

CHAPTER II
Review of the related literature

INTRODUCTION

This chapter substantiates the proposition in the chapter I to adopt a totally new approach towards nutritional impoverishment. This substantiation has been done through the review of literature related to nutrition in a broader perspective as defined in the chapter I. The review has been organized under five major categories viz. (1) the concept of development; (2) ideas about nutrition and development; (3) structural analysis; (4) network analysis; and (5) nutrition education.

2.1 Need for interdisciplinary perspective

The first chapter made it clear that the present study deals with five major dimensions. These are :i) The concept of development, ii) ideas about nutrition and development, iii) Structural Analysis, iv) Network Analysis and v) Nutrition Education.

Before going into the review of the different studies dealing with the more subtle aspects of these areas, it may be submitted that basically the idea of bringing about the convergence of two radically different theoretical and methodological perspectives in the common frame of analysis was born out of the realization of the limitations of the traditional ways of tackling the problem of nutrition through education. Moreover, the need for searching new ways of dealing with the problem of " malnutrition" became important in the light of the desire of the Indian Institute of Education , Pune to explore the possibility of initiating a nutrition education programme in the rural area. Indeed , a small study in the area around the study-village proved as a precursor for the present analysis. Hence, it could be said that the nature of the research was partly determined by a practical need. The review of the related literature is organized under the titles according to the areas mentioned above.

2.2 Concept of Development

The material reviewed under this area falls under two categories viz. development policy and programmes ; and the theoretical thinking in relation to the concept of development.

However, given the complexity of the subject under discussion, the researcher has not organized the presentation on the lines of the sub - categories. Instead, he follows an itinerary path of going from the school of economic development to social development as it was self -evident in the literature with the progress of time.

It is apparent that nations in different parts of the world tended to overemphasize the economic goals of development than having a comprehensive view of development including the social goals. For instance, it is discussed in details by Gunnar Myrdal (1968) that "with the consolidation of the modern nation - states following the industrial revolution, rulers in the west as well as in other quarters of the world put exclusive emphasis on the economic indicators of development. Indeed, this approach had its own set of repercussions too. This is especially true in the case of the countries of South Asia. Thus, the need to de - emphasize the exclusive importance of the economic targets of development."

The overemphasis by developing countries on economic indicators of development is pointed out in many other documents like The Impact of Development Strategies on the Rural Poor report (1988) states that "... (i) Most developing countries continued to allocate a smaller share of public expenditure to agriculture than their share of income from agriculture ... (ii) between 1975-79 and 1980-84, a majority of developing countries increased the allocation of public expenditure to agriculture relative to the share of agriculture to GDP, although

the ratio continued to be disproportionately low in many countries ...".²

The regional reports on land reforms in the late 1960s and throughout the 70s in different developing countries as presented in the same document point out that "invariably the land reforms carried out half-heartedly in many countries have led to a growth of either capital farming by landlords or the rise of a middle class of farmers who have ushered in the era of Green Revolution."³

Report by the International Monetary Fund again speaks exclusively in terms of economic indicators while analysing the effects of the recession of 1980s. Rather it talks about the facets related to the quality of life as something consequent to economic phenomena.⁴ Similarly the world development report of 1991 thinks it necessary to focus on economic factors independent of the socio - cultural factors. Indeed the report points out that economic development should take a precedence over 'social development'. This is amply clear from the discussion in the overview introducing the report "...the processes driving economic development are by no means fully understood...history shows, above all, that economic policies and institutions are crucial... it obliges governments everywhere (not just in developing countries) as well as the multilateral agencies to take account of the factors that have promoted development and put them to work...a consensus is gradually forming in favour of a "market -friendly" approach to development..."⁵

The same picture existed on the Indian scene also for a considerably long period with the policy - makers' focus mainly on the economic targets. This is very much evident in the historical fact that the Mahalonobis model adopted by the Indian rulers in the early 50s put thrust on economic growth. This observation is substantiated by Narain(1982). While taking an overview of the changing development perspective, particularly in India, he ascertains that initially Indian model of development was indeed influenced by an economic perspective. This inference is supported by Dube (1983) too . He is discussing the fallacy of the doctrine of economic development as the major goal that is substantiated by the Indian experience. He points out that "...it is evident that totally growth oriented approach to development is not possible in the developing countries...".⁷ The exclusive faith in the economic indicators of development was primarily based on the premise that 'monetary and physical benefits of economic growth would percolate down from higher strata to lower ones of society.' These premises were indeed not totally unfounded as economic processes in the western industrial nations in the later parts of the nineteenth century and early part of the twentieth century had shown a labour oriented growth in employment subsequently followed by improvement in living conditions (Chakravarty, 1987).⁸

