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9. ABSTRACT

Cultural and religious beliefs and practices pose serious impediments to improving the nutritional status of pregnant and lactating mothers and small children in India. The problems are discussed in this volume, which is a compilation of five papers and reports on world infant malnutrition, including a description of cultural influences on food behavior in the State of Tamil Nadu, India. As the pregnant mother in Tamil Nadu approaches her delivery date, she is increasingly restricted by custom and taboo. Her diet is severely limited not only by economics but by beliefs that bear no relationship to concepts of adequate nutrition. When the child is born it is subjected to prohibitions and restrictions stemming from beliefs about spells, sins, and the evil eye. Infant malnutrition tends to be perpetuated by the restriction of foods classified in the Ayurvedic hot/cold system as taboo. Family food is shared not only on the basis of size but of work output. Thus, though the mother and infant child are cherished and protected, they do not receive adequate food in terms of either quantity or nutritive quality. In this sense, family subsidy programs for adequate nutrition are less productive than they might appear. Also, such programs may be detrimental to family planning since having more children may be seen as a way for obtaining more subsidized food for the family.

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VOLUME II SECTION B
CULTURAL ANTHROPOLOGY AND NUTRITION

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CANTOR/ATAC
TAMIL NADU NUTRITION PROJECT
FIELD REPORTS

CULTURAL ANTHROPOLOGY AND NUTRITION

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CULTURAL ANTHROPOLOGY AND NUTRITION

COMMENTARY

This volume entitled Cultural Anthropology and Nutrition is a compilation of five papers and reports dealing with (1) the world background on infant malnutrition and weaning practices (hence, it includes the status of pregnant and lactating women), (2) anthropologists' views on food behavior as it relates to weaning infants and pregnant and lactating women, but extended to provide a picture of food and the human life cycle in Tamil Nadu, and (3) caste or jati factors as these relate to food and food transactions.

Aside from subjective ranking and distribution of opinions across samples, the picture is qualitative. It presents food and nutrition problems as derived from the relationships among social factors, cultural practices, taboos, status (religious and economic) and both change and the lack of change. Its qualitative character provides the counterpoint to the quantitative data analysis which emerged from consideration of these and other data. Its human references add flesh to the statistical skeleton which is all that economic considerations can furnish, and it is only the interaction of the qualitative and quantitative reflections of the real-life problem that puts its complexities in a proper perspective for the consideration of effective interventions.

The pregnant mother of Tamil Nadu as she approaches the birth of her child becomes increasingly restricted by custom and taboo. Her diet is severely limited not only by lack of food availability but by the choices she can exercise economically among the foods which she is allowed. In many ways, the child is all important; the mother is essentially an instrument. There is particularly a lack of understanding of the relationship of quantity and quality of the mother's food to the viability and human quality of the newborn infant.

The child is seen to be in a constricting environment at birth comparable to its mother and entirely exclusive of its family's economic status. If all of the prohibitions and restrictions reflected by adult family beliefs are observed, there must be a constant guard against spells, sins and

the evil eye. Many of these are observed side by side with the food taboos which appear not only to encourage the development of malnutrition but also to discourage its mitigation. Infant malnutrition is not related to food but rather to doshams (sins) and the protective foods which would relieve the symptoms are the very foods which, in many instances, are so classified in the Ayurvedic hot/cold system that they are forbidden to the infant. As weaning commences, another set of taboos is involved which minimizes protective foods and if it is available accentuates the carbohydrate component of the diet.

The family food is shared not only on a size basis, but also on a work output basis so that the more dependent members, infants and lactating mothers, are penalized in the intrafamily distribution. Despite this, however, the child is cherished, protected, and if it survives the ordeal, is celebrated and, in many instances, indulged. However, —and this is a reason to be optimistic— food behavior, although structured, varies enough from area to area (perhaps as much as on a frequency of 50 mile radii) to suggest that differences in individual or small group interpretation of taboos can provide the basis for communication practices which can catalyze change.

Not surprisingly, noncaste people, because their needs are greater and their status less restrictive (they have less to lose), appear to be much more open to change of food practices. Thus, in some instances they are observed to have more nutritious diets than caste groups. There is suggestion also that food is recognized more as food and less as medicine in the less restrictive atmosphere. In general, therefore, while there is large body of common food behavior as might be expected, there are enough inconsistencies to suggest that change can be achieved. In this respect, material for education programs appears to be clearly extractable.

The preoccupation with food is most significant. This is reflected by the amount of income that it demands, the time spent in preparing food and the social roles which foods play. The desirability of some degree of preparation or convenience —particularly in institutionally distributed foods— is apparent as the functions and importance of balwady and nutrition rehabilitation center employees are described in the anthropological reports.

The problems of caste restriction in serving food —which may accentuate take home practices and, therefore, family sharing— needs much work. Yet the report that caste appearances are ignored in certain situations is an encouraging sign that says: in the presence of proper attitudes, caste restrictions are minimized. The information contained in these reports on family sharing of distributed foods reinforces the understanding that most subsidy programs are family subsidy programs and not target group delivery systems. Two conclusions are suggested by this observation:

1. Family subsidy programs may be counterproductive to establishment of the relationship between food and child survival and, therefore, reduction in family size. Children may be seen simply as a means for bringing more subsidized food to the family.
2. Delivery systems which maximize receipt of food by the targets, minimize family sharing, and de-accentuate subsidies must be organized. Without such systems, the cultural pattern will continue to take its toll. The answer for cultural change, as it has been in other areas, may very well prove to be child care centers operated by carefully trained paraprofessionals.

The term food behavior used in these reports as distinguished from food habits or food practices is believed to be much more meaningful in laying the basis for interventions. Recognition of the term as applicable opens the way to involving the growing technology of behavioral science in a more structured fashion. Once we know the historical and cultural route by which food behavior patterns are initiated —how they are reinforced, and how their reflections pervade household crafts and find their way into food technologies— it suggests that we can use the same or comparable paths to induce change with a much greater expectation of success. It was originally planned in the Tamil Nadu project to engage a behavioral scientist as a consultant. Unfortunately, the plan coincided with the unfortunate events of late 1971 and early 1972, and had to be abandoned. It should be reinstated in the continuing work, and behavioral scientists should be called on to work with communicating and "mass media" specialists. The latter, particularly, are inclined to reach quick conclusions on the approach to improving nutrition and, therefore, confuse superficial indications of understanding with the will to act. The two are obviously quite different as a recent survey in Maharashtra^(a) demonstrated. Well over 60% of the respondents recognized the word protein after a campaign to emphasize it, but most didn't associate it with specific and available food products.

Basic associations between food and survival are simply lacking, but admonitions to eat particular foods are not necessarily the way to achieve the association. Somehow the concept must be put in the terms and context which determine food behavior.

(a) Protein Foods Association of India, Pilot Communications Project in Maharashtra, 1970.

INFANT MALNUTRITION IN THE DEVELOPING COUNTRIES
Some Social and Cultural Aspects

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INFANT MALNUTRITION IN THE DEVELOPING COUNTRIES:
Some Social and Cultural Aspects

Introduction

Alexander von Muralt (1972) started a recent symposium on malnutrition with the comment that wherever malnutrition prevails, the children are always the most severely affected since they are "so dependent on the insight of their mothers, on the socio-economic background, and on the hygienic conditions of their small world, that they easily get caught by a vicious circle beginning with malnutrition and ignorance, leading up to a premature death. Malnutrition is the primary cause of the high rates of infant mortality in developing countries, even if the ultimate cause which the death certificate states may be something else, often an infectious disease like measles, which in malnourished children is apt to take a dangerous turn."

In fact, Klein, Habicht and Yarbrough (1971) point out, in considering the effects of protein calorie malnutrition on mental development, that "there are cogent but not publicly articulated arguments against devoting scarce resources to infant and child nutrition. In oversimplified terms, death of pre-school children due to malnutrition is de facto the most widely used method of population control (according to Habicht). Moreover, physical stunting in childhood also reduces subsequent nutrient needs without apparently reducing adult physical function. Funds are always scarce; hence, nutrition programs receive from governments relatively more lip service than money. Long term growth of agricultural and industrial capacity appears to many planners to have greater eventual return on investment. However, present economic priorities would have to be revised if nutrition programs were shown to provide greater return on developmental capital through a more adaptive and capable work force."

That this may prove to be true is indicated by U. S. Senator Ernest F. Hollings who stated recently (May 6, 1973) that malnutrition in pregnant women can result in as many as 20% of their offspring suffering from mental retardation and, therefore, continuing the cycle of unemployment and further malnutrition for generations. Chow, (1968) reviewed evidence

from experiments with rats which showed that an adequate diet for mothers fed ad libitum during pregnancy and lactation resulted in progeny which were larger and better developed at birth than those of mothers on restricted diets. Furthermore, the stunted progeny of mothers on restricted diets utilized food less efficiently with a greater urinary nitrogen excretion, displayed abnormal behavior, and showed less learning capacity and reduced antibody formation. Studies in Taiwan, to be concluded in 1973, suggest that similar factors are operative in humans (Hsueh, Chow and Chow, 1972).

According to R. G. Ngala, Minister for Cooperatives and Social Services, the Government of Kenya has long recognized that malnutrition retards "individual physical and mental development and therefore national, social and economic progress." Mr. Ngala states further that "the problem of malnutrition is not caused by unavailability of, or inaccessibility to, foods only, but also failure of our people to make proper use of foods which are available." (Ngala, 1969)

In discussing factors which may lead to malnutrition, Dr. Cicely Williams, who introduced the name kwashiorkor (meaning "the deposed child" in the Ga language) to the medical and scientific world in 1933, stressed the importance of recognizing all the factors which may lead to the malnourished state. Some of these are represented in Figure 1 (from Williams, 1966). It is clear that defective food intake, which can be considered the proximal cause of malnutrition in otherwise apparently normal children, is by no means entirely due to lack of the appropriate food itself. Other important contributing factors are maternal deprivation, ignorance, carelessness, infectious and other diseases, and food habits and traditions. The last named factors do not seem to have as obvious a relationship to malnutrition as the others but, as will be seen, food habits, taboos, and religious food sanctions can interfere with good nutrition even as the food fads of the more sophisticated can cause malnutrition amidst plentiful food supplies. It is the purpose of this paper to review briefly historical and cultural influences affecting the feeding of infants and children as well as some of the physical and emotional effects of malnutrition.

