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INTRODUCTION

Field Period (Purpose and Location)

The case studies provided herein are based on data gathered over a two and half year period within the Department of the East, Upper Volta. During this period I was able to work in two distinct areas of the Department of the East, Kouri, located in the northeastern sector of the Eastern O.R.D. and Tangaye located in the southwestern section. The sector was populated with at least four different ethnic groups.

My task was two-fold. The first was to analyze socio-economic and historical data in order to identify societal changes in the areas in which they occur thus portraying the general evolutionary direction of the society; the second was to find out from the villagers the ways in which they perceived their developmental needs, given the direction in which their society is evolving. This last aspect of my work is considerably rare in the literature of development. The data for at least three district studies I have conducted in the area provide substantial information on the manner in which villagers assess their needs, as well as their evaluation of the efficacy of development programs within their areas.

Significance of Case Studies

Case studies such as these are important because they provide well needed examples of the manner in which development policies are translated into reality, once they have reached the recipient population. The actual impact of the project, with its wide as well as its narrow implications, can be ascertained.

In the process of implementation, crucial issues pertaining to the effects of the program on the population are brought to light. Among these are the benefits and inadequacies of the program; the population's response; the sensitivity or lack of sensitivity to the actual needs in the region and, finally, the deeper, long-range consequences of development policy in the area. It is hoped that a comparison can be made between the stated goals of the policy and the actual consequences of implementation, and as a result, suggest ways in which policy may be re-stated so as to facilitate attainment of desired goals and eliminate the possible negative effects of either omission, inconsistency, or lack of sensitivity.

I will show that though contrary to the stated goals of policy makers, development programs often result in the gross inequality of the distribution of benefits, both on the level of the sexes and in the areas of the economically favoured versus the economically disfavoured--Thus leading to the disadvantage of the entire population.

Although this paper addresses itself to issues relating specifically to women, it is important to stress that the issues in development affect all members of rural society affected by development programs. Programs that exclude women often exclude most men in the village. Many are excluded because of the structural incompatibility of the programs with their life style, or because the programs do not address themselves to their needs. Consequently programs often appeal to the relatively marginal members of village society.

Moreover, in a village society characterized by subsistence economy and low level technology, and where society and nature are delicately balanced, cooperation among all members of society is essential. Men and women have closely interwoven socio-economic rules. Imbalances, which seemingly favour men, are detrimental to both men and women.

Often men in the villages have remarked on the dearth of developmental programs available to women. They mention the absence of schools, training programs, and adequate transportation. (Women must use public transportation to gain access to markets or other areas. They do not generally travel long distances on bicycles or mopeds, the way men do.) Men recognize, as much as women, the importance of providing balanced programs in which both sexes may participate.

Sexual balance in the administration of development service is particularly crucial in light of the fact that the economic interdependence between men and women of the recently adult generation has increased in the last thirty years. This is so because of the breakdown in scale of the units of production. Units of production were once comprised of multi-generational households numbering many. Now they are comprised of single households where husband and wife bear the brunt of expanding agricultural production which must provide not only food but surplus to be exchanged for cash. Hence sexual imbalance in the repartition of developmental assistance has more immediate disastrous effects on the fragile units of production.

Case studies also provide the possibility of perception of the flaws inherent in the structures through which donor and implementation experts interrelate to the recipient population. The case studies show that problems are created when program designers, operating from structures quite dissimilar to those observed within the recipient population, seek to design programs to be implemented in rural areas. Their designs are based on frameworks familiar to them. These rarely correspond with those

existent in the villages. As a result many development programs fail to give the desired results.

Finally, these case studies include input from the local population. Often residents have voiced their needs and complaints. They frequently provide excellent criticism of development programs as well as suggestions of what they believe would be best for them.

Data Source

A. Thirty-month field period during which village-wide surveys, interviews, participant observation, use of government records, among others, constitute the means of obtaining data.

History and Description of the Village. 2) Ethnic Composition.

Both villages are located in the Department of East. The area is predominantly populated by the Gourma; however, there are numerous Mossi, Fulani and Zaose settlements.

Population Density

Population density has been traditionally low, approximately ten inhabitants per kilometer square. Some villages number less than 200 inhabitants. Others as many as 4,000.

Geography.

The region is fairly isolated geographically. During the rainy season several large bodies of water cut off the principal roads leading to the

area. A road and bridge that linked the region to several administrative centers were built with the aid of forced labour, during colonial times. After independence, the Voltaique government, left with few resources and no longer relying on forced labour for the upkeep of roads, was unable to provide the necessary maintenance. The roads quickly fell into disrepair and the region reverted to its present geographic isolation.

Administrative Structure

The area is predominantly rural. The administrative center is located in a semi-urban center known as Fada--N"Gourma. Rural development projects are administered from Fada N" Gourma.

Traditional Political Structure

The village is at the base of the traditional political structure. In the past groups of villages composed a larger political unit known as the Kuamba, or later known to the French as canton.

Village Organization

The people reside in fairly stable villages. Residence is organized on the basis of membership to a patrilineal descent group which gives exclusive title to land and certain types of political and religious offices.

Colonial History

The area was colonized by the French at the turn of the century. The colonial period gave rise to radical changes in the village economy. These were generated by the necessity to pay taxes to the colonial government and to supply forced labour and surplus food to the colonial administration. Upper Volta gained independence in 1960.

Village Economy

Type of Economy: Farming is the principal activity. Subsistence as well as cash crops are cultivated. There are two predominant seasons to the year--the dry and the rainy season. The dominant occupation during the rainy season is farming. Dry season is devoted to crafts and commercial activity.

Division of Labour

Division of labour is based on age and sex and is characterized by a great degree of interdependence between men and women at all levels of production. The following are examples of this type of interdependency.

Division of labour in farming: Except for clearing of fields, women are involved in all aspects of the farming system. The task of soil preparation is generally allotted to young men. Planting and weeding is done by women. At harvest time men cut down the stalks of millet while women remove the ears. It is generally known that though a man may cultivate millet he is not able to sell it until the seeds are removed from the stalk. This is a woman's job.

Examples of Division of Labour in the Production and Sale of Crafts:

When women fabricate pottery men are in charge of finding the raw materials, and firing the clay object. Men fabricate pottery as well, but they depend upon women to sell it for them. Men fish; however, women have to preserve the fish for them (by smoking) before they (the women) sell it on the market.