According to the same author, 'this faith was reinforced in the minds of the planners in India because of certain structural loopholes in the economic infrastructure of the newly independent

state like acute deficiency of material capital , low speed of capital accumulation, less than threshold availability of employment, low rates of conversion of savings into productive investment , marginally existent industrial sector to accommodate surplus labour from agriculture etc. Consequently, policy - makers and planners in India for the majority of five year plans focused on creation and maintenance of large - sized infrastructure ;development of heavy industries ; modernization of agriculture etc.' This inference is further corroborated in the editorial of the collection of papers titled Development Goals and Strategies - The Next Decade(1981).⁹

This faith in economic development was reflected in the programmes of many countries including India. This is expressed in following description of the scene in the report of the FAO conference on Agrarian reform and Development (1988), "...many development plans ...have incorporated explicit targets for employment and growth, while others incorporate some anti-poverty policies, which include: (a) asset distribution ; (b) asset or skill development of the poor ; (c)employment generation ... the Indian seventh year plan (1985-90) contains a programmatic approach towards poverty alleviation , with specific targets for the reduction of the number of people below the poverty line from the 37 percent in 1985 ,to 26 percent in 1990..."¹⁰

Nevertheless, the limitation of the traditional perspective of development has become amply clear to the policy -makers as well as their advisors (Dube,1983).¹¹ There are serious efforts by

policy -makers to define the new perspective as a substitute to the traditional one. This is summarized as follows (Streeten, 1986) "...the basic needs approach attaches fundamental importance to poverty eradication within a short period. It defines poverty, however , ...as the inability to meet certain basic human needs by identifiable groups of human beings ; poverty is characterized by hunger and malnutrition, by ill-health and by lack of education, safe water, sanitation and decent shelter...".¹² This thinking is substantiated from other quarters of the community of development specialists too like, The World Development Report (1991) states that "...the challenge of development in the broadest sense, is to improve the quality of life .

Especially, in the world's poor countries, a better quality of life generally calls for higher incomes - though it involves much more. It encompasses, as ends in themselves, better education, higher standards of health and nutrition, less poverty, a clean environment, more equality of opportunity, greater individual freedom and a richer cultural life...".¹³

Indeed, the realization of the need to evolve a new school of thinking about the concept of development is accompanied at the practical level by the intention to evolve social indicators of development. This is expressed as follows (Kuper,1985), "...proponents of the ...perspective are yet in the process of defining socio-economic indicators of development. This condition is mainly a result of (1) the considerable heterogeneity of social items , (2)absence of a comprehensive social model , and

(3) lack of common units of measurement ..."¹⁴ This view is supported by certain other institutions too (FAO, 1987), "FAO has assisted countries in developing appropriate socio-economic indicators ...for the monitoring and evaluation of agrarian reform and rural development..."¹⁵

The new perspective can be represented in the words of Sharma (1986). He focuses on the issue of centrality of people in development, "... since ultimate values belong to the realm of culture, questions like **what** is development, or change in what direction is to be regarded as development or what the aim of development is, are very much concerned with culture. Similarly, the question **who** is undergoing development is related to the culture of the people ..."¹⁶

2.3 Ideas about Nutrition and Development

There was no dearth of material regarding the pedagogical content and administration of implementation related aspects of the subject. Very few authors sharing the view about nutrition as espoused in present study (that nutrition is not merely a physiological process but a process of production, distribution and consumption of food) could be found. This indicates that still nutrition is largely looked upon as exclusively a physiological process restricted to consumption of food. A book by Baer (1981) contains nine papers on the importance of breast feeding and the need to integrate education about breast feeding into health and family planning services. No where any of the nine authors have mentioned the need to relate the

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productive, distributive and consumptive aspects of nutrition. An epitomization of the narrow view about nutrition can be found in Directions for Nutrition Education Research (The Pennsylvania State University, 1980). This book presents papers that exclusively focus on the theoretical aspects of nutrition improvement like developing standardized instrumentation, substantiative methodologies, for evaluation measures and common tools and language for determining levels of behavioural change. Again, all these needs are defined with respect to only the consumptive dimension of nutrition.

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This indicates that a large section of the community of nutritionists and development specialists look at nutrition as a process of 'eating properly'. Even the interest shown by Anthropologists in Nutrition stemmed from i) the attempt to provide descriptive ethnographic support to this view; and ii) the urge to understand man's functional relationship with his environment. Thus, studies motivated by this urge tended to focus on the physical aspects of this functional relationship rather than studying nutrition as a system of 'cultural management' of production, distribution and consumption of food by man. For example, Conklin (1957) considers ecological principles while describing and interpreting broad types of subsistence.

Agriculture gave a separate treatment to environmental data and socio - cultural data. Indeed, the linkages between ecosystem and socio - cultural sub - system were not clear in his work.

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These characteristics were exhibited by the studies of other

Anthropologists too (Carneiro, 1966). Lee focused on the optimization of food sources and ecological constraints dictating the hunting - gathering behaviour of a social group in his study on the !Kung Bushmen of Kalahari desert in Africa. Although he could explain the functional interdependence between a number of ecological, nutritional, demographic and organizational factors in his study; yet the role of non - indigenous features and factors in the ecology of nutrition of a group could not be

accomplished in his research.