Cultural Influences

The feeding of infants and children is, perhaps, as much influenced by the cultural history of a people as by the availability of suitable food, whether the latter be breast milk or other infant food. The domestication of milch animals is a comparatively recent event in the history of man. Among animals in the wild state, time of weaning appears to vary with the ability of the infant to live independently, avoiding danger and foraging for itself, and the ability of the young animal to take in and digest the food of the adult. The transition from hunting to farming introduced two new edible products, milk from domesticated animals and cultivated grains. The widespread use of cow's milk in infant feeding is a modern development of countries having scientific dairy and canning industries. Jelliffe (1968) emphasizes that these are developmental associations and that infant feeding can be accomplished without the use of animal milk though this is not readily appreciated by people "brought up in a country where 'milk emotionalism' exists."

In industrialized countries of the temperate zones, the widespread production of clean, fairly cheap cow's milk has changed the pattern of infant feeding by interposing cow's milk between human milk and semi-solid food. However, in many tropical countries, the basic two-stage pattern of weaning directly from human milk to semi-solid food is still customary for economic, climatic and, probably, cultural reasons.

Mother's milk was considered best for a child in ancient India and was recognized as an important food 6000 years ago, as revealed in Sanskrit record (Eckles, et al. 1943, from Jelliffe, 1968). Animal milk was also widely used and valued. Animals whose milk was used included the cow, buffalo, camel, goat and sheep. The belief, still held in some parts of India as well as in other countries, that colostrum is harmful to the infant was held in ancient Rome (Soranus of Ephesus, second century A. D. ; Jelliffe, 1968, p. 17). Another ancient idea that is still held in India and other parts of the world is that "hot" foods (in the Hippocratic sense or in India, the Ayurvedic sense), including eggs, are not suitable for children,

particularly in warm weather. The idea of "hot" foods being unsuitable at certain ages or conditions even interferes with the boiling of water for sanitary purposes. On the other hand, in a rural area of Peru, (Wellin, cited by Jelliffe, 1968, p. 69) found that milk was always boiled, not to prevent infection, but because of "hot-cold" ideas on disease and food. In some places, notably Pakistan, some women do not eat "hot" foods (eggs, meat, liver) during pregnancy.

In India, legumes are considered "sweet, cooling, heavy, destructive of strength and dehydrating. They should be taken only by strong persons in conjunction with unctuous articles." Milk (usually skimmed buffalo milk) may be used to supplement breast feeding if the child does not seem to be thriving. Animal protein is not used by the Hindu population except for milk products and only in some sects are eggs used. In many cases foods other than breast milk are not given regularly until the child is a year old or more. Breast feeding is often continued for two and even three or four years. The recommendation of the Koran that breast feeding should be continued for two years undoubtedly affects the feeding of Muslim infants in this regard. But, whatever the motivation, the yield of mother's milk is reported to be low quite early so that in Madras, for example, kwashiorkor is observed in babies still being breast fed (Rao, 1934, from Jelliffe, 1968).

Around Bombay, in lower socioeconomic groups, breast feeding is prolonged but semi-solid food, such as rice, gruel or sago (tapioca), may be introduced at seven to nine months. Milk (buffalo) is highly regarded as a food for infants, but is too expensive for most people.

The pernicious custom of giving opium pills to children to keep them quiet and allay hunger was still practiced as recently as 1934 in West Bengal and perhaps that recently in Bombay. The use of opium was first described in the Ebers papyrus (16th century B. C. E.), in which there are instructions to mothers on the use of opium to quiet their babies. Its use spread from Egypt and ancient Sumeria to Europe (where it apparently had been used earlier by Stone Age lake dwellers in what is now Switzerland) and later

to India, presumably with the spread of the Muslim religion. (The use of wine is proscribed by the Koran, but opium and hashish are not mentioned, Marks and Beatty, 1971)

Breast feeding was generally recommended in ancient times. Not only the Koran but the Bible and Talmud, which preceded it, recommended that breast feeding continue for two years. The baby was put to the breast at once and honey was given to assist in eliminating meconium. According to Wickes (1953, from Jelliffe, 1968), breast feeding was universal among the Hebrews since no mention of artificial feeding is found in the Talmud.

In the Middle Ages in Europe, breast feeding was universal but weaning and artificial feeding are discussed in books of the 16th century. It was advised that a gruel be given as a supplement to breast milk. Wet-nurses were widely used by wealthy women then, as well as during the next two centuries, in Europe. "Dry-nursing" or "hand-feeding" also became popular. In this alternative to breast feeding the child was given a "pap" made by cooking flour or bread in water (rarely milk was added) or a mixture of flour, cereal or bread, cooked in broth, generally with butter and, perhaps, milk added. This predominantly carbohydrate diet was associated with widespread malnutrition, rickets and a high infant mortality. The "mehlnahrschaden" (flour malnutrition) of 19th century Central Europe seems to fit the currently used term "kwashiorkor." It was common, in Europe, for the mother to chew the infant's food prior to feeding, a practice still current in some parts of the world.

The most startling discovery (at least to the writer, a zoologist) from a review of feeding practices around the world is that such habits are not necessarily beneficial to the infant or child, that instinctive behavior cannot always be depended upon or that generations of subsistence living have so altered maternal and cultural judgment that new education is absolutely essential if healthy young are to be born and healthy children reared. Again and again one finds statements such as the following regarding the Australian aborigines:

" between the ages of two and five years there is a high mortality due to injudicious feeding in the period of transition between weaning and the proper assimilation of an unmodified adult diet." (Jelliffe, 1968)

Even in a highly industrialized country, the United States, "milk-anemia" has been recognized as a syndrome. It is an iron-deficiency anemia caused by a diet comprising an excessive amount of milk and carbohydrates and a decreased amount of iron-containing protein. It is attributed to an irrational attachment to milk, often on the part of the mother rather than the child, coupled with feeding methods which make food disagreeable. The basis for this condition is thought to be the mother's refusal to recognize the baby's need for independence, thus giving rise to malnutrition amidst a plentiful supply of food. The treatment requires administration of iron and an appropriate diet, better feeding methods and correction of the emotional situation (Mackenzie, 1973).

Between these two extremes of development are found many examples of how culture, food habits, economic pressure for the mothers of young infants to work, ignorance of the relationship between appropriate food intake and health, etc., adversely affect infants and children.

Examples of Cultural Deterrents

In countries where poorer urban mothers work, the infant usually is nursed only in the early morning and at night, with daytime feedings consisting of available cereal gruels, sometimes sweetened with condensed milk (Jamaica), until lactation finally ceases. In some countries, the sweet potato or other carbohydrate is used.

In Peru, colostrum is discarded and the newborn infant is fed a laxative oil during the first three days. This is similar to the practice in various areas of India, as in Hyderabad, though in some places (Madras), the

neonate may be given diluted cow's milk or honey and dates instead of castor oil before breast feeding is begun on about the third day.

A large scale survey by Rao and co-workers (1959, cited by Jelliffe, 1968) in southern India indicated that supplementary foods made of locally available, cheap cereal products, and sometimes with milk, began at about one year but in Hyderabad this was delayed until about 18 months.

In West Bengal, various "cultural blocks" interfered with utilization of available protein for infant feeding. These include the "hot" and "cold" food classification, special ceremonies relating to the initiation of rice eating, and the use of "shokri" foods (eatable only if cooked by the correct caste). Vegetarian Marwari and Gujerati Hindu people will not give their children cod liver oil because they are forbidden to eat fish.

At a later age than early infancy, there may be a failure to give the very young child appropriate food, even if it is available. For example, Dr. Demissie of Ethiopia states that even though teff, the staple cereal in his country, is high in iron, there is a high incidence of iron deficiency anemia because "what a family has to eat in no way indicates what the preschool child is going to get." (Demissie, 1969)

There are numerous examples illustrating the difference between what is available to a family and what is actually given to a weaning or weaned infant. In Peru, Huenemann (cited by Jelliffe, 1968, p. 68) found that weaned infants generally share the family diet and that few foods were considered unsuitable for them. In most communities, semi-solids were introduced to infants in the second half of the first year of life and, in some places, included fish, beans, and meat or fish soups. However, some anomalous conditions exist. For example, in a fishing village where the adult consumption of animal protein was the highest in the survey, the greatest number of low-protein infant diets was observed, possibly because

fish is considered a "cold" and "heavy" food and is alleged to cause diarrhea. In Central America, meat and eggs are thought to cause digestive upsets in weanlings, who are given the adult diet, consisting mostly of maize. Perhaps the fact that eggs are expensive and are usually sold is a factor in their proscription.

In Malaya, in populations which do not use milk and especially where the range of food is narrow, the infant may suffer a severe setback at weaning since the diet offered him is rarely properly balanced and may not be digestible in necessary quantity. Further, the infant is not allowed any fish or prawn paste and is, therefore, deprived of animal protein as well as calcium because of the belief that fish will give him intestinal worms. Since the Malay mother is restricted to a diet composed exclusively of highly milled rice and fish for 44 days after delivery, this may very well affect the quality of the breast milk the child receives before weaning.

Among the Chinese in Malaya, breast-feeding is not universal, even among the poor. Beri-beri, which is common, has an adverse effect on lactation. Control of the baby may be taken over by the grandmother, the senior wife or some other relative. The baby may even be sold or given away to a relative who is better off or who has fewer children (Williams, 1946, from Jelliffe, 1968, p. 51). Another hazard to the infant is the practice of feeding in such a way that choking occurs and food enters the respiratory tract, causing aspiration pneumonia. This practice is common in several parts of the world. In Ibadan, for example, the water, maize, gruel or other liquid food is literally poured onto the side of the child's face rather than into his mouth from the mother's cupped hand or a gourd while the child is held across his mother's knee with his head down.

A less hazardous practice is the premastication of solid food which is sometimes introduced by the mother, with her tongue, directly into the infant's mouth. Prechewing of food, which is quite common in many parts of the world, including Europe in the twentieth century (personal knowledge

of the writer) and perhaps even now, should not be judged by current Western standards of esthetics, according to Jelliffe (1964). It has the advantage of presenting to the child finely mashed food, possibly partly digested by saliva. The possible transmission of disease by this feeding technique must be viewed in the light of the probability of infection in any case even if prechewing of food is not practiced.

In summary, tropical and subtropical infants may do well in the first six months of life. Then the rate of weight gain slows, probably as a result of malnutrition when the output of breast milk can no longer supply the nutritional requirements of the child. At the same time, food supplements are inadequate or totally lacking. In addition, the child's nutrition may be adversely affected by various diseases endemic in the tropics, by intestinal parasitism and by psychological disturbance associated with sudden weaning. This may be very traumatic since in some cultures, if the mother becomes pregnant, the baby is taken away to be raised by a grandmother or other relative.

Mineral and Vitamin Deficiencies

Iron deficiency anemia occurs in infants all over the world and is common in the tropics. It is due primarily to iron deficiency in the mother causing the child to have inadequate iron stores at birth, to the low iron content of milk and the customary weaning foods in the tropics, and poor absorption due to infection or kwashiorkor or a diet which forms insoluble iron phosphates or phytates. In addition, the protein supply must be adequate for hemoglobin synthesis to occur. Certain diseases may exacerbate a nutritional anemia, for example, hemolysis in malaria and hemorrhage in hookworm infection.