Seasonal Activities

Rainy Season

Farming: As forementioned, the villagers produce the bulk of the food that they consume in the course of the year. They grow millet, sorghum, maize, and a variety of other vegetables and cereals. Peanut is the major cash crop.

Families cultivate a communal plot of millet and sorghum. Each individual member may cultivate additional plots of millet, peanuts, cotton, or other products.

The fruits of the communal plot are under the jurisdiction of the head of the household. The fruits of individually grown plots are under the control of those who grow them. Women's individual plots of millet and peanuts provide the raw materials, as well as the source of cash for their dry season activities.

Constraints of the Rainy Season

Women face the greatest time constraints in this crucial season. They must divide their labour among various activities,--Farming in two plots as well as taking care of household chores. They spend more than 75 percent of their time in the family field. Less than 25 percent of their farming time is devoted to their own plots. The lack of time makes women's plots more vulnerable (to pests, etc.), thus limiting their potential productivity in their private field, and thereby directly affecting their access to resources with which to engage in private business.

Other constraints of the rainy season include famine. This is the period when food reserves are at their lowest and yet energy expenditures are at their highest. The head of the household often finds that he cannot feed his family, and so women must help to feed the family with their private grain reserves. Health problems are numerous during the rainy season. This is also a period of water-borne illnesses as well as malaria. Women use the most conveniently located sources of water. Unfortunately, these sources are often the most unprotected, and diseases caused by Guinea worm and other parasites abound.

Dry Season Activities

Economic activity during the dry season is centered around marketing of processed foods and the manufacture and sale of craft items. Women are the principal participants in the traditional market. The dry season immediately follows the farming season. Initial investments in marketing are made with the cash or the raw materials produced during the farming season.

The time pressure characteristic of the agricultural season is eased at this time. Women have time to process foods for marketing as well as for personal consumption. They have time to engage in craft production and to spend more time with their families. (Studies on the distribution of time show that women devote four times the number of daily hours to their children than they do in the farming season.) However, though women have more time at their disposal, the resources they utilize, such as water and wood are less conveniently located in the dry season than

they are in the rainy season. Women have to walk longer distances in search of water, etc. Thus they are forced to devote a greater number of hours in the preparatory stages of production. Although the intensity of labour is decreased, the dry season is a period of greater cash expenditures, particularly for social purposes--funerals, marriages, and the like. It is also the only period of the year when women can devote their time primarily to building up their cash reserves.

Women in this region identify the building of independent resources as a primary need. Husband and wife do not share incomes. They are not dependent on their husband for the provision of personal needs or of the needs of their children. Women take partial, and often full, responsibility for the care of children. She must also prepare for her old age.

OVERVIEW

Development policy affects millions of rural and urban dwellers. Intentions are good, yet actions and consequences frequently do not match the intentions. In analyzing the future impact of development projects questions on various aspects of development policy must be addressed.

These questions, if asked during the policy-making phase, will help to solve some of the problems encountered in the field.

A primary question to be asked of development programs is How much adjustment do villagers have to make to participate in the program? Development programs, as will be shown, often require an almost total revision of the population's customary behavior in regard to the particular area to be developed. The revisions may occur on the level of organization of labour, organization of time, division of labour, and communication. This is usually so because the designers of the program are unaware of the peculiarities of the cultural context for which they design the programs. The modifications of behaviour required for participation on the part of the villager do not guarantee that the suggested program will better the situation. Often the local population has evolved the most efficient means of managing its resources, given the resources of their social context. Development agents who have not taken the time to properly assess the needs and resources of the population often find that they have underestimated the validity of the traditional methods employed by the people, and have not contributed to the amelioration of the situation in the villages. During my field period I often

asked villagers why they persisted in farming in ways that agricultural specialists have considered harmful for the soil, particularly in burning the vegetation on the soil, which is said to have the effects of depleting soil nutrients. The other issue revolved around their choice of farming tools, short-handled rather than long-handled hoes. The villagers explained that unless they burned the vegetation in the fields they would be unable to till the soil. Their eco-system was such that they had absolutely no moisture during the dry season. Therefore the remains of vegetable matter from previous harvests did not decompose. As a result, during the rainy season the dried stalks were swept all over the fields by the water, forming clumps of undecomposed matter that would be too vast to remove manually and impossible to till into the soil with the simple hoes that they possessed. The use of short-handled hoes was another matter. When I told some of the women that the literature suggested that long-handled hoes would make their lives easier, they laughed. I was embarrassed by this response and pointed out to them that people from their own social group, the Gourma, utilized long-handled hoes in the south. The women said that they were aware of that. They then asked me if I was aware of the differences in soil in both areas. I had to admit that I was not. They explained to me that the top soil in the southern region was much thicker than the soil they had to work with. A long-handled hoe, with the increased leverage implied, would be inappropriate for their work.

The assumption developers make, that people persist in certain practices because they simply know no better, is somewhat naive. The people in the areas are more aware of their resources and the constraints

of their environment than any outsider. Often they have worked out the best possible solutions given the constraint. The development planner may hope to provide a better solution only after a thorough understanding of all the factors in play.

Even when positive solutions are suggested, the procedure for implementation is often radically different, than procedures known to the population. Hence the villager who is willing to learn finds that he has to relearn a whole new set of patterns. This unnecessarily lengthens mental absorption. It often limits adoption of novelties to a very narrow segment of the population, thereby contributing to inequality of access to valued resources.

Development programs should follow as closely as possible customary patterns. An example of the consequences of ignoring traditional organization of labour can be seen in the design of development programs for farming cooperatives. Cooperatives are often divided by sex. Even though there is a strict division of labour based on sex and age in these regions, men and women collaborate in all aspects of production. Each is specialized in a certain stage, or aspect, of the same activity. Farming is broken down into all of its components and at each level men and women must cooperate. Hence the creation of totally male and totally female cooperatives often goes against the known division of labour and contributes to the inefficiency of the working group. Other aspects of this issue will be discussed in the various sections.