Another major contribution to the anthropology of nutrition was from Raappaport (1967). His attempt to measure caloric and protein intake, energy inputs and outputs, to estimate productivity and carrying capacity and the effects of animal populations on ecosystems and to describe the numbers and kinds of floral and faunal species were totally new contributions to the anthropology of nutrition. Especially, the contributions were significant in the light of his attempts to explain the relationships between different components of the ecosystem in terms of trophic (i.e. nutritional) relationships. This is important from the point of view of the present research. However, the major difference between his thesis and the present research is that, while the present researcher is interested in understanding the processes of stability and change associated with the nutritional perceptions of the villagers, Rappaport focuses on optimization attained by a particular community

through energy flows.

Nevertheless, on the one hand, one sees a gradual but steadily growing awareness about nutrition as an integrated process of production, distribution and consumption of food by a group. On the other hand, there is a strong awareness about the close link between nutrition and health (which has been defined as an important dimension of the quality of a population in Chapter One). This is reflected in certain parts of the literature viz. Mejia describes, in details, the effort by the Columbian government to set up a multisectoral plan linking government agencies and private industries in the sectors of production, distribution, health sanitation, and education to combat the country's serious malnutrition problem (Mejia, 1980).²³ Another author aware about the relationship between nutrition and other aspects of development is Rasmuson (1977). He observes that 'until the 1970s the nutrition education activity was rather narrowly defined with focus only on the didactic, formal approach and aimed at disseminating information than at changing behaviour. Growing awareness of the "nutrition factor" in socio-economic development and the changing emphasis in international medicine from curative to preventive medicine elevated all nutrition interventions to new importance.' Indeed, the author in this case is opening up to the possibility of designing programmes that are much flexible in technology and broad based in content as he relates nutrition with the larger socio-economic picture.²⁴

Another author (Solon,1983) goes a step further and emphasizes on the need for peoples' participation in the management of a nutrition improvement programme. He, indeed, looks upon the nutrition improvement programme as a culmination of the long drawn learning process of the people instead of nutrition improvement programme as the cause of conscientization of people.²⁵

Yoddumnern-Attig (1992) has stressed the same point on the basis of a research study in eight villages in that country.²⁶

Another document that is produced by UNESCO (1983) takes into account not only the physical aspects of the nutritional needs of a population but also goes further to define nutrition education as a multi-variate activity with alternative educational packages pertaining to the socio-economic and cultural context of the potential user. Indeed, the document takes into consideration the broadest aspects of the process so as to include the productive and distributive aspects also.²⁷

Sequential to the above authors, Church and Doughty (1976), go on to elaborate the importance of cultural context of nutrition. They observe that "...in traditional societies foods are produced at the local level. They attain their own roles in the social and sensory aspects of people's lives. Food preparation follows particular customs . Nutrition education to be effective must take these local aspects into account and should try to meet its objectives through introducing a minimum of changes...".²⁸

Drummond (1975), indeed, went further to actually concretize this approach towards nutrition in the form of an experimental community based nutrition education programme in a small village in Brazil. Her thrust is on the involvement of the local poor people in the designing of a nutrition education programme. She observes that "...Oppressed peoples, such as the poor and hungry of this area...must participate in a humanizing process, in which nutrition can play a large part. The desire for health and survival is undoubtedly a deep source of motivation for the participation in the process of humanization. The development of consciousness can thus have a focus...".²⁹

The above discussion about the relationship between nutrition and development can be summarized in the form of view as expressed by Edie (1980) "...nutritionists have to look at nutrition education as more than mere dissemination of information about good food and balanced diet. Educators should be aware that their role is more than pedagogical; they could play an important role in the formation of food and nutrition policies that could lead to real improvements in nutritional status. Malnutrition results not only from inadequate quantities of food, but also from inappropriate distribution of food and the means to produce and process it...".³⁰

The researcher's perspective about nutrition, as operationally defined elsewhere in the thesis, comes very close to the above perception as both of them look at nutrition as not merely consisting of consumption of food but including production and

distribution of food also. This view stands correct empirically too as one can see that weakness in either of these three linkages in nutrition can affect the nutritional status of a group adversely. Thus, nutrition can be understood as the technological management of the environmental system by a social group.

2.4 Structural Analysis

As the review of literature related to development and nutrition above shows, researchers dealing with the problem of malnutrition have mostly dealt with it in a rather isolated manner. They either treat it as merely a physiological and /or psychological phenomenon of consumption of food or they consider it as a phenomenon largely controlled by extraneous factors that can be sufficiently controlled in order to improve nutrition. This view would not be consistent with the need to launch a self - educative nutritional improvement programme for a community. Thus, it becomes imperative to peep inside the minds of the participants who are ultimately going to create the programme and use it for their own end. Again it is not sufficient to merely look into the cognitive aspects of the minds of the participants in a programme, but to go ahead and identify those patterns of thinking of people that are stable and hold an unequivocal importance for the nutritional status of the people. This requirement can be best fulfilled by structural analysis because it deals with those aspects of the cognition and expressed behaviour of the people that exhibit a marked

permanency in the sense of structural qualities that can be abstracted with the help of universal characters.