Vitamin deficiencies abound but vary from one country to another. Avitaminosis A is widespread in India, especially in Bombay, Calcutta and Madras, and Indonesia, where the diet is composed mainly of rice and vegetable fat. In Ceylon and South India it was estimated (Nicholls, 1961,

from Jelliffe, 1968) that 60% of the blindness was due to earlier keratomalacia (caused by lack of vitamin A). The causes of avitaminosis A in the tropics include a number of factors: poor storage in the fetus due to maternal malnutrition, low vitamin A content of breast milk, early weaning, lack of vitamin A in the diet, poor absorption and storage in protein-calorie malnutrition. "Basically, avitaminosis A in young children is associated with poverty and ignorance and occurs in communities where diets of mothers and children are culturally restricted." (Jelliffe, 1968, p. 97)

Infantile beri-beri, like the adult form, is associated with a diet composed almost entirely of polished rice. This disease is, therefore, of importance in South East Asia where polished rice is the staple food, particularly where gasoline driven mills have replaced the hand pounding of rice because the former method removes a greater proportion of the hull and germ and, therefore, the rice has a much lower thiamine content (Scrimshaw, 1964). Occasional cases of pellagra (nicotinic acid deficiency) and of lesions due to deficiency of riboflavin have been observed in children with kwashiorkor or marasmus (Jelliffe, 1968). Though diets in India are often deficient in vitamin C, scurvy is not seen. This has been generally true but there are some reports of increasing incidence of infantile scurvy in Colombo, Ceylon, and in Nashville, Tennessee, U. S. A. This might be expected to occur in artificially-fed urban children who do not receive additional vitamin C (Jelliffe, 1968).

Rickets is still a disease of the tropics - an unnecessary one. In Central America, children affected are usually children of mothers who work inside and keep the child with them, or who are kept indoors because of illness, or, in the case of West Indian children, to prevent the skin from becoming darker (Scrimshaw, 1964). In Peru, children are not exposed to the sun because of fear of the "evil eye." A similar fear exists among the Amhara in East Africa who also protect children from sunlight to prevent darkening of the skin. In connection with vitamin C, it is interesting to note that the need for a particular nutrient which an individual may have may involve not only his own metabolism but also that of intestinal or other

bacteria which he may harbor. Infecting organisms may compete successfully with the host for available nutrients. In the case of active tuberculosis, Williams (1956) cites a personal communication from E. L. Sevringhaus that to produce tissue saturation with vitamin C may require several grams of this substance daily.

Jelliffe (1968) also describes the swaddling of babies so that little skin is exposed to sunlight. Not only may the baby be protected from sunshine for various cultural reasons, but in some places, as in Egypt, the amount of ultraviolet radiation at the surface of the earth is decreased by the filtering effects of airborne dust. Natural vitamin D is usually not given to infants in the tropics, according to Jelliffe, and the calcium intake is also low in India. The latter reflects a trend towards using unvitaminized vegetable ghee rather than ghee from cow or buffalo milk. This causes an additional, if minor, dietetic disadvantage. The effect of illness in exacerbating milk malnutrition is well known. Chronic gastroenteritis with its prolonged diarrhea may interfere with the absorption of vitamin D and calcium. Another possible reason for rickets in children in the tropics, where one would not expect it, is that perhaps the precursor of vitamin D (7-dehydrocholesterol) may not be synthesized in the skin of malnourished children. Or, as Platt has suggested in a personal communication to Jelliffe (1968, p. 112), vitamin D deficiency may be secondary to a deficiency of vitamin A or of essential amino acids, leading to follicular keratosis which could interfere with the formation and absorption of vitamin D.

It is paradoxical that rickets, a disease of colder climates with their short winter days, should have yielded in temperate and colder zones to fish-liver oil and vitamin concentrates while its prevalence remains high in sunny, tropical countries where excessive clothing need not be worn. As the children grow older, more exposure to sunshine occurs and healing is usual. "Rickets, therefore, may be regarded as a debilitating and possibly deforming disorder in young children in some tropical countries, but probably not as a major cause of infant mortality." (Jelliffe, 1968, p. 112). Calcium metabolism is closely associated with that of phosphorus and vitamin D and is also directly affected by the diet in that foods containing phytin or phytic

acid (whole-grain cereals) or oxalic acid (spinach, rhubarb, and other vegetables and fruits) lower the effective amount of calcium ingested from animal foods, green leafy vegetables, etc. The amount of calcium stored by the fetus in the last trimester of pregnancy varies with the calcium nutrition of the mother, who must also supply in breast milk the calcium necessary for skeletal growth in the postnatal period. Therefore, a high calcium intake is desirable for the mother during late pregnancy and lactation. A diet low in calcium is related to the development of rickets, osteomalacia, subnormal calcification of bones and teeth and, perhaps, stunted growth. Osteomalacia may result in pelvic deformities which would affect later child-bearing adversely. Although Williams (1946, cited by Jelliffe, 1968) noted that convulsions in children in Singapore were often associated with low blood calcium values, other workers have observed that low serum calcium values are compatible with good health in some ethnic groups, e. g., South African Bantu children.

Effects of the Soil Environment

A growing number of elements are being recognized as necessary for good health in trace amounts, such as iodine, zinc, copper and manganese. In addition, there are complex relationships, some of which are not fully understood, among various parts of a person's diet. Just as phytates in cereals lower the availability of calcium in the diet, so habitual eating of vegetables of the cabbage family makes the iodine requirement of the diet higher for the maintenance of good health.

Even more obscure, perhaps, are the relationships among trace elements in particular soils and the nutritive value of the crops grown in them. For instance, the use of manganese containing fertilizers apparently decreases the zein in corn by 15% and also increases both tryptophane and lysine. A more direct relationship is apparent in Tasmania where children, given milk from cows fed marrow-stem kale, developed goiter because plants in this family produce goitrogenic substances. If the children were given iodine supplements this milk did them no apparent harm. In addition, if iodine is added as fertilizer to the soil where the kale is grown, it can counteract the effect of the goitrogens.

Zinc deficiency in man has been associated with diets based largely on plant seeds, such as beans and cereal grains or their processed products. In pigs, a zinc-deficiency syndrome is aggravated when high levels of calcium are added to corn-soybean meal rations. Although the production of zinc deficiency was difficult in early experiments with rats, it was relatively easy in animals feeding on plant seeds since the phytate contained in this food and high calcium act synergistically to reduce zinc availability (O'Dell, 1972). Pories *et al* (1971) conclude that "it seems reasonable to assume that marginal zinc stores in the growing child might be a limiting factor in its normal development and growth." In fact, "where the choice of foods is poor, because of poverty, ignorance or prejudice, so that the general quality of the diet is low and where the dependence on locally grown foods is high, local soil deficiencies or excesses are likely to accentuate any dietary disabilities and to affect adversely human health and nutrition." (Underwood, 1971)

Summary Considerations

According to Gyorgy (1965), "In many countries today, 70% of the children under five years of age are malnourished and have no chance of developing their full potential." The high death rate in this age group (as much as 40 times as high as in affluent countries for comparable groups), is due to malnourishment combined with exposure to environmental hazards from which their parents are unable to protect them because of poverty, overwork, ignorance and, perhaps, traditional beliefs and practices in child-rearing which are not helpful. The nutritional problems of the young child were summarized by Martinez (1965) as: (1) undernourishment, (2) protein malnutrition, and (3) various mineral and vitamin deficiencies. The high mortality in this age group is not a new phenomenon but the interest in it is fairly recent and reflects humanistic trends. The morbidity and mortality of children in this age group is so great that it is the most significant regulating influence in the demographic picture of developing countries, according to Dr. Martinez. He stresses our ignorance of the social dynamics and process which cause this sector of the population to suffer unduly from malnutrition, but suggests some of the following as factors which bear on this situation. In poor, rural families in developing

countries, only nursing infants and pre-school children are unproductive:

1. They cannot communicate well.
2. They may be destructive and negativistic.
3. They may suffer from loss of appetite for physiological and/or psychological reasons.
4. They reduce the working capacity of the mother.
5. They are subject to frequent illnesses, which are much more severe in malnourished children and enhance the malnourishment. Food is withheld from children with diarrhea, which is a frequent occurrence.
6. The pre-school child has no precise place in the family or community except as it requires care and attention.
7. The mother may not have been able to lactate adequately because of ill health and/or malnutrition so that the child has a poor start in life. Supplementary feeding may be begun too early and interfere with lactation or, too late, when breast milk has become quite inadequate. In addition, supplements are usually deficient in quantity and quality.
8. Very often the pre-school age child receives the most deficient diet of the whole family. This may be due to a variety of reasons such as: The child has capricious feeding habits and cannot express its desires; maternal care may be poor or even lacking, where the baby is sent to another relative at the time of weaning; the mother may not understand how to use alternative foods, even when provided; fears that certain foods are harmful to small children.
9. The unproductive role of the small child puts him in an unfavorable position to receive food compared to the working members of the family. He is worse off than the infant because the nursing infant is not perceived as a consumer of family food.

Dr. Martinez notes that countries where the highest preschool age mortality prevails are also those with the highest birth rates and increase in population. He concludes, however, that the introduction of birth control would not itself improve the environment of the preschool age child.

Dr. Margaret Read is an anthropologist who has studied the response of various populations, including Indian, to programs in various health fields. Some cultural factors leading to malnutrition which she regards as of major importance are:

1. Child feeding is part of a unified family problem and food habits are closely related to the economic level of the family.
2. There is an involved relationship between food habits, preferences and cultural concepts of the causes of health and disease.
3. In a given cultural group, the main staple food (Jelliffe's "cultural superfood"), rice, for example, is considered the best food for everyone, adults and children. Other beliefs may control how much of this food may be given. For example, in Malaya it is believed that eating too much rice without side dishes of vegetables and fish make people stupid. Therefore, fathers do not want to give their children too much rice. Because of cultural prohibitions against giving too much fish, which happens to be expensive also, and other side dishes to children, the total food given young children is restricted even when it is available.
4. There is a widespread habit of serving the male working members of the family first, giving them the largest portions of the "best" food from a cultural standpoint. The remainder of the food is then divided between the women and children.
5. The timing of meals is made to suit the working days of the productive members of the family.

F. A. Thomson (personal communication to D. B. Jelliffe, 1968, p. 52) reported on infant feeding practices at Ipoh in Malaya where she observed different racial groups: Chinese, Malay and Indian. All give their children an excess of carbohydrates, almost from birth. At weaning, the diet is very low in proteins, high in carbohydrate and contains almost no vitamins. Although partial breast feeding is common and often continued up to two years or later, much carbohydrate is also given.

