I INTRODUCTION

This thesis focusses on the relationship between women, food, health and development. In order to justify this topic I begin, by explaining why I focus on women.

A. Why Study Indonesian Rural Women

The target of development is to improve social welfare. A society that can provide at least basic requirements for all its members has achieved a minimum of social welfare. The welfare degree of a family in turn is determined by the quantity and quality of available physical and human resources (IPB, 1983). One of the human resources that has recently attracted a lot of attention from society is women, whose potential contribution to development has so far been under-utilised.

It is thus important to give wider opportunities to women to fully participate in all aspects of development. Women have so far been largely ignored by development planners and experts. It is high time that their potential contribution to development be considered the same as men's.

Indonesia's 1980 census showed that about 74 million (50.3 percent) out of a total population of 147 million were women. About 85 percent of the productive labour force lived in villages and one third of them were women (BPS, 1980). 

Regarding land needs, Sajogyo is of the opinion that an average of 0.5 ha per family of five
just allows them to live properly. Whereas the result of Sajogyo's calculation for rural areas in Java indicated that the number of farmers with agriculturally cultivated land of 0.25 ha an average reached 50 percent. This means that as many as half the village families could not meet their basic needs properly (1973). While the introduction of new technologies intended to increase agricultural output through higher yielding varieties it turned out to separate women from agriculture (see Collier, 1970; Timmer, 1973; Stoller, 1977). For instance, the higher yielding varieties resulted in the replacement of the traditional ani-ani, which was always done by women, by mechanical hullers operated by men. This indirectly affected family incomes especially those of the economically weakest group of families where women had to work due to economic needs.

Empirical facts of various studies about Indonesian women indicate that their level of education is lower than men's (Lokakarya Nasional, 1981). Among other reasons this is due to the perception of most communities who believe that education at home is sufficient for women. While in fact, a woman is expected to act at home both as housewife caring for the health of family members and educating succeeding generations. Then how can these two roles be carried out effectively if there has still been no chance for women to improve themselves?
Until now, according to the norm applied in most communities, it is generally admitted and also approved that there is a difference in roles and the division of labour is based on sex differences. There are thus special roles and men's as their counterparts. Although this dichotomy is really too artificial and unrepresented, universally it is still effective and maintained in many places in the world, including Indonesia (see Rosaldo and Lamphere, 1974; White, 1976; Nelson, 1979; Sajogyo, 1981; Epstein and Watts, (eds.), 1981).

The role of a woman is therefore determined as wife, housewife or domestic worker. As a domestic worker, she has to manage and take care of the whole family of her reproductive activities; e.g. to bring up and train children how to behave (i.e. socialise and arrange and manage family resources such as income expenditure, prepare and distribute food to family members and other household workers. By contrast a man's role is regarded as husband, father, and family head having the main job to earn a living, besides representing his home in formal activities outside the home or in the public domain in general (White, 1976; Roy. G/ D'Andrade, 1980).

This arrangement is considered in theory the most effective and useful for the benefit of the society as a whole besides clearly defining the function of husband and wife in a nuclear family. However, in practice, it is not fully applied in Indonesian society due to various reasons.
empirical facts indicate that women, besides doing a large number of domestic jobs, are also involved in income earning activities. This situation was particularly found among women who belonged to the low income groups (see, e.g., Hart, 1976; Stoller, 1977; Paudajati and Sajogyo, 1981). Using the poverty line concept developed by Sajogyo (1976), about 40 percent of all families in the rural areas live below the poverty line. Women, in most of the families, have to work to earn money not only because of the economic reasons, i.e., in order to add to the family income, but for the work is a survival necessity. Women are often left with the economic responsibility to earn money, which could help to improve their family welfare. These conditions have existed for a long time and are often accepted as a reality of life by the people concerned.
Women refer only to men and consumptive ones or the ones related to household matters refer to women. This no doubt reflects a negligence of the economic problems facing women. In turn, it affects their families’ also. Women work altogether more than men, because women have to carry out their domestic tasks as well as work to earn money.

A case study done in Central Java (White, 1976) found that a woman worked more hours per day than a man, i.e. 11.1 hours compared to 8.7 hours respectively. If the activities of domestic and public jobs were compared, women spent 2 and 5.9 hours per day while men 0.8 and 7.8 hours per day respectively. This indicates the multifacetedness of women’s roles. This obviously also influences women’s performance in carrying out their first and main role as domestic labourers.

Several studies done in Indonesian villages (see Lokakarya Nasional, 1981) describe the problems related to women’s domestic roles as follows:

Women have a determining role in the process of socialisation, while their educational levels are relatively low especially in rural areas.

Women act as the “family purse” and have important roles in preparing and distributing food to their family members, yet there is a lot of malnutrition among women, particularly those who are pregnant.

Women's role in decision making related to family health is relatively low. This was found as an average of
levels of families. Indonesia has a relatively high number of embryo and infant death rate (cumulative total of 0.122). In all economic levels of society and especially in rural areas more women marry a lot younger than do men.

Women's participation in social and religious activities is quite high but their participation in extending development extension activities is relatively low. This indicates that it is necessary to study also the socio-economic and cultural conditions of rural women. The list of questions asked were as follows:

1. What kind of domestic jobs were carried out by women and girls in their families?
2. Were male family members also involved? If yes, for what kind of job and why?
3. How were the responsibilities of taking care of children allocated in a family?
4. How was their family income allocated and what factors determined its allocation?
5. How were the responsibilities of preparing and distributing food in a family allocated? Was there any priority system? If yes, who got the priority and what factors determined the priority?
6. What beliefs do villagers hold about the nutritional values of different foods? Do these beliefs vary with women's educational levels and/or their households' income levels?
among families with similar incomes is there an inverse relationship between size of household and nutritional levels?