Another issue in the design of development programs I have seen in the area, revolves around the means of production, or the available raw materials and technology. Planners find that in order for the local population to participate in the programs they must first obtain equipment,

this often implies the purchase of equipment manufactured in other countries. The problem with this, particularly in Upper Volta, is the accessibility of such materials for most of the population. Important questions to ask when designing programs requiring the material: How accessible is the material? Must the people take out loans to purchase it? Does upkeep imply continuing expenditures of money? If so, where is the revenue to pay for purchase and upkeep going to come from? These are issues that have been raised by others, and much more thoroughly than they are raised here, before. (David French) Yet they are important, and generally unheeded and so bear repetition. Tying the local population into a dependency structure that requires the constant outlay of cash for the purchase of resources outside of their community is counter-development. They will, as a result of inflation, be forced to spend larger and larger amounts of cash for which they must sell their raw materials and their labour to obtain. They will be caught in the characteristic downward spiral already known to many in the area. Resources and expertise must be centered within the community. If it is a question of technology, funds should be allotted to research and to the training of experts within the village. Research into the types of technology that can be reconstructed by the villagers and that can be maintained with raw materials available to the villagers is recommended. Thus if the question revolves around buildings for medical, instructional, or other purposes, it would be best to use traditional building materials even if they are considered less durable (not always the case) than modern building materials.

The villagers might have to rebuild or constantly refurbish a mudbrick building but, they are the experts and can do so whenever they see the necessity rather than having to wait for outside assistance. The materials are available within their natural environment, do not have to be bought, and even if they are bought, are more easily accessible to the average villager.

The main issues in question are 1) The compatibility of programs with the existing structures in the recipient population. 2) Equality of access to goods and services in the population, and 3) The possibility for the people to perpetuate a positive program without outside help. Although many development agencies give lip-service to these issues, the manner in which they administer their programs belie their goals. There is no room for input from the local population for either needs assessment or programs design. The programs are inflexible. They are presented to the population as a fait accompli with no room for change. They require the investment in foreign resources, the danger of which has been shown many times in the past. They disrupt traditional structures without providing adequate replacements.

Knowledge of the area, sensitivity to the needs of the population, sensitivity to their own perception of their needs as well as to the manner in which they have structured their own behaviour around similar issues, is imperative to the effective design of the program. Programs designed cannot exclude women if they take all the above into consideration.

As a correctional measure, the following procedure could improve the design of development programs. In the needs assessment stage, there

should be fund budgeted for anthropological studies in the specific area where the project is to be implemented. The study should provide information on traditional systems of social organization, economic structure and other factors vital to the comprehension of the internal structure of the society in the specific area. Program design must include methodology for insuring villager participation in assessment of needs, evaluation of program, and design of program. Methodology should take into consideration the various forms of communication of the villagers, which may not include open discussion with authority figures. (This is often the case with women.)

Finally, the fact that development programs often favour men, as is seen in many of these case studies, is directly related to the structures from within which development agents operate. Agricultural experts who consider farming a man's job will design tools for, and train men for farming. Hence the training for technology in farming has been addressed almost entirely to men. An internal revision of the structures utilized to deliver development services is necessary. Thus on every aspect of the administration of development services there should be female representatives as well as people assigned to the task of attending to women's issues in all facets of the development.

EXTENSION AGENTS, INSTRUCTION AND FARMING COOPERATIVES

The organization of Rural Development in Upper Volta has launched an extensive campaign in agricultural development. The implementors of the program are the agricultural extension agents. They reside in rural areas and function primarily as organizers, leaders, and primary instructors in agricultural cooperatives. The Organization of Regional Development of the East has made an effort to increase the number of extension agents in the region.

Farming cooperatives are composed of groups of villagers. The groups are divided according to sex. Though most of the agricultural extension agents are men, a few feminine agricultural extension agents provide leadership for women's groups. Members are usually chosen among young people who join the groups on a voluntary basis. The members of the group work on a communal field. Work schedules vary. Generally participants work on the plots three times a week. The harvest is marketed through the Organization of Regional development. Profits are distributed among members. The goals are to increase productivity through improved farming methods and advanced agricultural technology. Although the government hopes to build a reserve of millet in the area, the main focus is on the increase of production of cash crops.

Obstacles

Structure of the Cooperatives. As forementioned, membership is established on the basis of sex. This creates problems in areas such as the traditional sexual division of labour for agricultural activities. As I have already

mentioned, at each stage of farming women and men collaborate. Seeds are planted by women, fields cleared by men, etc. The group, by virtue of the requirements for membership, disrupt the traditional division of labour known to the villagers, characterized by interdependence and cooperation between men and women. In addition, since most of the extension workers were men, the sexual division of cooperatives suppressed the possibility of formation of women's cooperatives.

Group membership and relations between members

Members of the groups were admitted on a first-come first-serve individual basis. This procedure in itself has posed numerous problems in relation to the cohesion and solidarity of the group. The villagers are familiar with many forms of traditional farming cooperatives. However, groups formed for the purpose of cooperative activity in farming are based on ties more profound than simply the mutual desire to make a profit. Alliances are formed on the basis of kinship, friendship, or ritual ties. There are definite rules, based on traditional values, that serve to minimize internal conflicts and to promote group solidarity and commitment to the goals of the productive unit.

present
The nature of/cooperatives alienate village residents. In as much as traditional rules for cooperation in production are not respected, even those who would want to join the cooperatives would have to drastically alter their customary patterns of production in order to join the groups. This risk is too great for most villagers to take.

As a result, these groups appeal to the young and somewhat marginal elements of village society. People looking for a quick way of making money, or a means of receiving credit, and not fully committed to the programs. Consequently conflicts related to unequal labour investments of members, distribution of profits and leadership, are frequent.

Instruction (Instructors, Setting)

Instructors are recruited from all over the country, and for the purposes of simplification they are assigned to any area within the Department. Some effort is made to assign instructors to areas where they are best suited. For the most part, however, bureaucratic needs take precedence. Thus in the areas of the present case studies, many of the instructors were unfamiliar with the area, and often did not speak the language of the villagers. This is not as serious as it sounds because they were able to acquire basic language skills within a matter of months. However, the unfamiliarity with the language did contribute to their inaccessibility to the local population.

In addition, instructors were expected to provide training for a large number of villagers living in a wide area. Since they lived outside of many of the communities with which they worked, they were generally unavailable to the community members.

The bulk of communication occurs in group meetings which generally take place in a classroom setting. The extension agent plays the role of teacher. There is very little room for an equal and free interchange of ideas between extension agent and group participants. Communication is rendered difficult and members of the group often misunderstand much of the information presented to them. The following is an example of the

extent of lack of communication possible in such settings. I was interviewing villages on their attitudes towards governmental services available in the village. Many villagers mentioned that they had their money "stolen" by the O.R.D. Knowing the agents personally, I was somewhat surprised by these statements. The villagers explained that they had joined the cooperative in order to receive credit. They believed that they had only to pay 500 CFA (\$2.00) and this would entitle them to animals, ploughs, and other tools. A few received credit, most of them had waited for more than a year and so far had received nothing. Their money had never been returned. I then spoke to the agricultural extension agent who told me a completely different story. The 500 CFA was a group membership fee utilized for various group-related activities. Credit simply meant credit for tools and animals. Many of the farmers did not realize what credit meant. (They would have to pay large sums for the tools and animals that they received.) They also did not realize that group membership did not guarantee access to credit. Worse, the extension agents were totally unaware of the lack of comprehension among the villagers. They were shocked at being accused of thievery.