Among the Chinese, kanji, a watery rice gruel cooked with salt, is given as early as the first week. Interestingly, the particle size of kanji is increased as the child gets older. If the mother works, the child may be given kanji mixed with sweetened condensed milk or a gruel made of rice or corn flour, during the mother's absence. Drinks of diluted sweetened condensed milk or black coffee flavored with condensed milk are offered. As the child is weaned, he is given the family diet which, among the very poor, consists of polished rice and soy bean sauce and a little dried fish. Some may have vegetables but usually the favorite is lobak (radish, Raphanus sativus), a water vegetable of low nutritive value. Bread and Chinese cakes are popular, but fresh fish or meat or fruits are rarely eaten. On this diet, the child may develop signs of kwashiorkor at an early age.

The Malays in this area live mostly in rural surroundings. Breast-feeding is continued for two or three years, but is erratic. The infant is given soft polished rice, often mixed with mashed banana, in the first week. The weaning diet is mainly rice and sauce and a little salt fish. Occasionally a vegetable may be given. Jungle fruits are eaten, but not papayas. Eggs are thought to produce worms and are, therefore, not given to infants. On this diet, severe kwashiorkor develops in the Malay children and they may also show severe vitamin deficiency disease of the eyes.

In this one area, where the three ethnic groups - Chinese, Malay and Indian - live under similar economic circumstances, most of the severe

cases of malnutrition occurred in the Malay children, though they were mostly rural which might be thought to be an advantage. Thomson (cited by Jelliffe, 1968, p. 52) expressed the belief that this is due to the fact that the Malays continued in their old beliefs, restrictions and superstitions to a greater extent. They use certain Western articles of diet (bread and sweet biscuits), but meat is rarely eaten since the most readily available meat is pork, which the Malays, who are Muslims, may not eat. Furthermore, they do not drink milk although they may keep buffaloes and goats. The Malay toddler leads a generally unhealthful life, sitting in a dark house and receiving little attention. Sometimes such a child may be totally blind. Help is not sought, apparently, until the child refuses rice and then aid is sought because he has "no appetite." This is a warning sign and the child readily accepts the recommended diet and makes fair progress, once diarrhea and vomiting are controlled.

In the area under discussion, Indians are a minority. Many of their children may be emaciated and starving; a few show typical skin and eye changes of kwashiorkor. Though the Indian diet (Tamil and Sikh) is poor, the Indian mother is a good mother, according to Thomson, who breast-feeds and cares for her child conscientiously. The Tamil mother gives the child drinks of rice water and kanji with salt or sweetened condensed milk. Less sugar is used than by other peoples and powdered milk will be bought, if the mother can afford it. The Sikhs feed small children diluted boiled cow's milk as well as eggs. This seems to prevent typical kwashiorkor to a great extent though the eye signs (Bitot's spots) are seen in both Tamils and Sikhs, but with less frequency than in the Malays.

These observations show the effect of culture, religious proscriptions, customs, and even ideas of maternal care on the health of infants and children in the same geographic area. Even within an Indian community, the incidence of kwashiorkor was correlated with the intelligence and resourcefulness of the mother (Gopalan, 1970). However, it is clear that the health of the mother during pregnancy and lactation is of prime importance. (Hsueh et al, 1972). A study of the incidence of severe malnutrition in relation to birth order (parity) of the child shows a much higher incidence

in the sixth child and later children than in the earlier children as a group (Pollitt, 1973). In this connection, de Castro (1952) points out that the birth rate is higher where hunger is widespread. And, further, an increase of protein in the diet will slow the reproductive rate. He suggests that lack of protein stimulates fertility by causing a failure of liver function. Fatty degeneration and cirrhosis of the liver are among the effects of protein deficiency. It is further suggested by de Castro that the mechanism by which fertility is increased in response to protein deprivation is dependent on the decreased efficiency of the malfunctioning liver in inactivating excess estrogens, resulting in a marked increase in the female reproductive capacity. This, then, might be the biochemical basis for the observed increase in reproduction rate when a species, including man, is threatened by extinction due to lack of appropriate food. A Latin-American saying, quoted by de Castro, states succinctly that "the table of the poor is meager, but fertile is the bed of misery . . ."

Organized Approaches

In August of 1971 a symposium devoted to nutrition programs for pre-school children was held in Zagreb, Yugoslavia, under the sponsorship of several agencies, including Committee III. 3 of the International Union of Nutrition Sciences. The "Zagreb Guidelines" were published in June, 1972. It was estimated that there are 10 to 20 million young children with kwashiorkor or marasmus at any one time and that most of these children die. In Third World countries probably between one-third and two-thirds of the 400 million children below five years are suffering from less apparent signs of malnutrition which, nevertheless, markedly lowers their resistance to infection and "possibly impairs the subsequent physical and mental development of the survivors."

In a section entitled "The ecology of underdevelopment," the participants summarized the situation in many countries, including India. These areas are characterized by poverty (small family incomes and low per capita gross national product). Income is derived from a limited range of agricultural products whose prices are influenced by fluctuations in the

international market. The population is largely rural but rapid urbanization is spreading the development of shanty towns. Environmental hygiene - water supplies and sewage disposal - is rudimentary in many places.

The child population is twice as high as in industrialized countries, infant mortality is as high as ten times that of the industrialized countries, and malnutrition, especially of proteins and calories, 20 to 50 times as high. Where urbanization is occurring, the major impact of malnutrition is moving into infancy with the decline of breast feeding but in most areas the suffering is greatest at the two year level. Though Jelliffe (1968), Waterlow & Alleyne (1971) and others have stressed malnutrition in the tropics and subtropics, in the Zagreb Guidelines it is pointed out, as elsewhere in this report, that "the situation is little related to the tropical or subtropical circumstances of most developing countries (since) the same picture was found in Europe and North America in the 19th century and earlier. The principal factors responsible are economic, educational, hygienic, and cultural, and the final community picture as far as mothers and children are concerned is the end result of malnutrition and infections, combined with too many difficult pregnancies." (Report of IUNS Committee III. 3, 1973).

When the long term effects of malnutrition are considered, the interpretation of observations are even more complicated. According to Waterlow and Alleyne (1971), we do not know whether an individual stunted by malnutrition in infancy can "catch up" if treated and then given an adequate diet. It would appear that the various organ systems are more vulnerable at certain phases and that lack of adequate nutrition at such a "sensitive" time may cause a permanent deficit (Eichenwald & Fry, 1969; Klein et al 1971, Waterlow & Alleyne, 1971, von Mural, 1972).

In 1905, Adolf von Baeyer received the Nobel prize in chemistry for his synthesis of indigo. At the presentation of the prize, Professor A. Lindstedt, President of the Royal Swedish Academy of Sciences, commented "the

effects of this discovery. . . . can already be traced as far as the banks of the Ganges, and the time is probably not far distant when the immense fields, which up to now have been used for cultivation of the indigo plant, will instead become available to produce cereals and other foodstuffs for India's starving millions." (Lindstedt, 1905, published in 1966).

It is now almost 70 years later and it is evident to all those who have struggled with the problems of malnutrition that they are very complex. In addition to biochemical, medical, economic and political factors, an appreciation of food attitude (behavior) is essential (Jelliffe, 1964). In 1966, Jelliffe stressed the need for community assessment of human groups (clinical signs, nutritional anthropometry, biochemical tests), health statistics, and assessment of ecological factors (conditioning infections, food consumption, cultural influences, socioeconomic factors, food production). He states in an earlier paper that "Only by the use of community statistics can preventive measures be rationally applied to the most needy areas within a region or country and the results of these schemes later evaluated. Also, numerical evidence is needed, rather than impressions, to make clear to the fund-controlling public health administrators and politicians, the vast dimensions of the problem. (Jelliffe, 1963, quoted in 1968, p. 143)"^(a)

^(a)See Vol. I, Introduction, Tamil Nadu Nutrition Study

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A LIFE CYCLE

TIRUVANMIYUR VILLAGE: CHINGLEPUT DISTRICT

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**CANTOR/ATAC
TAMIL NADU NUTRITION PROJECT
FIELD REPORT**

A LIFE CYCLE
An Anthropological Study of Food Habits

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INTRODUCTION

Statement of Investigation and Analysis

Investigation was carried out in Tiruvanmiyur Village which is situated along the coast, some ten miles south of Madras City.

Data was collected and analyzed, as far as possible, along the lines set out in the work-plan (a). The report is built around two main points - food culture i. e. food habits and the beliefs and attitudes thereby; and health - what constitutes a departure from health and how it is dealt with. Most of the data is about women and children. I have tried to organize the data into a life cycle so as to give some idea of how a person orders his day and his life.

Investigation took us 18 days spread over a month during May-June 1972. My assistant (who is more fluent in Tamil than I am) and I, went to Tiruvanmiyur in the mornings and returned in the evenings every day during the 18 days of investigation.

We visited 50 households in all. In 44 households we asked about food habits, illnesses and medicines, general customs, etc. Of the other six, two were traditional midwives (ambattachies), (b) and the other three were manthrawadies (c). Of the four households, some 12 were really detailed "depth" interviews; and of the remaining, some got fed up with us early in the interview; some did not know much and some were interested only in specific sections of our questioning. This does not include the three or four households we visited where they were positively hostile - probably suspecting us of propagating family planning. The 12 detailed interviews were carried out over two, three and four visits to each of the households. The less detailed interviews were necessary and very helpful in clarifying our concepts; in confirming data; and often in giving us pointers to data which we then followed up in the more detailed interviews.

-
- (a) The work-plan is attached to the Notes.
 - (b) Literally the barber's wife.
 - (c) Knowledgeable in "manthrams" or magic formulae.

The 44 households were selected from all over the village. Thirteen households were from the two colonies (areas where Harijans live), and 12 from the two kuppams, (areas where fishermen live). The rest of the households were from the main village; of these, six were Brahmins, three Muslims and the rest a mixture of Gramani (a), Pillai (b), Nadar (c) and Naicker (d) castes. Of the Harijans, three were Christians.

Eighteen of the 25 colony and kuppam households were the least well off. There were seven other very poor households in the main village. In all, there were 12 households which were relatively well off. There were seven households which were middling, but closer in their standard of living to the poorer households.

-
- (a) Traditionally toddy tappers.
 - (b) Traditionally cultivators.
 - (c) Originally toddy tappers, now many in Government Service, etc.
 - (d) Cultivators.

