for two reasons:
it tends to underestimate the extent of preexisting knowledge on the part of those being served; and it fails to contribute to the sense of rural people that they can play an active role in improving their situation. Traditional agricultural extension tends to assume that rural people are ignorant and not fully rational. Also, it assumes that the result of teaching them better agricultural practices is to make them more productive and better off, but there is essentially no change in their social, economic, and political positions.

Some excerpts from a small and wise book by A. T. Mosher, *An Introduction to Agricultural Extension*, contrast this approach to one he recommends:

Most extension workers have never been farmers, yet they presume to teach men and women things that can make them more productive farmers. In these circumstances, taking the attitude of a superior and a teacher ... is foolish and self-defeating, whereas achieving the status of a 'reciprocal colleague'--one who learns as well as teaches--is a feasible goal and makes it easier for farmers to learn. (p. 22)

Mosher refers to the farmers as "co-learners"--the extension worker teaches them, but also learns from them. (He differentiates them further into active co-learners who have already responded to the extension worker's help and have come to trust him, and the potential co-learners with whom the extension worker must carefully build a good relationship.). (p. 80) Mosher realizes that community development programs have been more inclined than agricultural extension programs to "respond to felt needs," and that the extension workers are not convinced that rural people really know what they need (or want the wrong thing). He concludes that both the community development people and the agricultural extension workers are right to some extent and compromises neatly in his "first principle of extension":

The central objective of an agricultural extension service is to help farm families acquire new knowledge and skills along those lines of their current interest and need which are closely related to increasing farm production and to improving the physical level of living of farm families. (p. 35)

Clearly, Mosher rejects the first assumption of traditional agricultural extension, that rural people are ignorant and not
rational. But he does not take the second step and see the process of (nonformal) extension education as contributing to the reshaping of the social and political views of the rural people involved.

It is important to note that Mosher thinks of farmers as being both male and female; in this respect he is surely far ahead of many in the agricultural extension field. He does not consider the possibility that male and female farmers have had different social and psychological experiences that make further refinement of pedagogical approaches desirable. In the case of women, a greater effort is necessary to relate new knowledge about food processing, or grain storage, or nutrition to existing ethno-science or folk wisdom. Extension agents are even more likely to assume that women are ignorant than that men are. Since women are generally more oppressed than men, the process of defining problems and needs and developing a sense of mastery over their situation is all the more important.

In conclusion, I would suggest that the matter of pedagogical styles appropriate to different groups--people with more and less and no schooling, adult and young, female and male, urban and rural, and all different combinations of these and other group characteristics--warrants a good deal of further exploration and experimentation. Further, and especially relevant to the topic of this series of meetings, I would urge close attention to the knowledge needs of women actively involved in food production. These women have much practical knowledge already; they may be illiterate, but they should not be defined as ignorant. And in the process of providing them with knowledge that will make their work more productive and efficient, it is possible also to assist them in becoming "development women" with the disposition to learn more and to control the circumstances of their lives.
Margaret Doyle

My remarks will be quite general, and will be made primarily from my standpoint as a nutritionist. First, I would like to go back to Francille's statement about home economics, and how people tend to think it involves only such things as cake baking and flower arranging. Unfortunately, this does seem to be the idea which some people have had in the past. Certainly, I learned early as a member of organizations such as the PTA never to tell people I was in home economics or nutrition because the usual result was that I'd be put on the food committee with the expectation that my main concern would be refreshments for the meetings, and that was not what interested me about the PTA! However, it is my belief, my firm belief, that this idea that people have had about home economists is changing, and that we are being recognized as professionals who can make significant contributions--some of us in very specialized fields, while others have the broader outlook which is often so useful in work in development.

We have discussed the separation of home economics and agriculture. Yes, probably we have been separated, even though we are closely related. Agriculturists are concerned with production and marketing of food and fiber; home economists have concerns for the consumers of these products. So, even though we have tended to keep our disciplines separate, actually we have need for joint action. This joint action, in my opinion, should not be just on the basis of teaching people what to do in the home, but in terms of social and political action as well. For instance, as a nutritionist I wouldn't want to have anything to do with a program in a developing country that involved only nutrition and did not involve community development as a whole. I think that as far as nutrition is concerned, it is becoming increasingly apparent that nutritionists should be more knowledgeable and more active in the political arena in terms of developing nutrition planning activities and a national nutrition policy.

This talk about the role of home economists in the social and political areas doesn't say much about what goes on in home economics programs at the village level. But it does have a lot to say about what we do about graduate students, particularly foreign graduate students. I think that we have the chance to play a very important role, for this is where the "elites" are being
trained. These students, when they go back to their home countries, may indeed be involved at the planning and policy level. I am particularly concerned about the training of women to operate at this level. The need for this type of training came out clearly at the Tucson conference. The women from developing countries who attended that meeting had a lot to say, and what they said was important, about the role that they felt it was important for them to play in their countries. In this connection, we need to make sure that study in this country is relevant to the students' future professional activities in their own countries. The idea of enabling students to do their research in their own countries, on problems which are really pertinent and important there, is an excellent one. We also must remember, however, that education of foreign students and developing relationships with professionals in foreign countries is a two-way street. If there were more opportunity for some of our own students to have exposure to work in developing countries, it could make a tremendous amount of difference to them when they return. They may see things here in quite a different light than they did before. In my own case, malnutrition seemed pretty abstract to me until I visited Central America where I saw some fine nutrition rehabilitation programs in action, and where my eyes were opened to the real problem-poverty. This experience, as well as other ones later on, changed my whole view of nutrition problems in this country. I've made it a point to learn more about our problems, and certainly as a result of these experiences my ideas about teaching nutrition have changed greatly. Students who have had the opportunity of working in a developing country (such as in the MUCIA community nutrition course in Nicaragua) come back with the same increased awareness.

I think that the whole area of education for international work needs to be examined. It has been brought out clearly in our meeting today that we can't just consider the household, but must also consider the regional and national impact which programs have. However, maybe it isn't always possible to start at the regional or national level. Unfortunately, usually you can't start at the top and work down! In nutrition programs, for instance, you have to first find out what people are interested in, what they feel their needs are. Nutrition may be pretty far down on their list of important things. But, if you start with what is important to people and help them to achieve those goals, they often will begin to see some things as important that they didn't consider so before. For instance, participants in a community development program may begin to see that good health is important if they are going to be able to work and earn money, and they then may see nutrition as important if they are going to have good health. As they move along, they may also come to see that family planning is important if they are to achieve some of their new goals ... so the whole process is partly a sort of a changing set of values. To help people start from whatever point they are at and move along this path of changing values can be an important function for home economists and others working in the development area.
Concluding Note:

Home Economics, Agricultural Economics and Development

Vernon U. Ruttan

Home economics and agricultural economics have led a remarkably separate intellectual existence. Both have suffered from a mode of thought that has separated the economics of production from the economics of consumption. This intellectual separation has deep sociological and psychological roots in western culture.

The separation has been a barrier to understanding household behavior in both western and non-western societies. Within urban as well as rural households production decisions and consumption activities are highly integrated. Most households engage in both market and non-market production and consumption activities. Decisions with respect to market and non-market activities are highly interrelated.

The most exciting aspect of this series of seminars on "Home Economics and Agriculture in Third World Countries" was the gradual revelation, to both the agricultural and home economists who participated in the seminar, of their mutual interests in the theory and in the empirical analysis of household behavior, and of the power opened up by the melding of theoretical insight and empirical observation. The excitement was brightened by a realization of the significance of this power for the design of policies to enhance personal, family, community and national development.