Because of the setting and the forms which instruction takes, i.e. lack of dialogue between farmers and extension agents, instructors often do not realize that group members have totally misunderstood the goals and purposes, and sometimes even simple instruction.

TIME

Frequently the programs are insensitive to the time constraints of the people, particularly women. In the first place membership in the cooperative requires spending additional time in another unit of production. This is highly impractical for people saddled with the responsibility for

producing subsistence as well as cash crops. Time constraints are particularly significant for young married women. For women who consented to join the cooperatives, time constraints accounted for the great irregularity of attendance characteristics of the cooperatives.

Time constraints also limit access to training for large groups of villagers and especially women.

Summary of constraints

Structure, organization, and training methods conflict with traditional systems of the same order, thus requiring participants to alter much of their life patterns in order to be able to take part in them. Time, place, and patterns of instruction are rigidly set. There is no room for adjustments and consideration of the needs of the villagers. There is little dialogue between participants and extension agents.

Lack of individual follow-up in training because of large areas that each extension agent is responsible for.

The above constraints are true for all villagers, men and women. The following is a summary of the constraints that are particularly relevant to women's situation.

As forementioned, design of programs for training and extension are insensitive to the time constraints to which women are subject. Women frequently cannot participate in classroom settings with rigid meeting hours.

There are very few training and extension programs for women. When they do exist, they show very little consideration for the special situation in which women find themselves. The result is irregularity of attendance, and lack of motivation on the part of women who have been inadequately informed.

RECOMMENDATIONS

The needs and desires of women have to be adequately assessed. This may be done through preliminary social-anthropological inquiry, in which village women have a significant amount of input. I have found that women's schedules vary significantly with their status. Thus older women (grandmothers) and young unmarried women, seem to have the most available time during the dry season.

Older women may receive training with which they can become group leaders and impart their knowledge to other women in the village. The leadership of older women, within certain spheres, is rarely contested. These women are also exceptional sources of information relating to the needs of women. Their suggestions are invaluable to the design of adequate programs accommodating women.

The issue of recruiting extension workers from within the village as suggested above, would solve some of the problems of inaccessibility of the worker as well as provide a wider distribution of implementors. Individual follow-up, and ease of communication would be ensured.

The local population should set the parameters of their goals, needs, and the structure through which they receive training and information.

CREDIT AND THE PURCHASE OF AGRICULTURAL TOOLS

Surveys conducted in both areas show that there is a greater demand for agricultural credit than is in fact available. The reasons for the increased demand for credit is the growing concern with the prospect of famine. Villagers have witnessed a disastrous long-term drought in the last decade which has severely damaged the soil. Yields are extremely low and farmers find that they must cultivate increasingly larger surfaces in order to satisfy their food needs.

In Tangaye the villagers find that they cannot satisfy their food needs by farming. More than 80 percent of the villagers reported having to purchase millet in early August, before the first fruits of the harvest in late September.

Since technology remains simple and the quality of the soil has deteriorated, farmers find that they have reached the limit of the physical expansion of production. Man power per unit of production is quite low. Therefore, the farmer must invest in more complex agricultural tools just to meet subsistence needs. Hence the farmers' interest in credit for the purchase of agricultural tools.

OBSTACLES

In some areas credit may only be received through membership in an agricultural cooperative. This poses problems for heads of families who want to utilize ploughs but who do not want to work within the groupements. In the areas where credit is available to individual families for the purchase of ploughs and animals to draw them, it is unavailable to women,

and even if it were available it would not suit their needs. Tom Zalla has stated that farming with ploughs requires a minimum labour force. In most of these areas it is known that women tend to their plots alone or with the help of small children. Animal-drawn ploughs requiring a substantial amount of labour input seems not to be the answer here. Women need access to credit for technology that is appropriate to their needs and situations. One must bear in mind that women in general tend to have relatively little access to surplus labour. The issue of the relative inappropriateness of technology goes beyond the question of women. It encompasses all members of the village community. Farmers have frequently mentioned the problems they face with imported tools, unadapted to the local soil. They are fragile and break down frequently, sometimes at crucial times in the farming season. Repairs are virtually out of the question, particularly during the rainy season when repairmen are unavailable, and replacement parts are missing. Villagers also mention that often the tools are only delivered in part, which means that a farmer may be able to plant all the seed he wants to but there are no attachments for weeding. Manual weeding of large surfaces is impossible, given the time constraints of the farmer. Foreign tools are also expensive and require large outlays for the purchase of animals with which to draw the ploughs. In certain areas the farmers are not familiar with animal husbandry and find it difficult to train and keep animals. These farmers may own livestock but the livestock is often placed in the care of the neighboring pastoral group.

The expense involved in the purchase of these tools brings us to the issue of credit. The manner in which credit is dispensed requires careful considering when planning. Flooding the community with money from outside sources can have disastrous effects on the fragile village economy. For example, it was announced that the government was extending credit to farmers who wanted to buy animals for use in animal-drawn ploughs. Almost overnight the price of animals doubled. The farmers who were able to take advantage of the credit found themselves deeper in debt than they had expected to be. The rest of the villagers were squeezed out of the animal market because of the inflated prices.

The introduction of large, easily available sums of cash is not the answer.

Recommendations

APPROPRIATE TECHNOLOGY: More area-specific research must be done in order to find out what the technological needs of both sexes are. In the case of women there must be a recognition of the interrelationship between household duties and availability of time for farming as well as the resources she has to draw on. Therefore women need technological assistance in the two areas of life, household and farming.

There must be more research into the types of technology that can be produced and serviced by the residents of the area. The less specialized training required the better.

Programs to promote the manufacture of tools by local craftsmen should be funded.

The sexual division of labour should be thoroughly understood before making certain types of technology available. Studies have shown that often technology is available to men and not to women. With the result that men's burden is lightened but women's labour in their husbands' fields is increased.

Credit systems should be as independent of outside sources as possible, and wherever possible should be based entirely on the resources available within the community.