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Caste	Upper * Middle	Middle * Middle	Lower Middle	Poor	No. of Households
Harijan	1	2	3	7	13
Periapathinevar Chetty (fishermen)	-	1	-	11	12
Brahmin	1	3	1	1	6
Pillai	1	1	-	2	4
Gramani	1	-	1	-	2
Naicker	-	-	1	1	2
Nadar	-	-	-	1	1
Tiruvalluvar	-	-	-	1	1
Muslim	1	-	1	1	3
	5	7	7	25	44

* The upper middle and the middle/middle I have grouped together as relatively well off.

Standard of living was gauged by observation (of the type of house, clothing, vessels, etc.) and also by questioning about expenditure. Direct attempts to get at income were useless. Level of income was gauged from the type and amount of food they ate and from their expenditure pattern.

In addition to this, we visited the two balwadies in the village, three of the schools, the Panchayat Office, the Panchayat Union Office at Chittalapakkam, the Government Maternity Centre and Dispensary at Tiruvanmiyur, eight doctors including the doctors at the two dispensaries, the Primary Health Centre at Chingleput and six centers where the Government distributes bread to children and pregnant and lactating mothers under a scheme called the "Urban Crash Program"(1)

The major part of the data collected is incorporated in "A Life Cycle." The data here generally applies to the poorest and the middling households. Detailed notes pertinent to different sections, for example, regarding the six bread centers, are contained in Section II - Notes.

The summing up, apart from drawing conclusions from the main report also contains some impressions I had formed, perhaps indications of lines for further research in this field.

What I had planned to get at and was unable to is the decision-making pattern in a family. This needs participant observation for a very much longer period; from six months to a year. Just interviewing, in whatever depth, is not much use for this purpose. Most decisions are not made consciously or at one point in time, but through sessions of discussion and argument over periods of time. Long term observation of relative

power structure within the family, in different "decision situations," I feel is the most reliable method of getting at the decision makers in the family.

As is evident, this is not a statistical survey, and though in reporting, I have vaguely extended the data to cover the Tiruvanmiyur area, it strictly applies only to those households actually covered during field work.

I had also wanted to differentiate data according to caste, income and education. But during the course of investigation, I found it necessary to first clarify concepts for myself to establish and understand a pattern of food behaviour and attitudes, before I could make any useful comparisons. There is, however, sufficient indication that further research might yield meaningful variations along the lines of caste, income and education. (a)

Description of Tiruvanmiyur

Tiruvanmiyur lies along the coast some ten miles south of Madras City. It is in Chingleput District and has a Panchayat (b) which forms a part of the St. Thomas Mount Panchayat Union. Tiruvanmiyur is just off the old Mahabalipuram Road and on the new South Beach Road to Kalpakkam. The area is 5.19 sq. miles. Up until the time that one turns off the old main road, there is no feeling of having come away from the city; but inside Tiruvanmiyur one is far away from Madras.

The entrance to Tiruvanmiyur is guarded by a squat clock tower immediately reminiscent of all clock towers in districts anywhere in India. There is an old Shiva temple with a big temple tank in front of it. The better-to-do houses line the tank on three sides, the eastern side being taken up by shops, a doctor's clinic and the Panchayat Union Primary School. Buses

-
- (a) This is discussed in Volume I of the Tamil Nadu Nutrition Study.
(b) Village level government

plying between the city and Tiruvanmiyur draw up on one side of the tank, but arrivals and departures are few and far between. North and South of the tank are criss-cross streets where the bulk of the "caste" (a) population lives. These are mostly composed of Vellalas, Mudaliers, Naickers and Gramanis. The fishermen (Peria Pattinvar Chettys), however, live along the coast, in two clusters, one to the North and one to the South; to the North is Odai Kuppam and to the South, Tiruvanmiyur Kuppam. The Harijans live to the North in Laxmipuram Colony; and to the South in Tiruvanmiyur Colony. There are a few scattered well-to-do houses between the main road and the coast - mostly retired people who have settled down here, for, the air and water of Tiruvanmiyur is supposed to be good. Tiruvanmiyur is also popular with foreigners - youngsters for the most part, for whom Tiruvanmiyur is ideal in its village atmosphere and its nearness to the city.

The town (Tiruvanmiyur), which was a village during the last census, (b) has a population of 17,166 persons (1971 census) with 8,866 males and 8,300 females. The percentage of literacy is 56.47 (1971). Both the Kuppams and Laxmipuram Colony have primary schools. There is a primary school in the center of Tiruvanmiyur, and another run by the American Advent Mission, which is on the South Beach Road, close to Tiruvanmiyur Colony. There are two balwadies, one near the Mission-School and the other in the center of the town. To the North of it is the Maternity Centre where two doctors (Government) attend every Monday from 3 p. m. to 5 p. m. A Government van comes with the doctors and dispenses medicine. At the Maternity Centre there is a midwife and an ayah always in attendance. The midwife conducts deliveries in the patient's house and is quite often called in by the Harijans in Tiruvanmiyur Colony. There is also a Lions Club Dispensary quite close to Tiruvanmiyur Kuppam. Two doctors attend there between eight and twelve daily. There are also some four or five other doctors who live and work elsewhere but run morning and evening clinics here. They are not wildly popular but seem to get a sufficient number of people to continue their clinics. The Primary Health Centre for this Panchayat is at Vekacheri, some eight miles away. No one from Tiruvanmiyur goes there. Hospitals

-
- (a) Excluding Harijans (See M. Moffat, Balwady Report I for village structure.
(b) A town is designated as having a population of 5,000 or more and 60% non-agricultural.

in the city patronized by these people are Andhara Hospital (four miles away), Egmore Maternity Hospital and Egmore Childrens Hospital (ten miles away), Gosha Hospital (eight miles away) and Royapettah Hospital (seven miles away).

The Panchayat Office is near the clock-tower on the South Beach Road. From about 11 a. m. to 5 p. m. it is fairly busy with three or more Panchayat members (there are 14 in all) hanging around chatting with the Panchayat Officer. Bread is distributed from here, under the Urban Crash Program, sponsored by the Central Government.

A LIFE CYCLE

Childhood

The first few days - A child is usually born in the hospital. A taxi is called and the woman is taken to the Andhra Hospital, or the Egmore Maternity Hospital, or the Gosha Hospital. When the baby is born at home, it is usually because there has been no time to get to the hospital. In this case, the local midwife (ambattachi) or the government midwife or, as in the case of Odai Kuppam, a caste midwife is called. Sometimes only neighbors help. This is probably more often the case in the two Harijan colonies because Jagada and Pattu (ambattachis) won't go to a Harijan colony. The government midwife is more often spoken of by the Harijan women than by others. A competent looking woman who, as general opinion has it, charges no fees and only takes what is given out of goodwill. The ambattachi (literally the barber's wife) traditionally the village midwife, has an advantage over the ordinary midwife (maruthavachi). She gives medicine for mother and child and is often engaged to bathe the child for a period from one month to one year.

The medicines (a) given to the child are for getting rid of phlegm and to ensure a strong digestion. A very popular patent medicine is gripe water (b) which, as one woman said, is the modern version of castor oil.

(a) Medicines given by Ambattachi:

To the child: (1) Gorojanam - for phlegm, bad throat and to ensure a strong digestion.

(2) Essence of sukku, jajikai, mosikai, Kadoorani and azhakasadhu. This is given every day for some months just before a bath.

To the mother (1) Asofoetida and palm tree jaggery for the "rubbish" to come out.

(2) Karanjeeragam and panna vellum for strengthening the small of the back (iddupu).

Both medicines to be given till pollution is over i. e. for nine days usually.

(b) A popular patent medicine for colic.

The mother is given mainly two medicines. One for getting rid of the "rubbish" (azhukku) in the abdomen. The ambattachi says "for ten months the blood has been collecting there; it must all come out." The other is given for strengthening those muscles which have been put to strain (i. e. those of the small of the back - iddupu). The ambattachi charges Rs. 10/ - for delivery and Rs. 5/ - a month for bathing the child. Often, even when the delivery takes place in a hospital, the ambattachi will be called in for bathing the child.

There are two diseases commonly feared during these first days:

- (1) Sevapu, which is red patches all over the body. This is not fatal and can be cured by making a paste out of the sevapu leaf and applying it to the affected areas.
- (2) Karapan, in which the baby has blue finger-tips and feet and in some cases blue patches on other parts of the body as well. This disease can be fatal. Often as a preventive, small quantities of donkey's milk is given three times (morning, afternoon, and evening) any day during the first five days of the baby's life. Donkey's milk is difficult to get and very expensive; Rs. 2/ - for about two ounces. It is often sold near maternity hospitals.

There is no known reason why a child gets sevapu but karapan can be the result of the mother eating nao pallam (a) or pork during pregnancy. But there are ways of curing karapan (b). The lactating mother should definitely not eat dried fish and some say even meat for many months if the child has karapan. A child does not usually get karapan after babyhood but if it should, it is invariably fatal.

(a) A black berry with a big seed, oblong in shape.

(b) Cure for Karapan:

The Ambattachi says "grind the Karunnochi leaf, omam and cow dung together, and spread it on the floor. Put a thin cloth over this and place the child on it. Keep the mixture warm by placing four heated brass vessels or hot water bottles around the area where the stuff is spread."

During the first three days of the baby's life, whether it is born in the hospital or at home, it is given only sugar water. The main reason for this is to clear its throat of phlegm and to get rid of the "rubbish" and water in its stomach. Also, the mother should have her first bath, which is on the third day, before feeding the baby, and as some said, the first milk is "seem pal" as it is for instance when a cow gives birth to a calf. The first three days milk is thrown away. It is not given to the calf or drunk by people. From the third day on the child feeds on its mother's milk and continues to do so till the child is one, and sometimes until the child is $1\frac{1}{2}$ years old and occasionally until it is two or even three.

To the age of three years - Diet: Until about seven to eight months, the mother's milk is the only food the child has. At that stage it may be given an occasional biscuit, or a little bread dipped in milk or more often, coffee. Fruit and vegetables and rice are not given to the child until he is a year old or, as it is put, "till he walks." He cannot digest rice and vegetables and fruit is likely to give him a cold. This is quite strictly observed for the eight month old baby but after that one sees a child here and there messing up a banana or chewing on a piece of mango. Fish and meat are also forbidden until the child is nearing two years, and this is almost invariably observed. The child cannot digest such food. The gravy from a meat or fish or vegetable kolambu (a) may be given the child along with rice, but not the actual pieces of meat or fish or vegetable.