There is a long tradition of structuralist thinking in Anthropology. There were different shades of structuralist thinking having some commonalities and some differences. It may be useful to mention two important anthropologists in this tradition here. Bronislaw Malinowski had emphasized the idea of culture as a 'whole' wherein different components have definite functions to play in order to retain the complex whole of culture. Thus, he asserted that 'every culture has an implicit structure which manifests itself through the functions of the components of a culture. Malinowski rather tended to focus on the functional aspects of culture than making the structural aspects explicit (Le'vi-Strauss, 1946)³¹.

Another anthropologist in this tradition who went ahead of Malinowski to discuss the concept of 'structure' consciously was A. R. Radcliffe-Brown. He conceptualized 'society' and 'culture' as an integrated whole. He proposed that the 'society - culture' whole helped to organize the cognition of the individual and his social relationships in a particular pattern ; and these patterns were determined by structural principles (Le'vi-Strauss, 1963)³².

Anthropological investigation was influenced by the thinking of Malinowski and Radcliffe-Brown till the end of World War II. A major feature of the thinking of both of them was 'construction of the particular.' This 'particular' would be either a particular social organization or a particular culture as well as an

intended whole encompassing both of these. This feature also marked the major limitation of the structuralist thinking before Le'vi-Strauss. This was that they tended to focus on the specific 'social' and 'cultural' cases. Thus, they would strive to understand the inner organizational, cultural and psychological mechanisms that would ensure integrity of the particular wholes ; rather that, searching the universals in different cases.

Another major limitation of the structuralist - functionalist thinking was that it focused on those processes that maintain the whole. Since these 'processes' were treated as 'functions'; hence, the element of change implicit to any process could not be studied by this school of thought.

Indeed, these were the reasons that encouraged the present researcher to consider the structuralist thinking established by Clause' Le'vi-Strauss within the fold of anthropology. As one knew, his major concern was about 'identifying the universals that are basic to all forms of human cognition.' This perspective substantiated the aim of the present researcher (which was rather implicit in his study) to explore the generalizability of certain conceptual constructs like 'interpersonal communication networks,' 'exchange of information,' 'agrarian community,' 'socio - cultural context' etc. used in this study to other similar entities. Indeed, some of these concepts owe their intellectual substantiation to Le'vi-Strauss.

Second reason for inclusion of Le'vi-Strauss was that the present researcher was interested in studying the perceptions of

the members of the study village about their physical environment. The importance of studying these perceptions lied in the desire of the researcher to study further about the exchanges between the cultural system and the ecosystem of the village in future - which was although outside the scope of the present study. This focus on the exchanges between systems could be substantiated by earlier works by Le'vi-Strauss (1966).³³

Nevertheless, this is not the only reason for considering his work for the review; as it is not deniable that he holds tremendous intellectual influence on a number of other disciplines also. Obviously, neither can one just ignore him nor treat him on the same plane like other structuralist thinkers.

One's intention in reviewing his work is mainly to clarify the concept of 'information' which is central to the interpretative context of the present study. If one makes an attempt to see the historical context of Le'vi-Strauss and implications of his work for other structuralist as a pre-requirement for the above mentioned intention, then certain conspicuous inferences can be drawn. These are as follows :-

1. Le'vi-Strauss traces his antecedents to the philosophical tradition of the famous French thinker of the Enlightenment Rousseau who, according to him, was the first philosopher taking cognizance of man's transition from animality to intellect. Indeed, he thinks that this transition of man sets him apart from the rest of the living world which relies on instinct. This development is thought to be the precursor of the process of

emergence of CULTURE (Le'vi-Strauss, 1963). This has an important implication for the present study as one can not understand nutrition merely as a physiological process, but as a complex cultural process involving the sensory perceptions and cognitive schemes of the thinking of a people engaged in the acquisition and consumption of food.

2. PITY is a quality uniquely possessed by man and which allows him to think beyond his own circumstances. Indeed, pity allows man to identify with other cultures; but obviously, the discipline of anthropology rests on the premises springing out of this quality of human psyche.³⁵

The relevance of the present research endeavour has to be understood in the light of the above point. Thus, this study can not be merely an objective analysis of the nutrition related conditions of a people; but rather a facilitation of their own effort at obtaining satisfactory nutrition. Thus, this study instead of becoming an objective study would be more of an inter-subjective enquiry.

3. Humility about oneself and identification with others have ethical consequences. If at the level of the psyche "I am not 'me' but the humblest of 'others' then my culture can also never be the most superior but rather one among the others. This forms the ground for the premises of Cultural Relativism.³⁶ (Le'vi-Strauss; 1963). This might be considered as the limit of the present attempt at defining the content and form of a nutrition education programme. It implies that I can not simply

thrust any 'scientific 'content on the members of the community. On the contrary, the scientific content has to be tested for its viability in the cultural context of the community. This is important for the concept of information as any information, that has to be packaged in the educational programme, must be palatable for the targeted participants in the programme.