ACCESS TO LAND AND WATER

Land is plentiful in this area. But, as forementioned, there is growing concern with the deterioration of the soil. Women traditionally have access to land through membership to the patrilineal descent group within which they were born. A woman's patrilineal relatives must provide her with land if she so desires. Her husband must provide land for her as well. It is considered a serious offence to deny anyone access to land.

Access to land for production is not a problem in itself. There are, however, other factors that indirectly affect women's access to land. The three most important are: The time she is required to spend in her husband's field; the proximity of her land to her husband's field; and her personal access to labour (for purposes of pest control, etc.).

The division of time and labour is such in the neo-traditional unit of production, that women are the most pressed for time of all the members of the family. In the past, units of production were larger. Several generations of agnates worked the same communal plot, and the pressure to produce surplus was lessened by the fact that the village was still a self-sufficient economic unit. Women have always gardened and grown private plots of peanuts and millet, the fruits of which were used for marketing. Since farming units were larger and fields smaller, women had more time to devote to their own fields. It was unnecessary to spend as much time as they now spend in their husbands' fields. In addition, they seem to have had more access to labour than now, particularly the labour of

their natal family. In the smaller units of production presently predominant in the traditional economic sector of the village, women, their husbands and their children, shoulder the burden of farming larger surfaces than ever before, partly because of the need for additional surplus in the form of millet or peanuts for sale. And also because the new unit of production is unigenerational. A woman now spends twice as many hours in her husband's or the communal field as she had to before. Hence the time she can spend in her own field is greatly reduced. Time constraints determine the location of her fields. She must have a field close to her husband's and in so doing the choice of land available to her is severely limited.

Nearness to her husband's field permits her some degree of pest control in her own field. If she can secure the help of a child she has a little more freedom in the choice of terrain. Proximity to her husband's field also insures that she has more time to spend in her own field as she does not have to travel long distances. She must acquire a plot of land that does not require excessive preliminary preparation such as clearing of heavy trees. Women have limited access to labour for their personal fields. Clearing fields of trees is a major activity requiring months of labour. Therefore women have to look for plots of land that have already been cultivated. These terrains are usually depleted through repeated sowing of millet crops. These constraints mean that women often have to settle for the most undesirable plots of land.

Because of the heavy burden of jointly shared farm responsibility, the interrelationship between activities that take men out of the village production system and increased burden on women can clearly be traced.

Development projects have created problem of imbalance in a number of ways, particularly by providing opportunities for employment for men and not for women, in areas outside of the traditional production system. For example, by hiring men as paid labour to work in construction projects, particularly during the rainy season; by forming sexually segregated farming cooperatives which draw men away from their personal farms, and by providing technology which addresses itself only to the needs of men. All of these remove men from farming at crucial periods in the agricultural cycle, thus increasing the burden of women in their husbands' fields and leaving them with less time to produce in their own.

Access to water (Irrigation)

Here is a classic example of uneven development practices that create imbalances in the distribution of services in a once carefully balanced working community. An irrigation site was prepared in the area by Catholic Relief Services. Since a limited number of irrigation parcels were available, villagers were told that only those who worked on the project would be given a parcel once the land was distributed. Needless to say, only young men worked on the project. They were selected by project directors who felt that heavy construction work should be left to young men. As a result, the parcels are worked almost exclusively by men. They

grow large amounts of onions, rice, and vegetables off season, which they sell on the international and local market circuit. There are no women taking part in this lucrative off-season farming. Women were not included because of the way in which the project was conceptualized from the very beginning. What seemed to be an impartial and fair requirement resulted in the exclusion of women.

Resolutions

Careful assessments of the possible consequences of 'modernization' in whatever form it takes, be it technology, development programs, or other, in light of the problems created by sexual imbalance in the distribution of developmental services. Explicit references must be made to include women in development projects wherever it is possible.

Provision must be made for equal opportunities of both sexes to technology and training.

Project implementors have told me that they would love to have women participate in their projects except that women do not have the time. I have replied by telling them to redesign their projects.

MARKETTING

ISSUES FOR MARKETTING and NON-AGRICULTURAL EMPLOYMENT overlap. Policy recommendations apply to both areas.

MARKETS

For many women, marketting of agricultural produce is the only access to cash income available to them. They use the money earned to purchase all their needs, including clothing, medical attention, etc. In the past women had greater access to goods produced within the village through reciprocity in social relations of productions, among friends and family. The decline of production of village crafts has deepened the villagers' dependence on items produced outside of the traditional sector. These goods are available at constantly inflated prices. This places rural women in an increasingly difficult position since their access to money is even more limited than men's. Men have access to wages in exchange for their labour outside of village communities. Women are usually tied to the home.

OBSTACLES

There is growing evidence to show that marketing of agricultural foods is increasingly inadequate as a means of providing for non-nutritive needs. Though manufactured goods are growing in value, statistics show that the real value of the goods sold by peasants is declining. Government statistics show that 80 percent of the agricultural products marketed in

Upper Volta by villagers are sold below established government prices. The reasons for this vary. In this area most of the people who sell below minimum established prices do so because they have mortgaged their crop before it has even been harvested. Hence if a farmer has emergency expenses during the rainy season, such as a funeral, or illness, he has to borrow from merchants at the rate of 100 percent interest. Thus if millet is sold at 500 CFA per tin at harvest time, the farmer sells it to his debtor at 250 CFA per tin. In other words, the creditor will ask two tins of millet in return for the loan of 500 CFA.

Though the government tries to assist farmers in marketing of goods, it finds it difficult to compete with private merchants who are firmly entrenched in the community because of the credit systems established within the villages. Consequently, very few goods are marketed through government agents. In Kouri, villagers have not sold to the government since 1973.

Women in Kouri are responsible for the bulk of the production of the cash crop peanuts. They produced roughly 80 percent of 60 tons of peanuts sold in the village in 1977. Yet the marketing of these products is completely out of their hands. They must rely on middlemen who sell to large merchants in the area.

Women have often expressed the desire either to have personal access to markets and thus eliminate the middle men, or to be able to sell the by-products of peanuts such as peanut oil. It has been shown that a tin of peanuts that ordinarily is sold for 500 CFA, can, when converted to oil and other by-products, bring in as much as 1,500 CFA on the traditional market.

RECOMMENDATIONS

Sale of goods is a growing problem. Especially as peasants are more and more dependent on a cash economy. It is important to insure the equitable prices for goods bought from the villagers. Measures must be taken to prevent abuses by private merchants who leave villagers in perpetual debt and with little reserves to weather years of poor rainfall and insufficient crops.