What about other cereals, especially ragi? (b) A small child is not given any cereal but rice. Other cereals are not common in this area and ragi (kevarugu) is "cold" and likely to give the child a cold. But, theoretically, ragi with sugar and milk is reputed to be strengthening. However, it is never especially given when a child is weak or recuperating from some illness. A child should not eat too much kharam (c) or other spicy food, but separate food is never cooked for it. The one year old will have rice with a very little gravy and the three year old

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- (a) A gravy with tamarind mixed with various ground spices as its base and with pieces of vegetable, fish or meat floating in it.
 - (b) Identified as finger millet in "The Nutritive Value of Indian Foods and The Planning of Satisfactory Diets" by W. R. Aykroyd, Ex-Director, Indian Council of Medical Research.
 - (c) chili - hot.

with a little more and maybe a few pieces of vegetable or a piece of meat or fish. Buttermilk and curds are not allowed the small child. They are "cold." Coffee or tea is drunk by all children, one year onwards. Sometimes, but very seldom, a mother will run out of milk before the child is one year old and then Amul, occasionally Ostermilk or "Levers" (a) is given diluted with quantities of water. Cow's milk is preferred, as it is "natural" , but is not easy to come by. Even when cow's milk is procured it is mixed with an equal quantity of water before feeding it to the child. Buffalo milk is not good for children. It is difficult to digest and also, if taken in substantial quantities, it can make the child dull.

By the time he is three, the child's eating pattern almost wholly conforms to the general pattern followed by the family. Perhaps he won't be fed the previous night's rice which is the main breakfast dish for the rest of the family, because this again is "cold" and therefore capable of giving him a cold. But by the time he is four, he will be having his morning meal with the rest of them.

If he is one of some six hundred fortunate children in Tiruvanmiyur to have a bread card (1) then he is entitled to collect three slices of bread a day from the center where they distribute bread. Of course, he shares this with his brothers and sisters, usually managing to keep at least one slice for himself. It is the rare single child who has a chance of eating all three slices, but since he cannot normally manage to eat all three slices at one sitting, the mother or father sometimes shares a slice. That, however, is the only mother to get a slice, for the lactating and pregnant women who have bread cards almost invariably divide the bread among their children. The mother of an only child might get the taste of one slice, as also the woman with her first pregnancy, for she will share the three slices with other adults in the household.

(a) All baby foods are generally very expensive and therefore highly diluted.

The first eight or nine months of a child's life are spent in his mother's arms or astride her hip. Then he is likely to transfer to an older sister or more rarely, an older and reluctant brother. The child will toddle near and around the house at first, then further along the street and nearby houses, bushes and rocks, while his mother or sister sits around chatting or playing daiyam (a).

The child's ears are pierced and his head shaved by the time he is one year old. If possible this is done in front of the family goddess (kuladevata). But since usually the kuladevata is expensive miles away the ceremony is performed in the home. When the child has not been keeping too well, the ceremony is performed during the early months of the baby's life in the hope that the kuladevata will look after this one more member of the family.

Sometimes a child's nose is pierced and a thin metal ring fixed through the hole. The child is always called Kuppan or Kuppamma in honour of the goddess who rules over rubbish heaps, Kuppa. This is only done where the parents have lost a number of children. A bit of dirt from a dirt heap is ceremoniously rubbed on to the child and the child named after the rubbish heap; being such a lowly thing it is not expected to attract the attention of evil.

The main outings that a child up to three years has are to the market and provision store with its mother or sister, to friends and relatives' houses, to picture houses (most often the nearby tent) and to the hospital, the doctor or the manthrawadi.

Illnesses: The most common illnesses the child suffers from are fever, (the cause is not distinguished) respiratory troubles and diarrhea. A very small baby, after a day or two of fever, will be taken to a doctor.

(a) A game played with a board drawn on the ground and with dice and stones or shells.

A slightly older child, $1\frac{1}{2}$ years or more will be given an aspro or some equivalent "fever pill" for a couple of days more, before he is taken to the doctor. Most everyone has heard of typhoid fever and if the doctor recommends that the child be taken to hospital, the parents will do so, borrowing money for the occasion and standing in tireless queues in hope of the miraculous injection curing the child - for, injections are very much favoured for adults and children; as doctors pointed out again and again, the patient is wholly satisfied with the treatment only if it is an injection. For a cold, a cough and other respiratory troubles, the child is rubbed down with Vicks or often with camphor (karpuram). A running nose, a slight, even if persistent, cough, are not too much bothered with. But wheezing accompanied by fever is usually considered a case for a doctor.

Almost as common as a running nose is the short or long stretches of diarrhea that almost every child goes through. There are two types of diarrhea. One which can be treated and cured by doctors and the other which is the result of a dosham and can only be cured by manthrams (a). The latter are more common especially for children up to three years and progressively less virulent for children even up to 12 years of age. Children up to three, four and five years are more prone to diarrhea than older children.

A dosham is the result of some forbidden thing being done, even if it is done unknowingly, e.g. a child will have a dosham if it sees a woman who has aborted recently. There are a number of types of dosham, (2) each one following the committing of some forbidden action. The most common is the pakshi dosham. A child's clothes should not be dried in the open. The shadow of a bird or bird-droppings might fall on the clothes and the result is a dosham on that child. Pakshi dosham causes loose green bowel movements. In addition, and this is a feature common to all doshams, the child will become weak and won't cry but may whimper continually. He won't have any appetite, and in extreme cases, his pupils will disappear behind his eyelids and his fontanel (ucchi) will be depressed.

(a) Manthrams - magic formulas.

A child in this state is almost invariably taken to a manthrawadi, who will first of all ascertain whether it is a dosham or not, and will then find out what type of dosham it is and pronounce a manthram depending on the age of the child and the type of dosham. He will either merely wave margosa (vapa) leaves over the child, or give it sacred ashes (vibhudhi), or give a string to be tied round the neck (for a girl) or the hips (for a boy). By far the most popular manthrawadi in Tiruvanmiyur is one Madithuraru - his name stems from the village he comes from, Madaithur. There was not one family who didn't know of him and hardly a family who hadn't consulted him. Did he ever feel it wasn't a dosham or perhaps he couldn't manage it and therefore advised a doctor instead? "If they come without money what else can I do but advise?" he says. But he doesn't charge much; Rs. 1.25 to Rs. 2.50 usually. He has various exotic ceremonies for which he charges quite a lot, but doshams are no more expensive than an injection.

There are other manthrawadis (3). There is a fisherman, a well-known man in Tiruvanmiyur Kuppam, who is a gentle man in sharp contrast to the flamboyant Madithuraru. Muslims are very popular too. A Muslim at Thousand Lights is very highly spoken of.

It is not that the child is not taken to a doctor. In many cases he is, most often after trying one or more manthrawadis, occasionally before trying a manthrawadi but the child is always then taken to a manthrawadi as well. There were a few cases where the child had died in spite of all types of treatment, but most women said that their children had been cured by manthrams. As reported by them the symptoms point to acute malnutrition. Perhaps the child picks up enough to merely stay alive, and this is recognized as "cured"? Nothing strengthening is given the child. On the contrary, arrow-root kanji (a) is the only food given to him. It is not a food likely to cure a condition which is most probably due to protein malnutrition.

(a) A porridge-like substance, usually a suspension of starch or cereal flour in water.

There is not a child over a year who is not undernourished. This, however, is the norm and so no special food or worry is expended by their families on this condition. Money is borrowed, special efforts are made, for intermittent illnesses and the treatment of very noticeable weakness, but effort at that level of income cannot be kept up all the time. There is consciousness of under-nourishment, "you have looked at your children - now look at ours!" challenged one woman. But this consciousness is not ever-present and nagging. Extra money won't go into tonic for some child, but to buy a bit of jewelry or clothes or to retrieve pawned articles and very rarely just for more rice for everyone in the family. One woman who had had five miscarriages and two surviving children proudly says of her three year old son, "I have given him six bottles of gripe water, one bottle of Horlicks and two Amul tins, and I would like to give him more but I can't afford it." They had just borrowed Rs. 600/ - for their daughter's coming-of-age ceremony.

The child from three to five years. The diet of a child of three to five is rapidly coinciding with the adult diet. If the child is fairly normal this process takes place sooner than if the child has had a tendency to illness. "Cold" or the difficult-to-digest items of food would not then be given him.

There are two balwadies in Tiruvanmiyur. They admit children from three to five years of age. One is run by the Womens' Indian Association. It is in the heart of the village and about 60 children from nearby streets attend classes here. Of these, 30 to 35 are fed daily on the premises. Of the rest, a few bring their food and the rest go home to eat and return for the afternoon. A couple of children from a higher income group than the rest bring their own food. "I don't know whether the child will eat properly" and "the child will only eat curds and rice." Also "our children won't eat there," are the reasons given by mothers of these children.

The food served is substantial and varied. It is cooked on the premises and the children, though not positively enjoying it, seemed placidly satisfied with it. No Harijans attend this balwady. The teacher emphatically

said there were no restrictions. The balwady has quite a bit of school equipment and a certain amount of space for the children to play in. The other balwady is run by the All India Womens' Conference. It is of more recent origin and is run by a Mrs. Venkatraman, whose husband has retired and settled down in Tiruvanmiyur. This balwady is housed in a room behind their house. There is a trained teacher, one helper and an ayah who does the cooking. As yet they have no educational equipment. The balwady has been running for eight months.

Mrs. Venkatraman personally supervises all the cooking. The diet is varied interestingly, from chappatis to rice and uppams (a) and the children seem to enjoy it. About 40 children come daily and all of them eat there. She keeps weight charts for all of them. Mrs. Venkatraman tried giving them ragi (b) once a week for four months, but it was not popular with the mothers. There were complaints that the children were getting colds (ragi is "cold") and stomach upsets, so she discontinued it.

The balwady is situated on the South Beach Road and is closer to the Tiruvanmiyur Colony than to any other part of the village. All the children at the balwady are from this Harijan colony, except for two Brahmin children whose parents live almost next door. They do not, however, seem to mind that their children are studying and eating along with Harijan children. Of about 20 parents questioned, only two or three said that their children were hungry on coming home and asked for more food. The others all said that the children only had tea or coffee on coming home and a meal only at night. The two balwadies together account for only about a hundred children.

Illnesses: The ailments that children in this age group suffer from are similar to those of younger children. Diarrhea is less frequent. Mumps and sores have been included in this section only because they were not particularly mentioned for the younger child.

(a) Usually made of rough wheat flour, fried in a little oil, cooked with water and seasoned with chillies mustard seeds and blackgram.

(b) A millet.

A doctor is not usually consulted for either but is consulted more often for sores than for mumps. The popular home remedy for sores is "pencil Oint" (penicillin ointment). A truly home remedy is black pepper (molagu) paste which is applied to the affected area.

Mumps or Puttamma definitely does not call for a doctor's treatment. It is a visitation by the goddess Puttamma, a lesser version of Mariamme the goddess responsible for small-pox. It is not serious. "Here the goddess is only playing with the child" as one woman put it. A paste of margosa (vepa) leaves and turmeric (manja) is applied to the affected area and a gold chain is placed around the child's neck. This latter is to appease the goddess who has a desire for a gold chain. Like small-pox and measles, it is a disease which heats the body, so all "cold" foods are given. For the first few days the child cannot swallow, and small quantities of liquids, commonly buttermilk, are given. Kevarugu kood (a), too, is very good for mumps.