4. According to Le'vi-Strauss, the natural dimension of man's existence can be identified only after an abstracted model of his CULTURE has been constructed. (Le'vi-Struss; 1963). This inference holds tremendous importance for the concept of 'information' in the present study. As any interaction among the members of the community, converted into a series of values that can be operated, is considered as information in the present study, even the culture of a group can be interpreted as information.

This is necessary in the light of the need to abstract the **culture** of a people. This argument is based on the assumption that 'information is the most logical form of abstraction of a phenomenon .'

5. Le'vi-Strauss accepts the contention of Durkheim (1903) that 'social relationships are end-products of a categorical mind'. This position implies that social relationships are always subject to a taxonomic system of classification. This contention needs to be accepted with reservation as one is presuming in the present research that 'social relationships are forms that exhibit an intricate interplay of change and stability over a

period.

Thus , social relationships can not be relegated to the level of end - products; on the other hand, they play a crucial role in defining the nature of a 'culture ' at a particular time. Evidently, position of this researcher is substantiated here and one's own contradicted by Le'vi-Strauss in another place when he indicates awareness about the 'ever present contingencies of historical change and temporal vicissitudes ...' . (Le'vi-Strauss;1963).

6. Another important substantiation for the present study is by Mauss (1950) who conceived the relation between personality and culture as dynamic and not as a causal one. This, indeed, left a scope for the researcher to go beyond the structuralist argument and converge on the concept of networks as it will be discussed later in more detail. This dynamic conceptualization about the individual and his culture rationalizes the process of change in society because it substantiates the proposition by the researcher in Chapter One that through networks the individual acquires the content of his culture. At the same time, he remakes it and this remade code of behaviour is sent back to the larger gamut of his culture; making this is a continuous process entailing change and stability in Culture .

7. Another important contention by Mauss and Le'vi-Strauss that has a fundamental significance for the present study is that 'phenomenal realities , including cultural artifacts are always reducible to a common infrastructure ... the unconscious and

universal human brain invariably sustains and always accounts for observed ethnographic data and inferred ethnographic realities... what is the nature of this unconscious reality...its definition is in part derived from ...concept of reciprocal exchange ...the exchange of gifts is a synthetic, relational, and systematic process...'. Given below are the two implications this preposition has for the present research

(i) If one needs to understand the nutritional behaviour of a group in its cultural context then it has to be reduced to a form which also describes the procedural qualities of the original subject - matter. The researcher thinks that the concept of network holds the potential to describe both i.e. the systemic as well as the procedural form of nutrition in a community.

(ii) By means of studying the nutritional networks in a community, it is possible to generate the structural qualities of nutritional behaviour in a community. At the methodological level, it holds significance in terms of sampling of the individuals for the present study as it implies that modelling of the network encompassing a few individuals can definitely provide structural qualities of the information and its exchange within the community.

8. Another important contribution by Le'vi-Strauss that has bearing on the present research is definition of the axiomatic of structural anthropology. He espouses three principles on which this school of thought rests. These are

- a. the invariability of the rule as a rule;
- b. reciprocity as the most immediate form of integrating the opposition between self and others;
- c. the synthetic nature of the gift.

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If one tries to relate these with the empirical reality, then it implies that (i) there can not be variation in the way a particular reality is interpreted; (ii) culture advances through communication and other forms of exchange between members of society; (iii) an item transferred between individuals attains a new value after transfer and this value connotes the invariant quality of the relationship between the partners. This perspective additionally substantiates the appropriateness of networks as the core of the subject-matter of this study. According to him, all socio-cultural phenomena can be reduced to the terms based on the three principles mentioned above.

9. The paradigmatic interests of Le'vi-Strauss ultimately culminates into an explicit interest in mathematics. According to him, "...mathematics reveals the intrinsic properties that manifest in its purest form, the functioning of the human mind..." (1968). Secondly, at the practical level he uses the mathematical techniques to reduce a wide range of data right from the kinship classificatory system of the Australian Aborigines up to the analysis of the mythic variants (1960) .

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Use of the mathematical techniques have been advocated by certain other structuralist too like, Jakobson (1960) "...it is not things that matter , but the relation between them..." . This gives

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credence to the effort by the present researcher to employ certain techniques for analysis which are based on the graph theory in mathematics. Indeed, the perspective of the researcher comes closer to that of these prominent structuralist as he also focuses on the relational values than the 'nature' of the things which are in interaction in the system of communication.