(9) Are families without a male household head worse nourished than those where the main male provider is present?

(10) What diet is regarded as most desirable by women belonging to different socio-economic strata and why?

(11) Which are the most prestigious food items? What beliefs do villages hold about food taboos related to women's life cycle? How far do these affect the dietary patterns of women?

(10) Which category of rural women is most receptive to suggestions regarding improved nutrition, for instance, through a kitchen garden project?

(11) If besides doing domestic jobs, women are also involved in directly productive work what were the advantages and disadvantages? What kinds of job, of a directly and/or indirectly productive nature could be more easily combined? And what were the cause factors?

B. The Study Objective

The main objective of this study was to find out the various factors which affect women's roles in their performance of directly productive and indirectly productive work according to the different socio-economic...
In particular, the study explored the different operations or roles they perform in their households. Providing adequate food for their households is expected to be useful not only for planners and administrators concerned with programmes intended to increase women's involvement in the development process.

The result of this study is expected to be useful not only for planners and administrators concerned with programmes intended to increase women's involvement in the development process, but also for researchers and academicians who are interested in the effect of food on women's responses to change.

The different pattern of allocating the family income and women's perception of the traditional roles and the way women spend their time and how they carry out the responsibilities assigned to them were the different factors explored in the study. Problems faced by them, the way women spend their time and how they carry out the responsibilities assigned to them were the different factors explored in the study.
These patterns for living are highly idiosyncratic. But, has its own culture and structure, and a few of family's members have unconscious patterns during day to day activities with their families. To some extent, of course, each individual and behavioral patterns during day to day life take place from infants to the elderly. In the family, the attitudes and behavior towards work, the opposite sex, or the economic status of the family, are all affected by each other. My study focuses on the behavioral aspect of individuals, role is the dynamic aspect of related terms used in role analysis to the behavior of individuals. Role is the dynamic aspect of related terms used in role analysis to the behavior of individuals. Role is the dynamic aspect of related terms used in role analysis to the behavior of individuals.
other hand, the family as the smallest unit of organisation is also part of the wider society. To some extent the patterns for living of each includes norms-value-utilisation of human and non-resources that apply and operate in the society at most societies including Indonesia women's roles described by the division of labour between men and women. The original basis of this sexual division of labour is undoubtedly related to men's and women's different roles in human reproduction. Accordingly, in subsistence societies, of which there are only few left, women were generally responsible for such tasks as gathering and processing of food for the family; care of children and socialisation of small children; collecting firewood and fetching water; and local trade or exchange of surplus products. A common feature of these tasks was that they could usually be performed near the home. Men, on the other hand, went hunting and fishing, often far from the home; assisted in clearing the ground under slash and burn agriculture; conducted long distance trade and were responsible for the security of the community. Children of both sexes assisted their parents and were thus trained to assume their adult roles in due course (Roy G. D'Andrade, in UNDP, 1980:15-49). By way of generalisation, one may conclude that men's and women's tasks were related to their differential roles in securing the survival of the
Even so, many activities were not directly, if at all, related to physical differences but were designed as interests indicated.

The theories which later appeared referring to the origin of the gender-specific division of labour varied between the theory of nature and the theory of nurture, the feminists and the functionalist theories (see, e.g., Hill, 1971; Parsons, 1972; Wilson, 1975; Rossi, 1977). The theory of nature argued that the division of labour between men and women was the result of psychological differences caused by biological differences; while the theories claimed that it was the learning process through the environment that maintained and established the division of labour by a whole cultural superstructure.

This opinion seemed to be in line with the functionalists which stated that the division of labour according to gender was a basic need of society and was created for the benefit of all societies as such. The more eclectic theory of socio-biology tried to combine the biological and cultural differences into one statement; i.e. it assumed that the division of labour between men and women was rooted in nature because it was based on genetic differences. That was why this division of labour has lasted up to the present. However, the feminists' theory considered that all these arguments were prejudiced against women. Modern women's liberation advocates insist that rather than continue the complementarity of men's and
Women's roles should have the same right and equal opportunities in all activities as men have. The feminist theory denies any biological base to gender roles. For the study of rural women in Indonesia this feminists' theory did not seem appropriate. There are now made to diversify women's roles which has become a national issue in Indonesia underlying of which is the intent to utilise women as potential human resources. The Outline (GBHN, Garis-garis Besar Haluan Negara) declares that "without minimising the values and meaning of women's roles at home, women have rights, responsibilities and opportunities similar to those of men in order to fully participate in all development activities". This clearly indicates that the roles of women at home are still considered important although the demands of development expect women not to play their roles at home only. In other words, besides doing their domestic roles, a woman in Indonesia is also expected to participate in public activities. These do not only involve the activities of earning an income, but social as well as institutional activities. The objective of the institutional activities of the female is basically directed to increase women's knowledge and skills in supporting family viability and welfare.

From the point of view of women's roles, there are at least three categories of women in Indonesia: women who participate only in the domestic domain, those who combine
and public activities, and others who prefer to become professional or business women and usually remain unmarried (Maria Ulfah Subadio and Ihromi, 1978). The last is not relevant in rural areas because the norms and sanctions to prevent girls from remaining unmarried are much stronger in villages than they are in a developed city like Jakarta, for instance.

Each category of roles might create conflict or even among women. This may be so because of the image woman's role that is held by women themselves, or even whole societies. From the woman's own point of view, she belongs to a heterogeneous category rather than a homogeneous category regarding the problem she is facing. Therefore role conflict and tension faced by women differs from one woman to another, quite apart from the position of her family in society.