Growing Up. Five to fifteen years . At five or six almost all children go to school, usually to the one nearest their homes. And they all come home for lunch. There is only one school in Tiruvanmiyur which serves mid-day meals and that is a primary school at Odai Kuppam where they started serving meals only since June 12, 1972. The Kuppam which is just one sprawling street is too close to the school. The parents say the children keep running home. The school has 80 children. Meals are supplied to the school and all the students are fed out of this. The quantity seemed adequate but the parents were vociferously complaining about the quality. "The children just throw it to the dogs" they say, and "they come home and want more food." What we observed is that children fill their vessels and run out of the school with it. Some run home, others are joined by younger brothers and sisters and all eat the stuff together. A few mothers on the sidelines were either encouraging their younger children towards the school or were waiting for the older ones to come out of school with the vessels. The teacher, who seemed a sincere and earnest

(a) Like kanji, but made with finer flour and more solid in its consistency.

man the first day we were there, locked the legitimate school children in during lunch time. Subsequently, he gave up and on one of the days we were there, watched the children run home with the food and on another day turned his back while they handed out the vessels through the window. But there was always a core of children who sat in the classroom and ate. "What can I do?" he said, "The younger children want to eat as well." Almost every child is given five, ten or 15 paise daily to buy snacks, like gram (pattani) ground-nut and ice cream. Those with a slightly higher income and those of a higher caste don't like their children having mid-day meals provided by the school. These children take their own food with them, or food is sent from home.

Though the boys usually seem to continue through primary school, the girl of nine, ten, 11 and perhaps even six or seven is often kept home to look after a younger brother or sister. This is to some extent understandable in the Harijan Colonies because the Harijan woman works if she can get something, usually coolie work. But the fisherwomen at the kuppam do not work except to sell the fish their husbands catch, during which time the husband is usually in the home. So there is not much excuse for keeping their daughters at home. In any case, once the girl comes of age (13-15) she almost always discontinues school and awaits offers of marriage. "After all, why should a girl study further? Men need jobs." Education is a passport to a salaried job, a much coveted thing. A few families, especially the Brahmins and those with a somewhat higher income, permit girls to study further. Single girls do not do the regular daily shopping. However, they do go out to fetch water from the innumerable pumps all over the village. Only women gather at pumps, and they do a lot of the cooking and housework and, of course, look after the younger ones.

The first menses is one of the most exciting events of a girl's life. (4) The girl is in a state of pollution, theetu, for anywhere from nine days to 16 days. The theoretically ideal period for the fisherfolk is three months but no one really observes this. During theetu she must not see any man. She won't be pretty if she does, and she must eat, sleep and

bathe separately. She is fed special food. This is the only occasion in her life that she is given strengthening food; food that will strengthen her back, the small of the back to be exact, (iddupu valuvu). She has one raw egg, about four ounces of gingelly oil (i. e. one ollock local measure) every morning and special preparations like puttu (a) (of raw rice) and blackgram vada (b) or unda (c). The second time she has her period she has the same type of food for three days, but not for subsequent periods. At the end of the first theetu the girl bathes, wears new jewelry and new clothes, and friends and relatives are feasted.

Illnesses: The child between five and 15, if he has fever is not likely to be taken as quickly as a younger child, to the doctor. Like an adult he will probably be dosed with aspro for a week or ten days before the doctor sees him.

Jaundice and small-pox are included here because they are not childrens' diseases only. Everyone, adults and children, can get them. Jaundice is not a disease a doctor can treat. "English" medicine cannot cure it. There is a strict diet (pathyam) to be followed. No salt or oil or chillies is allowed.

A special variety of greens called Kizharnalli khire (d) should be eaten along with green gram (Paitham paruppu) also karasalamkanni khire (e) with curds. Grapes and coconut water are good. Jaundice "heats" the body, and so all those "cooling" foods are eaten.

In addition to the pathyam which should be followed for a month or more, there is a special leaf, "Poona Kanja" which is tied to the arm; it forms a wound on the arm and as the wound heals the jaundice disappears. Most people just follow the diet. (5)

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- (a) Steamed rice mixture seasoned with coconut and sugar.
 - (b) The pulse is ground, seasoned and deep fried in oil in the shape of a flat cutlet. Blackgram is mung bean.
 - (c) A ball of the pulse usually held together with heated jaggery (coarse, dark sugar)
 - (d) A variety of greens.
 - (e) A variety of greens.

Small-pox is about the most "heaty" of diseases. It is the result of the goddess Mariamma's wrath. Various things have to be done to appease her. It is pointless going to the doctor. The patient must be kept separate. He must not sleep on a mat. The house has to be kept immaculately clean. Sweeping should be done not with a broom but with a cloth. Any couples in the house should not sleep together, or the pox will increase. All these rules apply to mumps, chicken-pox and measles as well.

Clothes are washed away from the house. When the patient has his bath it is with margosa (vepa) leaves and cold water. Vepa leaves are kept by his bed as well. There is a special diet for small-pox, the most important thing being fruit. "Cold" fruit of all sorts are eaten. Certain types of banana, grapes and sweet lime (sathugudi) are the most common, not "hot" fruit like mango or papaya. Castor oil and a particular variety of banana (pevalapalam) are fed to the patient, for this will take all the "milk" down and bring it out. The body is said to be filled with the "milk" of small-pox. One should have lots of buttermilk and curds and coconut water.

If one goes to a doctor he might give one an injection and that would only make it worse. One should just appease the goddess. One can get small-pox even if one has been vaccinated. If one's body is "heaty" then one is more prone than others to catch small-pox.

Adulthood - Fifteen to Twenty Years - Sometime between the ages of 15 and 20 the boy will have done with school and will seek work, preferably a salaried job, but often just a coolie's job. The boys of the fishermen caste also prefer salaried jobs but do not usually have the option to do anything else but fish. "Only salaried people eat," they say. But as one lot of boys said, "to get a job is very expensive - we can't afford it." Money is demanded for almost any job, without promise of actually getting the job. The amount demanded can be anything from two to six months salary.

The girls during this period get married. For most castes it is the boy's family who seek out the girl and the wedding expenses are theirs. The girl's family on their part provide her with jewels, sarees and vessels for her new home, investment for the almost certain pawning that she will have to resort to later. For the wedding, both families go into debt, which along with other similar "ceremonial" debts, they will continue to repay for many years to come. The girl goes off to her husband's home, occasionally close by, often not too far away. She might have to live along with her in-laws but most families are nuclear with one or two dependents (a widowed mother or father, maybe a brother or sister). Being married she has more freedom than as a single girl. She does the daily shopping. As the wife of a fisherman she will sell the daily fish in the market. As a Harijan she will probably get some coolie work. If from a Sudra caste she may do housework at someone's home. But jobs are not easy to get and, of course, she will soon start a baby.

Pregnancy: The first few months she knows, and other women will tell her, that she must not eat papaya or pineapple as she would have an abortion. Some say that dates and white sugar can also cause abortion. It is preferable that none of these are eaten through the nine months of pregnancy, but definitely not during the first four or five months. Nao pallam must also be avoided, and perhaps pork, or the child will be born with karapan. Otherwise she can eat whatever she likes. In fact, if she has any special cravings, her husband and family should try and get her that food. Some people say that drinking milk daily with saffron in it will make the baby healthy and fair (6). But some of this is theoretical, because many women vomit and lose their appetites during the early months of pregnancy and besides, there is not much chance of their eating papaya, etc. as they can't afford it anyway. A few women go to a doctor if the vomiting is persistent but most of them laugh and say, "what can you do - you just wait till it goes down." So the majority do not see a doctor till the eighth or ninth month of pregnancy. Sometimes they may consult a doctor during the early months of pregnancy because they have difficulty in urinating. Occasionally they ask for tonics if they are feeling extra weak but this is more likely to be the case for later

pregnancies and not for the first. A woman should keep active during pregnancy or the baby will become dull. And if one is in fairly normal health, one should not eat fattening things or drink too much tonic. This will make the baby big and prevent easy delivery. "But we don't have to worry about that" said one woman, "we don't have the money to even eat normally." (7)

There are other restrictions. A pregnant woman should not go out in the blazing sun of the afternoon, nor at night after the sun has set. She endangers the child, as it may get some dosham.

There are two ceremonies important to a first pregnancy. Usually they are performed together, unless the family has money to spend for two occasions. The two ceremonies are valakapu, which should be performed at the mother's place during the seventh month and seemantham which is performed, at the mother's expense, at the husband's place during the eighth month. Often they are performed together, at the husband's place and then the pregnant woman goes home to her mother's place for the delivery. She returns to her husband's home the third or fourth month after the baby is born.

As a pregnant woman and later, as a lactating mother, she may be one of the few who can collect three slices of bread from the distributing center. If it is her first pregnancy and there are no other children in the house, she will share the bread with her husband and mother-in-law or whoever else stays in her home. If there are children in the house, the first preference is theirs for eating the bread. The woman may get a half slice depending on the number of children in the house.

After the baby: Whether the woman has the baby at home or in the hospital she is virtually starved for the first three days, and sometimes five days i. e. until she comes home from the hospital. She is fed on bread and coffee and sometimes milk. One old woman said that in her

day when bread was not available, she had a sort of wheat chappati.

There are varieties of lehyam (a) which the woman has, from the first day, definitely to the 15th day and sometimes for a month or even three months. The most popular are:

1. Asafoetida plus palm tree jaggery (pana vellum)
2. Karanjeeragam plus pana vellum
3. Kai masala - 19 ingredients ground together (the shop-keeper knows the ingredients).

These lehyams are to heal the wound (punnu) and to get the "rubbish" out of her body, and to strengthen the muscles of the small of her back. The kai masala is more consistently favoured by the Harijans than by other women. The lehyam is had once, twice or even thrice a day.