2.5 Network Analysis

Discussion about the implications of the structural thinking regarding socio - cultural phenomena inevitably leads one towards the sub - field of network analysis in Anthropology. Consideration of Network Analysis is compelled by a participatory approach towards development too. If one wants development activity people - oriented, then one has to consider the issue of methodology of a people - oriented development activity with priority. Use of native communication systems is an important component of this nascent radical methodology. This view is reflected by Sharma. He says, "... the question **how** development is to be brought about is deeply related to culture. Patterns of communication are integral parts of all cultures ... traditional societies have their own symbols, media and networks of communication. The area and intensity of impact of messages, informative as well as valuational, concerning development will be enhanced manifold if the traditional networks of communication are geared to the stupendous tasks of development...". What is the concept of a 'network'? How does it relate to the present problem of designing a nutrition education programme? Which are the

different types of network analyses, and which among them is more suitable for the kind of problem being discussed here?

"a network is a structure in the form of a net: a system of
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lines" (David K. Smith; 1982). This is one of the most general definition of network that one can offer to make a sound beginning. Though as one moves further and tries to relate the concept outlined above to the social reality, certain qualitative characteristics of the term stand out. In the first place, one has to cope up with the circumstances that led to the acceptance of the concept of networks in the social sciences. First of all there is no scope for confusion about the relevance of the concept **network** in social research. In other words, it can be said that there is no point in debating the **validity** of the concept as far as it comes to the help of a social scientist as a handy tool. This is particularly so in case of Anthropology, a discipline which has provided a firm methodological ground to the present research. This view is substantiated by Alder Lomnitz (1977), "...the question about the "real" existence of a social network is meaningless: it is an abstract category defined at the convenience of the anthropologist. It is not a native
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category..."

Firth (1951) observes that, ' in any social organization, there is continuity as well as variation from the formal patterns and the newly emerging variations are limited by the structural
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forms'. There was a strong call for moving away from these typically structural thoughts in Anthropology after the end of

the second world - war. This is represented by Blau (1956) who puts more emphasis on the ACTION rather than the structural thoughts while interpreting the social changes and more particularly the deviant behaviour in an organization. He further adds that "patterns of activities and interactions that can not be accounted for by the official structure ... find expression in a network of social relationships ...". Thus, one can see two radically differing perspectives standing in contrast to each other. Clearly, the second perspective took resort to the concept of network to account for the non - permanent phenomena in society.

However, increasingly the analysis of structural relationships and personal networks are converging on each other (Mitchell; 1969). Indeed, this is reflected in the acceptance and adoption of the concept of network within the fold of structuralist interpretations following the field of network analysis as represented by Fortes (1949) and Le'vi-Strauss (1967) in their respective works in the 1940s. In the 1970s there were concerted efforts by social scientists to define the network :

- a. A relevant series of linkages existing between individuals which may form a basis for mobilization of people for specific purposes... (Whitten; 1965).
- b. Human beings are connected by a complex network of social relations. The term 'social structure' is used to denote this network of actually existing relations (Radcliff - Brown; 1965).
- c. Partial network is any abstract of the total network based on

some criterion applicable through the whole network (Barnes; 1954).

d. Face to face relationships may usefully be distinguished as structural, categorical, or egocentric according to the basis upon which individual persons intuitively classify one another on meeting.⁵⁶ (Southall; 1961).

Another important application of the concept of network is the use of Graph Theory in finite mathematics. Certain techniques in that sub - field of mathematics have been proposed to analyze the relationships between individuals⁵⁷ (Hage and Harary; 1983). Some of these techniques like Reachability Analysis; Capacitated Network Analysis; and Markov Chain are of potential use for the present research as these focus on the communication networks in small groups. As well as, these techniques carry the notion of 'optimal information flow' which is crucial to the present research. This will allow reducing complex social interactions with respect to nutrition to conceptual simplicity. The researcher referred to the work done by following social scientists and mathematicians on the basis of the Graph Theory. Berge (1962) describes a number of anthropological situations in which the data can be reduced with the help of the techniques rooted in Graph Theory.⁵⁸

A paper by Berlin (1973) discusses the cognitive aspects of the classificatory systems used by certain groups in terms of the interdependence of the aspects.⁵⁹

Brookefield (1971) extensively discusses the structural

qualities of the cognitive systems that guide the navigational skills of the Melanesians as well as the interplay of economic exchanges and power. A paper by Cartwright (1979) discusses the implications of the concept of balance and clusterability for the analysis of social relationships.

Cohen (1978) discusses the networks exchanging food items in their ecological context. Doreain (1981) discusses the possibility of identifying the conflicts within a social group with the help of the concept of Reachability.

Kapferer (1969) discusses the ways in which potentially dominant information mobilizers keep operating in networks.

These studies basically provided an insight to the researcher about the potential uses of graph techniques in the analysis of cognitive systems as well as social relationships.

Thus, one sees that a number of researchers have tried to define the generalizable as well as the specific aspects of the network. After all the elaborate discussion about the structuralist perspective and networks, it has occurred to the present researcher that there is a need to relate the two perspectives mentioned here as one wants to model the process of transition from the subconscious (as described by Le'vi-Strauss) to the mundane or empirical fact and vice-versa in the case of present research. This requires certain degree of flexibility in the interpretation which is apparently lacking from both the perspectives.