The position of a family in society depends largely on social and economic factors. The general criteria used in determining a family's status are among others based on land ownership levels of income and/or levels of per capita family expenditure per year. The last criteria were considered to be better able to reflect a family's abilities in rural areas in fulfilling their basic needs, i.e. food sufficiency (see, Sajogyo, 1976). On the other hand, by considering socio-economic strata differences emerged in the problems faced not only by women themselves, but also their families as well. While the problems themselves may differ from one family to another there are
general regularities which are largely determined by family characteristics, such as economic position, social status, family composition, norms and values held, as well as the division of labour operating. Another factor to be considered in this context, is an individual's characteristic which is influenced by the family of orientation and procreation as well.

The empirical data shows that individual characteristics such as educational levels, strong economic position, higher social status often related to the increasing age of women enables them to determine their choice and carry it out (see, Hull, 1976; Daroesman, 1977; 1979; Stoller, 1977; White, 1976; Pudjiwati 1981). Furthermore, a woman is an individual and a family member and she is also a part of a social system in a community. As a social system, the community has norms and values which arrange every individual's action, for example, "what are the common and uncommon jobs done by a woman and a man".

Indonesia can be categorised under two main headings, namely the location and the source of livelihood of most people. Locationally there are two types of society, urban and rural. According to the main source of livelihood societies can be divided into agricultural and non agricultural ones. Of course, these two distinctions cannot be seen separately; they overlap and complement each other. A rural society is commonly connotated with
cultural activities as the main source of living of most people and the reverse is true for an urban area. The major characteristics associated with the difference between them are as follows:

In urban society institutional arrangements are more formalised. While in rural society they are more informal. This is reflected in the perpetuation of traditional systems. Urban society is less rigid as compared with rural society in adopting change. In turn, this influences the relationship patterns that exist between individuals and/or between families. In rural society these relationships are mainly expressed in wider ties while in urban society kinship ties are limited to the nuclear family. Traditional norms based on kinship ties are more closely related to the division of labour among family members in rural areas than in urban areas. For instance, village women who are working as productive manpower in their families' fields, but whose contribution is not paid are still considered merely as family labour. Accordingly, their work is often not included in the calculation of manpower statistics. This puts these women at a disadvantage because they are considered only as consumers and not as producers. In turn this accounts for the fact that development and/or any extension programmes for females emphasized more their traditional roles. Without necessarily considering this as inappropriate, it can be concluded that the role differences based on the gender-specific division of labour
women's handicaps are not limited to ideological factors. Women's handicaps are not limited to ideological factors. Could they live if they had alternative opportunities. Of the time presently devoted to domestic activities women in this text; it is necessary also to investigate how much diversity them as well as the handicaps they are facing in the perception of their traditional roles and the efforts to discover them. For this it is necessary to know women's own discoveries. For this reason, for this have to be uncovered, the reasons for this have to be uncovered, other than domestic work would have more force. It they not then the demands for women to participate in domestic roles, i.e., whether those jobs take up all their time, must first consider the execution of their public role. Therefore, when studying the concrete roles of women in the society, development expect them to take part also. Still, understood to be majority in the domestic domain, though above description indicates that women's roles are understood (UNDP, 1980:10).

So far, the only remedy is intensive time-use, indicating is that women's work is understated, often all occupations are generally of very limited use. Often all contributions on rural women's labour force are not recognized. Because of the family setting, household domestic work and computation of the GDP are that so much of it is performed, the main reason for not including women's work in the GDP maintained. In varying degrees it is recognized.
All these variables jointly determine women's roles. The economic factors indicate the real needs of society and family to evaluate the contribution of women's roles in meeting, the basic needs of their families. Whereas the socio-cultural factors related to existing social institutions which affect and maintain the role of women in order to keep the unity of a family. Moreover, these two factors can be seen in the context of support of the effective power distribution, either or physical ones. This helps to determine the role pattern of women and the influencing factors.

2. The Socialisation of women's role

As already said, the family is the smallest organisational unit. As the smallest unit, a family is characterised by the unity of residence, pattern of cooperation both in directly and indirectly productive activities (1).

Based on the unity of residence, i.e. a number of families living together in the same place, a family can be distinguished between a nuclear and extended family. Accordingly, it can be assumed that the pattern of cooperation in these two types of family will differ. But, in general, they have the same functions to support the

(1) Directly productive activities are activities which directly produce money, whereas indirectly productive activities are those activities which enable other people to produce for cash. Cooking and preparing food for a family's workers belong to this latter type because without good nourishment they cannot work productively and efficiently.
According to Rosaldo and Lamphere (1974) the process of socialisation continues for the whole life of an individual and a woman turns out to have a very determinant role as socialisation agent, especially for her children. A woman’s socialisation activities are determined by the knowledge, skills and dispositions she has acquired from her own socialisation.

In Java, the process of socialisation continues for the family of procreation, which they form through marriage (see, Brim, O. G. Jr., 1967). Socialisation is closely related to the process of biological reproduction. The main idea is to relate social roles and biological differences. This type of argument has been called “biological individualism.”

In a family, the family unit is a static entity and for reproduction of the family the family unit is not only a social unit, the family provides the social and cultural base of society. Ideologically, family units are reconstructed socially according to the operating norms. As an economic unit, a family supports the perpetuation of society through the formation of new individuals.
up to death has placed them to carry out particularistic roles. The meaning of particularistic refers to the categories of jobs orientated in taking care of and completing the responsibilities which are relatively permanent. "Relatively permanent" here means that domestic jobs done by a woman are endless and repetitive, such as taking care of children, preparing food, washing clothes, cleaning the house, buying items, were almost identical day by day. It is generally accepted that "a work is never done" (Epstein and Watts, 1981). An empirical facts reinforce this statement. The further effect of the particularistic point of view has placed the position of women into the domestic domain and reserved the public domain for men (1).