The problem of personal credit for personal needs has to be explored, bearing in mind that the villagers must be assisted to be as independent of outside structures as possible and that the very nature of their dependence lies in the necessity to rely on purchases rather than to manufacture their own goods. Hence their spiraling dependence on money originating from outside sources, and their powerlessness to control the exchange value of the goods that they produce.

Development should be as complete as possible. Supportive infrastructures within the local government (i.e. taxation, laws against usury, etc.) should be built up in order to insure adequate exchange value for agricultural produce.

Production of village crafts should be reinforced in order to offset the drain on cash reserves from villagers.

Non-Agricultural Employment

In this area most women's non-agricultural employment consists in marketing goods produced in the village either by themselves or by others. Women market pottery made by themselves and men; they also make thread which they send to weavers who will in turn produce the cloth which the women either have marketed or stored as wealth. Most importantly, the women in this area market beer (made from millet or red sorghum), and other forms of processed foods including peanut oil, shea butter (beurre du karite), millet cakes, flour cakes, etc. Women may also market non-processed agricultural products such as tobacco, cola nuts, etc.

Non-agricultural employment also includes a number of activities not related to food production. Women have various employment such as healers of children, hairdressers, caretakers, seamstresses, and such.

Marketing implies a series of steps in the organization of women's time and labour. These are: 1) Initial investments and therefore the importance of the agricultural season; 2) Production and processing procedures; and 3) marketing.

The farming season is crucial for women of this area. It is at this time that they grow the crops which provide revenue as well as raw material from which food and crafts are processed. Women grow several types of foods on their farm plots. They grow peanuts which are usually sold as a cash crop. They also grow millet which they process and sell in the market. In addition they grow pois de terre, okra, and other vegetables.

Thus the time women devote to their private fields in the rainy season is crucial. A poor harvest has an immediate effect on her ability to engage in non-agricultural employment. It means a reduction in cash and in material goods used in production.

Non-agricultural employment during the dry season follows a definite pattern. In general a woman starts the season by using the money she has earned in the sale of peanuts to invest in other types of foods which she processes. For example, she may use cash earned from the sale of peanuts to purchase rice. Through a lengthy manual process she dehulls it and resells it at a higher price. With the money from this she will invest in flour to make fried cakes which she sells in the market. The profits from these are then re-invested in tobacco and cola nuts which can be stored and sold during the rainy season.

Processing: One of the most important things to recognize is that women process all their raw materials. Even the seasoning used in their cooking is processed by themselves. Women have to spend time gathering shea nuts in order to make shea butter in which they generally fry the foods. This may take as many as two days. They also process peanut and sesame seed oil, which they use to fry cakes and make sauces. They must produce the flour from millet or sorghum; they must also produce the seasonings. In addition, much time is spent in the search for wood and water in order to cook these foods. Production time is severely limited by these lengthy processes.

Marketing: Women often market in the traditional marketing circuits. Women generally market their own, or other women's and men's goods. The bulk of articles marketed are those produced in the village. Hence they are increasingly vulnerable to the replacement of certain types of village goods with manufactured goods originating outside of the village. Traditional markets are now being flooded with a variety of manufactured goods which are beginning to replace many common village produced items. For example, beer is replacing the millet beer produced by the women. Textile is replacing the cotton cloth produced in the village and thus one of women's main accesses to wealth. Replacement of village goods by manufactured goods has a serious repercussion on a variety of production systems within the village. For example, the weaving industry has been severely affected, to the degree that young men do not produce as much cotton as previously. Weaving has declined considerably from one generation to the next. As a result, women have less and less access to cloth which represented an important part of their stored wealth.

Village production systems that gave women access to a variety of goods as well access to wealth are disappearing. Although manufactured goods may be bought with money, women have seen the exchange value of their cash crops lower as a result of inflation, thus further limiting their access to manufactured goods.

Expansion of Markets: While traditional markets are being flooded with manufactured goods, rural products have but few outlets. Women have often mentioned their interest in having the opportunity to go to larger markets some distance from their village. It is ironic that though

access to larger markets is easier in this area than it has been for a long time, roads have provided a means of bringing manufactured goods to the peasant but no means of providing a wider market for rurally produced goods.

Summary of Obstacles:

- I. Constraints on time women can devote to their own fields, and therefore insecurity of harvest, which is the basis of their initial investments.
- II. Lengthy processing procedures impose constraints on production.
- III. Severe competition from manufactured goods threaten women's primary source of revenue.

Resolutions: Women are concerned with expanding their non-agricultural economic activities. This means expansion of production during the agricultural season. Thus, more money should be budgeted for research in appropriate technology for women's use during the farming season.

Since most of women's activity centers around the processing of food either for family consumption or for sale on the market, funds should be budgeted for research and investment in labour-saving devices that can be operated with energy sources available in rural communities.

Marketing: Rural markets must be protected from invasion by manufactured goods. The market for rural goods should be expanded and expansion of production of rural industries based on traditional skills should be promoted.

REFERENCES

- Academy for Rural Development, Comilla. Womens education and home levelopment programme. Annual Reports 1st-5th report, 1962/3-1968/70.
- Ahdab-Yehia, M. "Women, employment and fertility trends in the Arab Middle East and North Africa," in Kupinsky (ed):172-183.
- Ahmed, Manzoor. BRAC. Building Human Infrastructures to Serve the Rural Poor. Connecticut: ICED, 1977.
- Ahmed, M. and P. Coombs. Attacking rural poverty: How nonformal education can help. Baltimore: Johns Hopkins, 1974.
- Barres, V. et al. The Participation of Rural Women in Development: A Project of Rural Women's Animation in Niger 1966-75. Paris: IRAM, 1976 (mimeo).
- Barwell, C. Farmer training in East Central and Southern Africa. Rome: FAO, 1975.
- Berger, I. and A. Krystall. "The women's group program: A strategy for education and rural development." Kenya Education Review, Vol. 2 (Dec.), no. 2, 1975.
- Brown, S.E. "Love Unites them and Hunger Separates them: Poor Women in the Dominican Republic." in Reiter (ed). 1975: 322-332
- Bond, C. A. Women's Involvement in Agriculture in Botswana. n.d., n.p. November, 1974, (mimeo).
- Bond, C.A. "Women's Involvement in Integrated Farming Pilot Project." (mimeo) February, 1977.
- Boserup, E. Women's Role in Economic Development. London: Allen and Unwin Ltd., 1970.
- Bourque, S. C. and K. B. Warren. "Perceiving the Sexual Division of Work: Economics and Subordination in Two Andean Communities." mimeo (n.d., n.p.)
- Budinic Maud, N. Youssef. "Women Headed Households: The Ignored Factor in Development Planning." Washington: International Center for Research on Women, 1978.
- Chahel, Rena. "The Status of Women, Work and Fertility in India." in Krupinsky (ed.) 1977:146-171.
- Chakravorty, S. "Farm Woman Labour: Waste and Exploitation." Social Change (March/June) 1975.