This flexibility is required in terms of balance between

dynamics that characterizes any system and its stability. Both these expectations can be fulfilled with the entry in the picture of a perspective that allows dynamics and stability to exist together. This need may be satisfied to a considerable extent by cultural ecological perspective. This perspective focuses on those core features of a culture that are directly related to the economic organization of the group. Thus, indeed one can correlate the environmental conditions; the food use patterns of the community and its cultural schemes related to the use of certain nutritional conditions in a certain manner. Indeed, one can go on to construct a model that treats the ecosystem of a group as a network and integrate it with the nutritional behaviour of the group under study which is also modeled as a network i.e. the cognitive system associated with the nutritional needs and the actual interactions exchanging the nutritional information and /or food (Harris;1968).⁶⁵

This view asserting the close link between the cultural perceptions and ecology is substantiated by other Anthropologists too. Beals (1973) states, " ... it is convenient to define the environment by an outside observer as representing **scientific reality** and the environment perceived by the members of a cultural system as representing **cultural reality** ..."⁶⁶

He adds, " ... the survival of a cultural system involves much more than the solution of problems posed by the natural environment. It involves coming to terms with changes in the environment resulting from the operation of the cultural

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system..."

Thus, eventually one sees a convergence of diverse perspectives within anthropology and related disciplines in the present study.

2.6 New ideas in nutrition education

Traditionally nutritional education has been treated in a typically **western** style which consisted of transfer of information related to 'good' food items to the users. It definitely had its limited success in the western societies. Though, this approach could no longer be advocated for the developing societies since their problems related to nutrition were radically different from the western society . Some of the new ideas that came closer to the approach of the present research are cited here.

A book titled Directions for nutrition education research-the Penn state conferences by The Pennsylvania State University, 1980.⁶⁸ This book presents views on eating patterns, nutrition communication, formal nutrition education and community nutrition education. Although the book has been written in the American context, yet importance of the ideas in the book for the developing countries can not be denied as (i) it focuses on participation of people in nutrition improvement; (ii) it stresses on the importance of developing certain standardized indices which can be used in diverse socio - cultural context to assess the nutritional behaviour of people.

In Nutrition education - a state of the art review, the view

expressed by Hornik (1983) comes much close to the present researcher as it traces the origin of the problem of malnutrition not merely to insufficiency of food, but ascribes it mainly to the lack of equity in the distribution of food. In the present research also it is hoped that some fundamental insight in the discrimination related with food distribution will be gained. The role of mass media in nutrition education is emphasized upon by Manoff (1980); and in fact , expects a role of advocacy for the mass media against the vested interests in the field of nutrition. Indeed, this view comes closer to the present research as the researcher too insists on the definition and satisfaction of nutritional needs by the users themselves.

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Israel (1984) emphasises the combination of the face - to - face communication with the mass media approach. He analyses the significance of the traditional belief systems and patterns for the designing of the content of nutritional messages.

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There are other studies rooted in the Indian context which can be divided into two categories viz . experimental studies and overview of government supported nutritional supplementary programmes.

Limitations of the traditional supplementary approach towards nutrition in the sense of appropriate target setting have been pointed out by some researchers. For example, Gillespie (1992) points out that, "... the most common type of conventional nutrition intervention is supplementary feeding programme...the study by Beaton and Ghassemi (1982) reviewed over 200 reports of

past food distribution (take - home or supervised) feeding programmes for young children and found that the net increase in the food in - take by the target recipients was 45 to 70 per cent of the food distributed. This may be seen as the evidence of the inefficient targeting ...".⁷²

It may be interesting to cite a study carried out in the state of Maharashtra(India) as representative of the first category.

The study focuses on the use of mass media in the dissemination of relevant information. However, the study does not consider the relevance of the content and its form to the nutritional perceptions and habits of the targeted participants of the project. (Protein foods Association of India; Evaluating a new approach to nutrition education - Research results of a pilot study using mass media for nutrition education).⁷³

Another experimental project in nutrition education is reported by Chandrasekar (1980). This project consisted of combining nutrition education for a group of illiterate women with the literacy activity. It showed that with the growing use of the material produced for literacy, awareness of women participating in the experiment definitely increased. This is an important finding for the present research as it proves the relevance of the group based learning processes for bringing about a desirable nutritional behavioural change. Another study by Devdas (1973) indicates that the effectivity of a supplementary nutrition improvement programme increases with the addition of a nutrition education component to the programme.⁷⁴

This is important vis - a- vis the temporary success of the government supported supplementary nutrition improvement programmes in India as one is aware that these programmes do not have a strong nutrition education component to them.

This is substantiated in another study carried out by the same author (1971). In another study again by Devdas, it was proved that unless the component of nutrition education is added into a nutrition supplementary programme, one can not expect drastic changes in the status of the participants in the programme as there is no change in the attitudes of people towards nutrition.

Appropriateness of selecting an agrarian community as the target of a nutrition education programme is emphasized by some other researchers too. For example, Gillespie states, "... recent research has shown how villages in India remain as social and cultural units despite external economic and social forces, and a large part of the potential of the village studies lies in the possibility of appreciating and penetrating the complex nature of social and economic relationships as they bear on this micro - level. Such a small - scale approach reveals both the qualitative and quantitative aspects of the processes that typify the integrated food system...".