In Indonesia, though domestic work is still a woman's concern, due to several factors, women are also involved in public work; i.e. earning a living and participating in social activities. The latter activities are much more followed by women from higher income families. Yet, even their participation in public areas is still restricted by

(1) The domestic domain includes activities performed within the realm of the localized family unit. The public domain includes political/economic activities that take place or have impact beyond the localized family unit and that relate to control of persons or control of things (Sandell, 1974:190). In turn, the domestic domain requires women to do domestic work as a real supplement and sub-ordination to men and they usually only have informal power. While the public domain places men into activities outside the home where they usually have formal positions and power; it means that they have more chances to dominate women. These two terms are commonly used by most female researchers to differentiate between domestic and public activities.
particularistic view which places them in the domestic domain as their primary concern (see, Mayling Oey, 1984).

Compared with other countries in South East Asia, where the majority of the population is also Islamic, the participation of women in Indonesia constituting 32 percent of the total labour force is relatively high (UNDP, 1980). Yet obstacles outside religion, i.e. attitudes and traditions held by society, still do not support women’s efforts to search and develop their own identity; among them are the attitudes towards the social status of married women who are considered higher than girls, divorcees and/or widows. Though there is already a National Law of Marriage which stipulates the proper age for men and women to get married, it is not yet fully accepted by society. Indirectly this situation facilitates the forming and maintaining of the particularistic viewpoint. Logically, this is so because as soon as a woman gets married her independence is limited due to giving birth, taking care of children and doing several domestic tasks. These are still seen as women’s jobs which cannot be shared with other household members to any large extent. Thus a woman has to choose between domestic and public work, and what commonly happens is that she prefers domestic to public work (see Budiman, Arif, 1981).

3. The role of women in reproductive activities

The "consumption arena" is an important part of reproductive activities. This is so because the activities
preparing food need other activities such as going to market, collecting firewood, fetching water, washing etc. But, what is going to be served often depends on the family composition such as the number of family members, age and sex besides economic conditions of the family.

The consumption arena is often considered the same as consumption activities, but logically it represents a larger area of concern; healthy individuals are expected to come from an effective consumption arena; without effective nutrition for instance, a child cannot absorb education well, a worker cannot work energetically and of course a woman cannot perform her roles efficiently.

Until now, everywhere in the world, including Indonesia, consumption matters are always treated as women's concerns and roles. This point has been encapsulated in the saying that "women are the guardians of the household" (see, Lewin, K. 1943) and "no matter how high a woman's education is she ought to and will work in the kitchen", taking care of the health of other family members.

There have been many studies concerning the consumption which can give a detailed description of anything consumed by a family even the calorie-protein contents needed according to age, sex and jobs. But, the quality of women's roles in this consumption arena has not yet been fully explored in research.

As I already mentioned, universally, women are still considered "guardians" of the family consumption arena. As
women have the role to decide what should be consumed by the family, the pattern of consumption distribution in the family and the forming of consumption standards. All these are closely related to the consumption behaviour of women affected by the level of knowledge, attitude and adequate performance of their guardians role (see, Sanjur Diva, 1982).

Every family, both in rural or urban area has basically had to develop ways of arranging family activities in the consumption arena. All of these as the result of their adaptation towards their physical and non-physical environment (Florencio, 1980). Cohen (1968) proposed that "in no society are people permitted to eat everything, everywhere, with every one, and in all situations. Moreover, this adaptation will result in the consumption standards, i.e. how families spend their income which is also influenced by the level of family income, as proposed by Engel's Law:

"...the percentage of income spent on food diminishes with rising income..., better-off households do not spend more than 30 percent of their income on food while for lower income groups this may be more than 70 percent. And it should be realized that the absolute expenditure for food is much greater among the well-to-do" (van Hartog, 1970).

Besides income, other factors affecting family consumption standards are social and cultural which mutually interact. By means of illustration, I refer to two micro National study results. The first is the evaluation of the UPGK's study in eight provinces of
not only concerning the socio-economic but cultural aspects as well (see Sjafr, Ida, 1981 and Epstein, T. S. 1994).

2. Diseases of Procurement of Agriculture Education and Development of the Nutrition Situation in Indonesia.
Empirically, a family in a village can be considered both as a production and consumption unit. Therefore, the family income should not only be calculated on the basis of cash income but to this needs to be added the values of commodities, things and/or services produced by all household members, which are not sold but are consumed by themselves. In every society, one can distinguish three socio-economic categories: rich-middle-and poor, which can be subdivided into more refined strata. Each has common characteristics in their adaptation towards the socio-cultural norm of food practices; there may be slight differences but similar norms will apply (see den Hartog, 1972; Florencio, 1980).

The basic function of food in a society is to make human survival possible, but on the other hand man’s interest in food cannot be explained by an innate biological impulse alone as pointed out by Malinowsky (1944) and Audrey Richards (1939). The biological need of the human body for food has done much to shape the society in view of all the different activities concerned with food production, distribution and utilisation (see den Hartog, 1977:3-6). Thus in the study of the function of food in a particular society it is useful to distinguish the social aspect. There have been distinguished six functions of food (den Hartog, 1977:3-6): (1) the gastronomic function i.e. the pleasure of food perceived by human senses is
2. Diets and nutrition can significantly affect people's health. In some cultures, a healthy diet is often associated with longevity and well-being. However, in others, it may lead to various health issues.

3. Understanding the cultural significance of food is crucial for developing effective public health interventions. For example, in many societies, certain foods are considered taboo or blessed, which can impact health outcomes.

4. Food also has a role in family roles and social structure. In some cultures, certain foods are reserved for specific family members or occasions, reflecting the importance of these foods within the family's structure.