- Clearinghouse on Development Communication. "Project for Equality of Access to Education for Women and Young Girls, Upper Volta." Washington, DC, 1978.
- Cloud, K. "Sex Roles in Food Production and Distribution Systems in the Sahael." in Proceedings and Papers of the International Conference on Women and Food, Tucson, Arizona, 1978:62-89.
- Colle, R. D. and S. F. de Colle. "The Communication Factor in Health and Nutrition Programmes: A Case Study from Guatemala." Cajanus Vol. II (3) 1978:151-197.
- Crone, Catherine. Research on Innovative Nonformal Education for Rural Women. New York: World Education, 1977.
- Deere, C. D. "Rural Women's Subsistence Production in the Capitalist Periphery." Review of Radical Political Economy, 8 (1), 1976.
- Deere, C. D. "The Differentiation of the Peasantry and Family Structure: A Peruvian Case Study." Journal of Family History, 4(3) 1978: 422-438.
- de Janv^{ry} A. and C. Garramon. "The Dynamics of Rural Poverty in Latin America." Journal of Peasant Studies 4(3) 1977:206-216.
- DeWilde, John. Experiences with Agricultural Development in Tropical Africa. Baltimore: Johns Hopkins, 1967.
- ECA/FAO. The Role of Women in Population Dynamics Related to Food and Agriculture. Rome: FAO, 1976.
- Evenson, R. and Y. Kisled. Agricultural Research and Productivity. New Haven: Yale U. Press, 1975.
- Fernea, E. W. Guest of the Sheik. Garden City, N.J.: Doubleday, 1965.
- Fortmann, L. "An Evaluation of the Progress of the National Maize Project. USAID/Tanzania (Mimeo) 1976.
- Fortmann, L. "Women and Tanzanian Agricultural Development." Dar es Salaam: Economic Research Bureau, 1977.
- Garrett, P. M. "Some Structural Constraints on the Agricultural Activities of Women: The Unlean Hacienda. Madison, Wisconsin: Land Tenure Center Research Papers, No. 70, December, 1976.
- Goody, J. and J. Buckley. "Inheritance and Women's Labour in Africa." Africa (43) 1973:108-21.
- Hafkin, N. J. and E. G. Bay. Women in Africa. Stanford, Calif.: Stanford University Press, 1976.

- Hanger, Jane and J. Moris. "Women and the Household Economy." in Chambers (ed.), MWEA: An Irrigated Rice Settlement in Kenya. Munchen: Weltforum, Vertog, 1973.
- Hansell, F. Review of Conditions Affecting the Integration of Rural Women in Development. Rome: FAO Working Paper, September, 1977.
- Harding, S. "Women and Words in A Spanish Village." in D.G. Mcguigan (ed.) New Research on Women and Sex Roles Ann Arbor:University of Michigan Press, 1976: 158-182
- Heasman, K. "Women and Community Development in Kenya and Uganda." Community Development Journal, 4 (1966):16-22.
- Hildebrand, P. "Generating technology for traditional farmers: a Multidisciplinary Methodology." Paper presented at Bellagio Conference on Developing Economies in Agrarian Regions: A Search for Methodology, August, 1976
- Hoskins, M. Social and Economic Development in Upper Volta Woman's Perspective. USAID/(REDSO/WA) April, 1978 (Mimeo).
- Hull, Valerie. "Fertility, Women's Work and Economic Class: A Case Study From South-east Asia." in S. Kupinsky (ed.), The Fertility of Working Women. New York: Praeger, 1977, pp. 35-80.
- IADS. "Integrated Cropping Systems Project Proposal, Nepal." (mimeo)1976
- Janelid, I. The Role of Women in Nigerian Agriculture. Rome: FAO, 1975.
- Jayasut, N. et al. "Status of Thai Women in Two Rural Areas." Bangkok: National Council of Women of Thailand, 1977 (Mimeo).
- Kandiyoti, D. "Sex Roles and Social Change: A Comparative Appraisal of Turkey's Women." in Wellesley Editorial Committee (eds.) Women and National Development. Chicago: University of Chicago Press, 1977: 57-73.
- Kearl, B. E. "An Overview of Communication in Agriculture Projects." Development Communication Report, AED, Washington, DC, 1978:1-3.
- Krupinsky, S. (ed.), The Fertility of Working Women. New York: Praeger, 1977.
- Leberf, A.M.D. "The Role of Women in the Political Organization of African Societies." in D. Pauline, Women of Tropical Africa: 93-120.
- Leis, N.B. "Women in Groups: Ijaw Women's Associations." in Rosaldo and Lampherd (eds.), Women, Culture and Society:223-242.

- Lamphere, L. "Strategies, Cooperation and Conflict Among Women." in Rosaldo and Lamphere (eds.), Women, Culture and Society:97-112, 1974.
- Lele, Uria. The Design of Rural Development: Lessons from Africa. Baltimore: Johns Hopkins, 1975.
- Leonard, D. K. (ed.). Rural Administration in Kenya, Nairobi: East African Literature Bureau, 1973.
- Levine, R. A. "Sex Roles and Economic Change." Ethnology (5) 1966: 186-93.
- Lockheed, M.E., Jamison, D.T. and C.J. Lau. "Farmer Education and Farm Efficiency: A Review of the Literature." Unpublished paper, Educational Testing Service, Princeton, N.J., 1977.
- Mellor, J. W. The New Economies of Growth: A Strategy for India and the Developing World. Ithaca: Cornell University Press, 1976.
- Mernissi, F. "The Moslem World: Women Excluded from Development." in Tinker and Bransen (eds.), Women and World Development. Washington, DC, 1976:35-45.
- Ministry of Agriculture, Botswana. "Evaluation of Female Field Staff in the Ministry of Agriculture." (mimeo) 1978.
- Misch, M.R. and J. B. Margolin. "Rural Women's Groups as Potential Change Agents: A Study of Colombia, Korea and the Philippines." Washington: USAID Technical Assistance Bureau, May 1975.
- Moseman, A. H. Building Agricultural Research Systems in the Developing Nations. New York: ADC, 1970.
- Moock, P. R. "The Efficiency of Women as Farm Managers." American Journal of Agricultural Economics, 58 (5) 1976:831-835.
- Moses, T. "Female Status, the Family and Male Dominance in a West Indian Community." in Wellesley Editorial Committee (eds.) 1977:142-153.
- PAG (Protein Calorie Advisory Group). Women in Food Production, Food Handling and Nutrition. Final Report. New York: UN, 1977.
- Palmer, I. "Rural Women and the Basic Needs Approach to Development." International Labor Review, Vol. 115, no. 1 (Jan.-Feb.) 1977:97-107.
- Pauline, D. (ed.). Women of Tropical Africa. Berkeley: University of California, 1960.
- Pettit, John. Integrated Family Life Education Project. New York: World Education, 1977.