As one sees in the review of the related literature with respect to various dimensions of the problem defined in the present research, it becomes apparent that although there is no dearth of material related to these aspects still an integrated

perspective with respect to designing of a cost - effective and reliable nutrition education programme is lacking. Thus, it becomes imperative to closely inspect the theoretical linkages between these dimensions as defined in the statement of the problem in Chapter One.

Summary

Chapter I had focused on (i) the concept of development; (ii) ideas about nutrition and development; (iii) structural analysis; (iv) network analysis; and (v) nutrition education. These areas of discussion formed the basis of the review of literature.

(i) Concept of Development :

The material reviewed under this area falls under two categories viz. development policy and programmes; and the theoretical thinking related to the concept of development.

It is found that most of the nations across the world had a narrow perception of development i.e. economic development. Indian policy - makers were also influenced by an economic conception of development. Limitation of the economic thinking became apparent with the passage of time. Thus, a search for alternative paradigm to the one of economic development began. The new alternative paradigm was called social development.

Focus of the paradigm of social development is on the Quality of life. A better Quality of life includes higher incomes, better education, higher standards of health and nutrition, less poverty, a clean environment, more equality of opportunity, greater individual freedom and a richer cultural life. This focus on the Quality of life as an index of development was accompanied by endeavour to evolve social indicators of development.

(ii) Ideas about nutrition and development :

Conventionally, nutrition is understood as an physiological process of consumption of food. There is little awareness about nutrition as process of production, distribution and consumption of food. Even in the interests shown by Anthropologists in nutrition stemmed from the urge to give credential to this view about nutrition. Second motivational factor for involvement of Anthropologists in the area was born out of the theoretical need to understand man's functional relationship with environment.

There is a gradual change in this pattern of thinking. Nutrition is regarded as an integrated process of production, distribution and consumption of food. There is also awareness about the close link between nutrition and health. A step ahead in the new thread of thinking about nutrition is the assertion of the fact that there is interplay between nutrition and other social and economic dimensions of development. It is strongly proposed by a number of development thinkers and nutritionists that nutrition education programme must (a) look into the local aspects of nutrition, and (b) take into account the link between nutrition and dimensions of development. This is accompanied by the assertion that nutrition education programme must be flexible in technology and broad based in content.

Indeed, some authors have stressed two points regarding the flexibility of the nutrition education programme viz. (a) content of the programme should be suitable to the cultural perceptions of the target group : (b) members of the target group of such a

programme should participate in the designing of the programme.

(iii) Structural Analysis :

The need of structural thinking in the present study is irrefutable as one is required to understand the cognitive aspects of nutrition in the light of the conceptualization as an integrated system of production, distribution and consumption of food.

Even though a number of prominent anthropologists had contributed to structuralist analysis ; still the researcher has focused on the insight provided by Claude Le'vi-Strauss as (a) he interprets human phenomena in terms of universal categories (which is prime concern of the present researcher too, though in the limited context of nutrition) ; (b) he provides conceptual ground for the study about relationship between cultural system and ecological system. A proposition by Durkhiem which is accepted in toto by Le'vi-Strauss that, 'social relationships are a end - products of a categorical mind,' needs to be accepted with reservation since the social relationships play an important role in shaping reality. Indeed, the social relationships are the embodiment of the dynamic exchange between the individual and culture.

This perspective has two important implications for the present research. These are (i) concept of network holds the potential to describe both systemic and process form of nutrition in a community ; (ii) it is possible to discover the structural qualities of nutritional behaviour in a community by the means of

studying the nutritional networks in a community.

(iv) Network Analysis :

The concept 'network' has been widely applied in different fields. The original theoretical concept has been accepted in social sciences too. Use of the concept in social context allows to interpret the change in society and culture in contrast to the structural analysis. Nevertheless, the concept has attained a heuristic value in social research as it serves as an appropriate tool of analysis of the social relationships. This is important for the purpose of present research. General applicability of the concept has been strengthened through convergence of the structural and network analysis perspectives. Present research is expected to contribute towards this integration.

(v) New ideas in nutrition education :

The dominant view about nutrition education till recent times was influenced by western perceptions. It consisted of only transferring 'relevant' information to the target group. Alternative views that have emerged as a sequel to the western idea of nutrition education have certain commonalities and differences. Some of the salient points that have a bearing on the present research are :

- 1) Participation of people in nutrition development programmes is necessary.
- 2) Malnutrition is mainly a result of lack of equity in food distribution.

- 3) The role of mass media in nutrition education needs to be emphasized.
- 4) The supplementary nutrition improvement programmes in India are handicapped by inappropriate target - setting.
- 5) A nutrition improvement programme can be effective if it is confined to nutrition education.
- 6) The agrarian community is the suitable unit for a nutrition education programme in the Indian context.

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