5. Additionally, food can be a mechanism for cultural expression and identity. In many societies, food is used to convey cultural values and practices, and its preparation and consumption can be seen as a form of cultural expression.

6. The role of food in social life is also important. In some cultures, shared meals are a common practice, which can strengthen social bonds and promote community cohesion.

7. Food preferences and dietary habits are shaped by a variety of factors, including cultural background, economic status, and personal beliefs. Understanding these factors is crucial for developing effective nutrition policies.

8. The psychological impact of food cannot be overlooked. People's attitudes towards certain foods can be influenced by cultural beliefs, personal experiences, and societal norms, which can affect their dietary choices and overall well-being.

9. In conclusion, food plays a multifaceted role in people's lives, influencing health, culture, and social structure. Understanding the complex interplay between food and these factors is essential for developing effective strategies to promote healthy eating behaviors.
magic symbols associated with food and these need to be
analysed within the context of society. In religion food
often plays an important role which should be appreciated
and taken into account in nutrition education (Sakr, 1971).
Thus, according to specific religions, there are certain
items which have to be avoided by their followers, both
concerning food and non-food. Accordingly, they affect the
independence of an individual and/or a family in
determining their choice related to the family practices in
the consumption arena; (6) foods as a means to exercise
influence and power; i.e. food symbolises the authority
structure in the consumption arena. Thus, a person and/or
groups in control of food supply can also control society.
Accordingly, at household level food can be used as a means
to gain influence to by the person responsible for the
family's food. Since women are assumed as guardians of the
family's consumption arena, the question to be examined is
whether women have power or not.

Efforts to improve social welfare by means of the
consumption arena have long been carried out throughout the
world, including Indonesia, either run by the governments
and/or other institutions. All of them focussed their
programmes only on women as their main intended users, with
the main objective of increasing women's knowledge in
conducting their role as guardians of the consumption
arena. Only recently, they began to try to include not
only passive attainment on how to increase women's
knowledge, but they have experimented with functional
and/or occupational programmes as well (1). In this context, the objective of improving a family consumption arena is not only to improve nutrition but rather through better nutrition to ensure development.

So far, empirical data indicates that the problem in the consumption arena have not yet been solved completely. It has become clear that the spread effect of efforts to improve family's health was very weak, i.e. there are still highly malnourished mothers and children (see Tan, M. et al, 1970; Sajogyo, 1975). In this context, it is important to consider the obstacles that originate from the women themselves and how these relate to the family and society at large. Thus socio-economic and cultural factors altogether can be considered as either hindering or promoting change (see, Telem. I. B. and Herman, S. 1982; Soekirman, 1984; Tan, Mely et al, 1970, Freedman, M. 1955).

(1) Family improvement education, designed primarily to impart knowledge, skills and attitudes, useful in improving the quality of family life, on such subjects as health and nutrition, homemaking and childcare, home repairs and improvements, family planning and so on. While occupational education, designed to develop particular knowledge and skills on such subjects associated with various economic activities and useful in making a living (Todaro, 1977:259).
"Food habits are the ways in which individuals or groups of persons, in response to social and cultural pressures, choose, and make use of available food" (Mead, 1962:50-62).

In order to investigate the possibility of reducing the impact of socio-cultural obstacles, it is necessary to see the actual responses of the woman herself, her family and society at large to the old practices but also to innovations introduced relating to the consumption arena. This should also help to develop effective extension methods. I myself considered this a challenge for a social scientist like myself and therefore linked my studies with an action programme; i.e. the introduction of Kitchen Gardens in Cipari. Chapter VI discusses this project in detail.

The Conceptual Analysis Model of Women's Roles already mentioned prescribed roles have placed women in the domestic domain to perform indirectly productive work. Whereas they are now expected also to participate in the public domain, either in social development programmes or even to out to earn an income. The latter applies more to low income groups, women’s roles are determined not only by the economic strata of the family but also by the structure and types of family (nuclear and/or extended family) and the previous socialisation gained by then, either through their family of orientation or later by their family procreation. At societal level, the role performed by women is influenced by the type the society represents. The analysis of
roles can be conducted from four perspectives of their position in dealing with indirectly and directly productive work done in the domestic and public domain respectively.

(1) Women's traditional roles
A woman belonging to an extended family has the opportunity to share her domestic tasks with other women by getting help from close or distant relatives. Those who belong to the nuclear family may also get help but this is limited to her husband and/or children. All this is influenced by the family composition, i.e. if there are mainly females or male members, undoubtedly domestic work is done mainly by the woman, except if the family can afford to get help from paid domestic servants. Otherwise the woman is forced to perform only her domestic work, which role analysis places in a central position.

(2) Transitional roles
In Java it is usual for women to work in their families' fields, while often the responsibilities of domestic work remains hers alone, there is no sharing of domestic roles with other household members. In this case, she can be expected to fulfil obligatory roles, which role analysis places in transitional roles.

(3) Dual roles
The both domestic and public tasks are conducted by a woman and she gets help from other household members she can be considered to perform 'balanced roles' and/or 'dual roles'.
Flexible roles

If a woman carries out her domestic and public tasks, i.e., earns an income side by side with her man and he helps her with domestic chores this amounts to a 'contemporary role' or 'role partnership'.

To summarise, whether or not women participate in public activities their domestic roles still remain largely unchanged (see Chart 1.1). The difference is only one of degree: either she is fully responsible or she gets a little help from other family members.