- Pescatello, A. (ed.) Female and Male in Latin America: Essays. Pittsburgh: University of Pittsburgh Press, 1973.
- Purcell, K. "Modernizing Women for a Modern Society: The Urban Case." in A. Pescatello (ed.), Female and Male in Latin America (1973): 257-272.
- Reiter, R. R. (ed.). Toward an Anthropology of Women. New York: Monthly Review Press, 1975.
- Rice, E. B. Extension in the Andes: An Evaluation of Official U.S. Assistance. Washington, D.C.: USAID, 1971.
- Riegelman, M. et al. A Seven Country Survey on the Roles of Women in Rural Development. USAID, Washington, 1974.
- Roberts, P.A. Rural Development in Zinder Department, Niger Republic. An Evaluation. University of Reading, 1977 (mimeo).
- Rogers, E. M. Communication Strategies for Family Planning. New York: The Free Press, 1973.
- Rogers, E. (Ed.). Communication and Development: Critical Perspectives. Beverly Hills, CA: Sage Publications Inc., 1976.
- Rogers, E. and H. J. Park, S. Lee. "Mothers Clubs in the Diffusion of Family Planning Ideas in Korean Villages." Paper presented at the American Association for the Advancement of Science, New York, 1975.
- Roling, N. "Adoptions in Development: A Conceptual Guide for the Study of Non-Innovative Responses of Peasant Farmers." EDCC 19, 1, 1970.
- Reining, P. et al. Village Women, Their Changing Lives and Fertility: Studies in Kenya, Mexico and the Philippines. Washington: American Association for the Advancement of Science, 1977.
- Remy, D. "Underdevelopment and the Experience of Colonialism: A Nigerian Case Study." in Reiter (ed.), Towards an Anthropology of Women, 1975.
- Rosaldo, M. Z. and L. Lamphere (eds.). Woman, Culture and Society. Stanford, CA.: Stanford University Press, 1974.
- Rubbo, A. "The Spread of Capitalism in Rural Colombia: Effects on Poor Women." in Reiter (ed.) 1975: 333-357
- Ruddle, K. and R. Chesterfield. "The Venezuelan Demostrador del Hogar': An Example of Women in Nonformal Rural Education." Community Development Journal, Vol. 9, no. 2, 1974:140-44.

- Sattar, E. Women in Bangladesh: A Village Study. Dacca: The Ford Foundation, 1974.
- Schultz, T.W. "The Value of the Ability to Deal with Disequilibria." Journal of Economic Literature 13 (September, 1975):827-46.
- Sheffield, J.R. and V.P. Diejomaoh. Nonformal Education in African Development. New York: African American Institute, 1972.
- Starrakis, O. and M. L. Marshall. "Women, Agriculture and Development in the Maya Lowlands: Profit or Progress." in Proceedings of the International Conference on Women and Food, Tucson, Arizona, 1978: 157-174.
- Stirling, P. Turkish Village. London: Weidenfeld and Nicholson, 1965.
- Standt, K. A. "Women Farmers and Inequities in Agricultural Services." Rural Africana, no. 2 (Winter) 1975.
- Standt, K. "Agricultural Productivity Gaps: A Case Study of Male Preference in Government Policy Implementation." Development and Change, Vol. 9, 1978:439-57.
- Stoler, Ann. "Class Structure and Female Autonomy in Rural Java." Signs: Journal of Women in Culture and Society, Vol. 3, No. 1 (Autumn), 1977.
- Tinker, Irene and M. Bramsen (eds.). Women and World Development. Washington, DC: ODC, 1976.
- UN Economic Commission for Africa. "Women the Neglected Human Resources for African Development." Canadian Journal of African Studies, 6(2) 1972:359-70.
- UNESCO. Access of Girls and Women to Education in Rural Areas. Paris: UNESCO, 1964.
- UNESCO. Agricultural Education in Asia: A Regional Survey, 1971.
- UNESCO. Study in the Equality of Access of Girls and Women to Education in the Context of Rural Development. Paris: UNESCO, 1973.
- UNESCO/ECA. Reports on Vocational Training Opportunities for Girls and Women. UNESCO, 1975.
- UNESCO. Statistical Yearbook. Paris: UNESCO, 1976.
- UNICEF. "Children, Youth, Women and Development Plans: The Lome Conference." Abrijan: UNICEF/Regional Office for West and Central Africa, 1972.

- UNICEF. Women and Development. New York: United Nations, 1975
(revised).
- Van Allen, J. "'Aba Riots' or Igbo 'Women's War'? Ideology, Stratification, and the Invisibility of Women." in Hafkin and Bay (eds.) 1976:59-86.
- Wallis, H. "Community Development in Sarawak." Community Development Journal, no. 1 (January) 1966:12-16.
- Welch, F. "Education in Production." Journal of Political Economy 78 (Jan./Feb. 1970):35-59.
- Wellesley Editorial Committee. Women and National Development. Chicago: University of Chicago Press, 1977.
- Whyte, W. F. "Toward a New Strategy for Research and Development in Agriculture: Helping Small Farmers in Developing Countries." Desarollo Rural en las Americas (9) 1/2, 1977:51-61.
- Wolf, M. "Chinese Women: Old Skills in a New Context." in Women, Culture and Society, Risaldo and Lamphere (eds.):157-172.
- Wortman, S. and R. W. Cummings. To Feed This World: The Challenge and the Strategy. Baltimore: Johns Hopkins, 1978.