Chart 1.1 Women's Roles

<table>
<thead>
<tr>
<th>Prescribed Roles</th>
<th>Perceived Roles</th>
<th>Performed Roles</th>
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<tbody>
<tr>
<td>Domestic Roles/ Indirectly Productive Work (IP)</td>
<td>IP or DP</td>
<td>IP or DP</td>
</tr>
<tr>
<td>Public Roles/ Directly Productive Work (DP)</td>
<td>IP + DP</td>
<td>IP, IP &gt; DP, IP = DP, IP &lt; DP</td>
</tr>
</tbody>
</table>

Notes: IP = Traditional Roles; IP > DP = Transitional Roles; IP = DP = Dual Roles; IP < DP = Flexible Roles
1. The customary division of labour among household members places women inside and men outside the home. This division of work means that women contribute an income and take care of the welfare of the family. While children of both sexes help parents the same, differential treatment is received by the various family members as shown in Chart 1.

Chart 1: Differential treatment received by various family members

1. Woman
2. Man
3. Children

Notes:
1. Receives most preferential treatment
2. Receives less preferential treatment
3. Receives no preferential treatment
A conceptual model illustrating the factors determining women's role performance. The problems faced by women in carrying out their role is seen in the way they allocate their time, this in turn is affected by three interrelated factors, as already mentioned: economic and socio-cultural variables, the background of the women themselves, and the factors deriving from the role performance.

Besides the factors mentioned, there are also factors inherent in the work environment due to the socio-cultural and economic environment.
(1) the economic aspects, which are reflected in (a) the status of the family, seen from the level of expenditure per capita per year equivalent to rice prices, (b) kind of jobs carried out by the household head (HH) and other family members including women, (c) size of land and other physical resources possessed by the family, (d) family composition, including age, sex and numbers of family members.

(2) The socio-cultural aspects operate within and outside the family. The former include (a) social status of the family i.e. educational levels, time spent in income earning and social activities carried out by the HH and other family members, (b) family size and composition, (c) geographic mobility, i.e. travelling, (d) division of labour among household members, (e) family nutritional levels, (f) family perception of women's roles. Socio-cultural variables operating outside the family include: (a) existing institutions, values-norms-and traditions, patterns of relationships between individuals, group of persons and/or kin, kinds of jobs which are regarded by society as suitable for women and for men, (b) existing development programmes, (c) the societal perception of women's roles.

(3) Women's Background

This includes knowledge, attitudes, skills possessed by women in order to carry out their roles, such as educational level (formal and non-formal), age (young or
number of balita they have, time spent in directly and indirectly productive work, household technology which can help lighten domestic work etc.

Those three factors simultaneously affect women's time allocation. At the same time development programmes attempt to encourage women to improve the quality of their family's lives. In order to do this a woman's role is characterised, for instance, by her family nutritional level. This is so because family members are likely to function well and energetically if they are healthy (see Rothschild, undated). In turn, the labour force and succeeding generations can be effectively maintained. Here the woman's role as guardian of the consumption arena plays an important factor. However, it must be remembered that this is also influenced by the closely inter-related factors of economic, socio-cultural, family and societal variables (see Chart 1.4).
1.4 Factors affecting nutritional levels

A conceptual model
Economic aspects here relate to (a) level of family income, and expenditure per capita per year equivalent to price levels, (b) food availability in the family, including access to food (both in terms of quality and quantity), family members depending on that food distribution pattern following the culturally determined division of labour, pattern of daily meals, nutritional levels (especially of vulnerable groups), (c) access to land and credit which can be related to patron client relationships, (d) the family's perception of food values. The societal background (rural or urban) strongly influences what food is usually consumed, by whom, in what situation and the establishment of priority systems.

(2) Socio-cultural aspects influencing the consumption arena of the family include: (a) food taboo practices related to life cycle phases especially applied to vulnerable groups, (b) prestigious foods that is served on ritual occasions, offered to guests, (c) customary beliefs about what may or may not be eaten, how the controlling mechanism operates and who carries it out, in what situation and what are the sanctions, (d) as a means of communication, inside and outside the family. Inside the family, it is symbolised by the habitual pattern of eating together, food distribution priority systems and decision making processes according to the background of society (urban versus rural), at societal level, it is associated
gift-exchange of food operating between individuals and/or groups of persons, both in terms of quality and quantity.

(1) women's guardianship is influenced by their background including knowledge, attitude, and skills. It largely depends on (a) educational levels (both formal and non-formal) and previous socialisation obtained, (b) women's past experiences and adaptation to cultural practices of food taboos, i.e. food taboos practices, prestige foods, infant feeding practices etc., (c) technology (cooking) facilities available, family income, kinds of food prepared, the art of processing-cooking-preparing-and distributing food among family members—the division of labour in carrying out the food path activities, comparable expenditure on food and non-food.

This interaction of economic, familial and societal variables affects a family's nutritional levels (see Chart 1.4).

To test and evaluate women's responses to certain innovations introduced as part of an extension programme an experiment based on research was carried out (1). Response was gauged by the rate of adoption, i.e. the relative speed with which the innovation was adopted by members of the social system.

(1) Innovations introduced to the society are adjusted to the felt needs of the population. This is so whenever innovations succeed basic research where the problems facing the society have already been identified, not only by the researchers but the potential users themselves.
The rate of adoption is usually measured by the length of time required for a certain percentage of the members of a system to adopt an innovation. Therefore, the measuring method is the use of "the innovation, rather than focusing on the individual as the unit of analysis.

Crucial elements in the diffusion of new ideas are (1) the innovation (2) which is communicated through certain channels (3) overtime (4) among the members of a social system. (1) Innovations that are perceived by potential beneficiaries as possessing greater relative advantage, compatibility, complexity, trialability and observability have a more rapid rate of adoption (1); (2) communication channel is the means by which the message gets from the source to the receiver, while diffusion is a subset of communication research that is concerned with new ideas.

(1) relative advantage is the degree to which an innovation is perceived as better than the idea it supersedes; it may be measured in economic terms, but often social prestige factors, convenience, and satisfaction are also important components; compatibility is the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of the receivers; complexity is the degree to which an innovation is perceived as difficult to understand and use. Thus in general, those ideas requiring little additional learning investment on the part of the receiver will be adopted more rapidly; trialability is the degree to which an innovation may be experimented with on a limited basis; observability is the degree to which the results of an innovation are visible to others. The easier it is for an individual to see the results of an innovation, the more likely he is to adopt. These five characteristics of innovations, as sensed by the receivers, contribute to their different rate of adoption (Rogers and F. F. Shoemarkers, 1971:22-26).
the essence of the diffusion process is the human interaction by which one person communicates a new idea to one or several other persons on the basis of interpersonal communication or using a media as a channel of communication; (3) over time, i.e. types of innovation-decisions can be classified into authority decisions and individual decisions, in which the individual has influence (4) social system is defined as a collectivity of units which are functionally differentiated and engaged in joint problem solving with respect to a common goal (2). These four elements of the process of the diffusion of new ideas affect the extent and success of change agents' promotion efforts in diffusing an innovation (Rogers and Shoemaker, 1971:157-158).

(1) see footnote (1) Chapter VI/364

(2) the members or units of a social system may be individuals, informal groups, complex organisations, or subsystems. Each unit can be functionally differentiated from every other unit. All members cooperate at least to the extent of seeking to solve a common problem or to reach a mutual goal. Thus, diffusion occurs within a social system because the social structure of the system affects the innovations diffusion pattern in several ways (Rogers and Shoemaker, 1971:28-36).
I.5. Factors affecting women's response to innovations: conceptual model

Perceived attributes of innovations:
- Relative advantage
- Compatibility
- Complexity
- Trialability
- Observability

Types of innovation decision:
- Optional, collective, authority

Women's responses to innovation

Communication channels:
- Interpersonal, group, and media

Characteristic of social system:
- Urban vs. Rural

Promotion efforts by:
- Change agents, existing formal/informal group in the society

Rate of adoption

This chart is a modified version of the one proposed by Rogers and F. M. Shoemaker, 1971, p. 158
E. Methodology

My study is focussed on women's roles, food, health and development. Therefore, it is related to women's main roles in the domestic domain. I thus try to explore the reasons for the perpetuation of traditional roles; what women actually do in their domestic work rather than what they should or should not do. To find answers to these questions I considered that case studies are more helpful to gain indepth insight rather than rely on survey methods and questionnaires. This in turn made me concentrate my study in one community only.

The reason is simple because a community study is a type of study which attempts to understand and describe a group of people who live in a certain geographical location, share certain institutions in common, and feel togetherness to some extent (Wiseman & Aron, 1970:99-100).

By describing and analysing one community as the centre of my study I do hope to reveal underlying processes and structures that are common to many other local groupings of humankind. I decided to use the family as the main unit of analysis (see Komarovsky, 1962), because it is through family sponsorship that individuals enter the community and become members of the large and more amorphous social grouping. Yet families do not constitute a homogenous unit of analysis, but are also differentiated. Accordingly, family expenditure per capita per year equivalent to rice prices was used as indicator of family
groupings (see Sajogyo, 1976). These family strata are important in this context because they affect life styles and life chances of family members, including woman’s role and performance.

Area selected for study

The area selected for study is Cipari village, located in West Java (see Chapter II). The selection was based on several criteria, i.e. location, ecology and the traditions maintained by villagers. Altogether Cipari ranks as a traditional rural society where most people depend for their livelihood on agriculture and are linked by patron-client relationships.

2. Respondents

Some data was collected from all the 350 village households, while other information was gathered from sample households or selected case families. The 100 percent village census provided the basis for the compilation of a stratified random sample. Households were classified into three strata: rich-middle-and poor, noted by I, II and III respectively. To do this I followed the "Sajogyo Poverty Line Concept", using the rice equivalent method applying to rural areas (1).

\[(1)\]

In his concept, Sajogyo differentiates between rural and urban areas in terms of the number of kgs of rice equivalent per capita per year defining each stratum (1976).
Strata I: includes households having an income in excess of basic needs; i.e. households with an expenditure of more than 320 kgs rice equivalent per capita per year.

Strata II: includes households with an income that reaches the line of food sufficiency, i.e. those who have an expenditure of more than 240 up to 320 kgs rice equivalent per capita per year.

Thus my sample consisted of 60 households which represented a 16 percent sample of all village households.

3. The study methods

I conducted my anthropological style study of Cipari with a holistic approach (see, Epstein, A. L. (ed.) 1979; Epstein, T. S. 1978) and used several different methods: Census, collection, in-depth enquiries, case material, panel and action method based on grass root research. Each method was used for a different purpose.

(a) all village households were included in my census not only to get a full picture of the overall community but also to classify households according to Sajogyo’s concept of Poverty Line.

(b) in-depth enquiries were conducted not only to gain insight into complex socio-economic and cultural phenomena but also to pursue specific subjects in great depth. For
in-depth enquiries I used a limited sample of households representing the three strata.

(c) case material giving individual life histories aimed to show how attitudes develop over time. A major advantage of this method is that it preserves the integrity of the unit under study, and more important it allows the collection of detailed data on a few cases. This is particularly useful when investigating a phenomenon about which little is known (see Wiseman and Aron, 1970:76).

(d) The panel method involves observation and collection of data from the same social unit several times at regular intervals (once a month) covering the two agricultural seasons. To allow me to collect time and household budgets for a whole month, I divided my 60 sample households into two groups; each group represented the three strata. The first group was visited daily during the first and second week of the month, while the rest was seen during the third and fourth week of the month. This is one of the advantages of this panel type study that respondents studied over a period of time need not be the same individuals (Shah, 1972:12-13).

(e) Action research was carried out by combining several methods, i.e. participant observation, community study, exercises and demonstration methods, individual and group approaches. Chapter VI discusses all these methods in detail.
Data collected according to each method used is presented in Table 1.1.

<table>
<thead>
<tr>
<th>Kind of data collected</th>
<th>Methods used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical test data</td>
<td>Body weight and height were used to measure the nutritional status of Balita, while for arms circumference, nutritional levels of vulnerable groups, and height were given at appropriate points in the following chapters.</td>
</tr>
</tbody>
</table>

5.4 Retrospective Data
- Details of specific recall periods were used to discover the nutritional status of the study sample. The study was carried out over an extended period of time, depending largely on what information I chose to collect from certain groups and/or individuals depending on the subject matter of my immediate interest. Sensitivity: (1) I tried to obtain more and more specific information by using retrospective questioning, starting from the interviewee's general question and gradually narrowing on the specific area of my interest, narrowing the questions as I went along.

I used several types of data-gathering techniques, depending on the level of interviewee's depth and the level of the interviewee's in-depth interviews. I usually started by asking the general question and gradually narrowed the questions as I went along.
As I already mentioned, I conducted a detailed and intensive village study which relied heavily on participant observation. This influenced the way I present my results.

This is a synthesis of the quantitative and qualitative approach. The quantitative data presented in numerous tables show the statistical pattern of each subject, while the qualitative material offers explanations why certain patterns occur. To do this I usually present the materials extracted from my case studies and participant observation.

Altogether, I suggest my qualitative data are an important complement to the many statistics I collected and represent a "body of meaningful data."

Problems found in gathering the data

As with most other researchers who conduct similar studies, I also encountered several problems. But since the problems I faced differed from one subject to another, I prefer to present them in the appropriate context in the following chapters. I do hope that this will help the reader to gain a more meaningful picture of what problems I faced and how I tried to solve them.

In general, the ability of using the local language should be taken into account by anyone intending to use "participant observation" in his/her study. Without familiarity with the language serious problems will arise, especially in personal (interpersonal) communications. In my case, for instance, most villagers, especially the older
I was relatively easy for me to get insight into their lives and understand fully both their articulated and non-verbal responses to my questions. Though my accent is slightly different from theirs, it aroused sympathy in them for me. They appreciated that I tried to learn their language during my stay in Cipari in 1979 to 1981.

The addition used to speak in their own local language namely Sundanese. Since I also speak their language it was relatively easy for me to get insight into their lives and understand fully both their articulated and non-verbal responses to my questions. Though my accent is slightly different from theirs, it aroused sympathy in them for me. They appreciated that I tried to learn their language during my stay in Cipari in 1979 to 1981.
<table>
<thead>
<tr>
<th>Kind of data collected</th>
<th>Methods:</th>
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<tbody>
<tr>
<td></td>
<td>SI</td>
</tr>
<tr>
<td>I. Household data:</td>
<td></td>
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<tr>
<td>1. Population census of the 350 households</td>
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</tr>
<tr>
<td>2. Household size and composition</td>
<td>x</td>
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<tr>
<td>3. Relationship to household head</td>
<td>x</td>
</tr>
<tr>
<td>4. Level and non-formal educational level</td>
<td>x</td>
</tr>
<tr>
<td>5. Professionalisation process</td>
<td>x</td>
</tr>
<tr>
<td>6. Number of productive labour units</td>
<td>x</td>
</tr>
<tr>
<td>7. Housing, including lighting, type of houses, number of rooms, source of water, heating</td>
<td>x</td>
</tr>
<tr>
<td>8. Agricultural land owned, including ownership</td>
<td>x</td>
</tr>
<tr>
<td>9. Past history of size and kind of land</td>
<td>x</td>
</tr>
<tr>
<td>10. Present family income and expenditure</td>
<td>x</td>
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<td>11. Past family nutritional level</td>
<td>x</td>
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<tr>
<td>II. Employment:</td>
<td></td>
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<tr>
<td>1. Employment of family members aged 10 years and over</td>
<td>x</td>
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<td>2. History of jobs</td>
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<td>3. Perceptions of work</td>
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<td>III. Sample income equivalent in rice per capita per year for 60 sample households</td>
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<td>3. Cash and non-cash income, return to work</td>
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<tr>
<td>IV. Household expenditure of 60 sample households</td>
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<tr>
<td>1. Food and non-food</td>
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<td>V. Health:</td>
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<td>1. Pregnancy histories, birth, illnesses, death</td>
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<td>2. Nutritional levels of vulnerable groups</td>
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<td>VI. Intrahousehold food distribution in 60 sample households</td>
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<tr>
<td>1. Eating pattern, daily meals</td>
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<td>2. Infants, balita feeding practices</td>
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<td>3. Food preparation</td>
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<td>4. Food taboos, prestigeous food offered to guests and for ceremonies (gathered also from other sources than the 60 sample households)</td>
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### Role (continued)

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<th>Material to be studied</th>
<th>Action by women and/or community of:</th>
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<td>divorce especially for a woman</td>
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<td>Family planning and other innovations</td>
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</table>

### VIII. Material from cases to describe:

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<th>Household income and expenditure in relation to kind of jobs, patron-client relationship in giving a full account</th>
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<td>The role of women at present and their inherent conflict</td>
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<td>Women's perception of work, health, food taboo, family planning, etc.</td>
</tr>
</tbody>
</table>

**Notes:**

- Structured interviews
- Unstructured interviews
- Recal retrospective
- Anthropometric method
- Case method

indicates the method used