On the third day after delivery, the woman has a bath and then feeds the baby. From the hospital she is usually home on the fifth day. She has her first meal on the fourth or fifth day. She has it at about 11 A. M. or 12 noon after having had bread and coffee in the morning. She has only one meal from the fifth to the ninth and sometimes to the 15th day, i. e. till the pollution (theetu) is over. The meal consists of rice and kolambu with fresh (pinji) brinjal, drumsticks or field beans. No other vegetables are allowed. All food should be cooled and should not be hot temperature-wise. The masala (b) for the kolambu mainly consists of coriander, cummin seeds, black pepper, turmeric and one chilli plus a little salt, perhaps garlic and a very little heated tamarind. No oil is allowed. The kolambu should not be chilli-hot (kharam) but pepper hot is all right. No pulses (parupu) should be added or the baby will have gas and indigestion. Any other vegetables will not be digested properly and will adversely affect the baby's digestion. Meat and fish are forbidden, though chicken soup or goat's feet (attu kaalu) soup is considered strengthening especially if it is had with a little brandy which is very "hot" and will help prevent the mother and child from catching a cold. However, too much brandy may

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- (a) A concoction compounded of various roots and berries, all ground and held together, usually with jaggery.
- (b) A mixture of ground spices.

curdle the mother's milk. Bread and coffee can be had morning and late evening. The mother is in a state of pollution (theetu) for nine or again 15 days. On the tenth or 16th day she has two meals but with the special diet (pathyan). Perhaps a little fish may be added but only special fish; shark (sorra) which produces more milk, karapodi and sudum fish (a).

Other fish are harmful, especially fish with small bones like the nethili, (a) which bones can come through the milk and choke the baby. Fish may also cause the baby to have sores and one should be careful in eating it.

Buttermilk and curds are strictly forbidden for 15 days. But after that Brahmins advocate lots of curds whereas others continue to forbid it for the next three to six months. Milk, though some have it, is suspicious, as it causes mandam to both mother and child. A little red gram (thoram parupu) may be added from the 15th day onwards, but the vegetable restriction continues for two to three months and even then, vegetables like potato which is vayu, and "cold" vegetables like pumpkin are forbidden. English vegetables (eg. carrot and cabbage) are neither here nor there and are therefore all right. They can gradually be introduced into the diet. No coconut should be eaten for about five months. It is mandam. The idea is to keep the mother's body on an even keel, perhaps slightly warm. Clarified butter (ghee), of which Brahmins have a lot, is "cooling" and balances the lehyams, all of which are hot. They are important for their medicinal value and therefore they must be had, but an attempt is made to balance the heat with something "cool." But ghee is not "cold" (gingilly oil is) and therefore not capable of giving a cold. "Cold" things are very strictly avoided because respiratory troubles are among the more common complaints of infancy. Fruit, for instance, should not be had for nearly a year. Papaya and mango are too "hot" and most common fruit are "cold." The fisherfolk also recommend crabs (velli nandu) which is "hot" and very good for the body. Food given to the girl at her first menses and which is specifically strength-giving is forbidden the lactating mother. Eggs are considered indigestible, gingilly oil is

(a) Local varieties of fish

cold, as also is blackgram. (So idlis and dosa is forbidden) and puttu has coconut which is very mandam and forbidden for five to six months.

A few people said the mother should not have too much water as she and the child might get "janni" (a). The mother should also not have much medicine except the lehyams - even aspro as it might reduce the milk. On the 15th or 16th or 21st day, the mother is given the previous night's rice for testing her state of health; on this will depend the strictness of her future diet. If she vomits or catches a cold she has to continue to be strict. The previous night's rice is "cold" and she will not have had it the first 15 days and whatever the outcome of the 15th day test, she will not have it for another month or two. Betel leaf is eaten often because it is harmless and therefore is all right to eat between meals when hungry, and it slakes thirst and it is good for digestion. After delivery one should not fetch water or lift weights as the intestines (kodalu) and the womb (garba pai) will come out. One should not be seen around too much. One may catch the evil eye (drishti). Just as one kept active during pregnancy, after delivery one should lead a quiet and calm life resting as much as possible. The fuss of going to the mother's house is there only for the first baby, but eating the lehyams and adhering to the pathyam is, if not quite as strict as for the first baby, almost as strictly followed for the later deliveries. (8)

By the time a woman has had one or two children she settles down into the routine which will continue for almost the rest of her life. If a Harijan, or of any Sudra caste and she is between children with an older daughter to look after the younger ones, she will work three times a week, maybe at coolie work or mornings and evenings daily, if it is housework. As a fisherwoman she will go most days to the market, usually once a day, sometimes in a good season twice, to sell fish in the mornings about nine or ten and evenings around five.

The morning meal is usually the previous night's rice with tea or coffee which is often bought. Sometimes idlis or appam (b) are bought for the

-
- (a) A bad cold and chill with shivering
(b) A species of dosai or pancake

husband and children. She might or might not eat a handful (literally) of rice if it's there.

Shopping for rice, pulses, vegetables, oil, spices is done every day. Money won't stretch further. If the money comes in in the evening, the shopping is done then for the next day. If, as with the fishermen, the fish is hauled in in the morning and sold around noon, supplies are bought and cooking started in the afternoon. Sometimes food i. e. rice, is cooked twice a day, often only once along with a kolambu. In the Kuppam, the kolambu will have fish four to five times a week and vegetables the rest of the week. For others, fish is eaten two to three times a week only. Some families have meat once a week, only on Sunday, but more likely not more than once a fortnight or even once a month. The rice they use is boiled rice (pullangal arsi). Raw rice (pachi arsi) is eaten mainly by the Brahmins and those with substantially higher incomes. Those who eat boiled rice say that it stays in the stomach longer so the next meal can be postponed a little while. Both groups claim that it is a habit as to which type of rice is eaten and that eating the other type gives them body aches and indigestion. But for all ceremonial purposes, raw rice is used; for puttu eaten at the first menses, for Pongal (a) and for the marriage ceremony and for funerals.

Just about everybody knows about the different properties of food, chiefly "hot" "cold" vayu, mandam, pitham good for digestion and strengthening (9). Most people most of the time can eat most things without their health or digestion being affected. But if one's stomach is upset or one has a cough or cold or perhaps some disease like jaundice, then one is made conscious of what foods to eat and what to avoid. Other departures from the everyday, pregnancy and lactation, also induce awareness of food properties. In addition to specific circumstances causing an awareness of food properties, the awareness is also kept alive by a certain number of people who constantly feel that their body systems are only kept in working order by consistently eating or avoiding this or that type of food. There are people who feel, for instance, that they have basically "hot" bodies and so must always eat "cooling" things and avoid "hot"

(a) Raw rice and pulse cooked and seasoned with salt and spices or with sugar, raisins and cardamon. The harvest season is also called Pongal.

things. Common symptoms of a "hot" body are a constant dry cough, nagging stomach pain and smelly motions. Such a person should avoid having too much tamarind, which is very hot, and a daily necessity. He should have a lot of greens which are "cooling" excepting for drumsticks, leaves (murunga khire) and ara khire, (a) and he should have a lot of buttermilk and curds and avoid too much of fish and meat. A person with a tendency to a "hot" body should generally avoid "hot" foods and eat plenty of "cooling" foods. One woman said even cooking on a kerosene stove and with metal vessels makes the food "hot." Wood as fuel and mud vessels "cool" the food.

There are also people who have a tendency to a "cold" body. Their hands and feet get cold easily and they are prone to colds and respiratory troubles. Such a person should strictly avoid fruit, except the few "hot" ones like mango and papaya. He should also avoid eating the previous night's rice and ragi porridge, both of which are "cold." He can have most "English" vegetables, these being neither "hot" nor "cold" but just "all right." He must avoid buttermilk and curds, especially at night.

Then there are people whose constitution is bilious. (Pitham). A lot of ginger and lime juice should be added to their foods. Bitter gourd is very good for pitham.

Those who have a gas producing (vayu) constitution must avoid potato and raw banana (valakai). They must restrict their intake of pulses.

It is not only old people with their more vulnerable digestion who are diet-conscious but young people as well. Illnesses, pregnancy and lactation keep alive their minds to the principles of food properties.

(a) Drumstick is a pithy vegetable; murunga kire and ara khire are greens.

Twenty to Forty-five Years - Most families have one major meal a day and left-overs for the other meal. The man will, however, drink coffee or tea, or in the late evening drink arrack (a) at a coffee house or an arrack shop. The children will buy an ice-cream or munch pattani (b) during the school interval. The woman too might buy 6p or 12p worth of sundal (c), or pattani for the free morning and afternoon. Her house is small and thus does not need much cleaning. There are not many clothes to wash and only one meal to cook, so if she is not working, she is free the whole day to chat, to play the game of daiyam. She shops every day and occasionally she collects firewood, takes a child to the doctor, or the manthrawadi, or sometimes to a movie, and that is the extent of her activity.

Family planning does not interest her. In fact, many women are suspicious of it. They say the loop causes bleeding and tubectomy weakens the system. Arms and legs ache and one is never the same again. The fisherwoman uniformly stated that tubectomy was all right for other women, but for them who have to lift weights, (the daily fish to the market) it is not good. After tubectomy one cannot lift weights ever again. There is the occasional woman who has had the operation. One of them said she has never been able to work as hard after as before the operation. But the others found no difference. The Government Maternity nurse, who has been in this area for eight years, says "One can't open one's mouth about family planning. They become suspicious and unfriendly."

Forty-five Years to - . By 45 or 50 a woman usually is a grandmother, sometimes a widow, dependent on her children. She may even be an earning member of the household. There are no more children to be produced or fed. A few make and sell idlis and appams to nearby households and other do house work in some middle class home. Many sit around idle indulging in gossip and the odd caustic remark on the state of the world.

(a) A local liquor, usually made out of sugar-cane

(b) Gram

(c) A dry mixture of pulses seasoned with coconut and spices.

SOME IMPRESSIONS AND CONCLUSIONS

Doctors and Hospitals

Generally, the attitudes towards doctors and hospitals have a rational basis. Most women in Tiruvanmiyur have their babies in hospital. Experience has taught them that, this way, more women and infants live through childbirth. In a life largely circumscribed by the limits of the village, a visit to a distant hospital (for example, the Egmore Childrens' Hospital) is a major outing. Such visits are most commonly made for children rather than for adults, a fact most probably defined by the restrictions of income. Doctors in Tiruvanmiyur said that they had about an equal number of adult and child patients. Children are brought to them for fever, respiratory troubles, diarrhea and skin diseases. Old people come to them for general body aches and pains and digestive troubles (mandam). Some doctors acquire a reputation (kai rasi i. e. special talent) for particular diseases. The Lions Club doctors were stated to be good with children and there used to be a lady doctor in the village who was very popular with women and children. In the same way, people believe that for fever and respiratory troubles, "English" medicines are good, but for children's diarrhea, which is usually caused by doshams, a manthrawadi is the best man, and for jaundice, village medicine (natu vaidyam) is best. In both these cases, an allopathic doctor is only an off-chance, last resort.

Health, Medicine and Food

The concept of malnutrition is rudimentary. "Eat well" is the basic prescription for feeling weak and tired, for recuperating from illness, and "eating well" means having two good meals of sufficient rice. Of the innumerable lehyams and kashyams (village medicines, the one solid, and the other liquid) not one is for generally picking up strength. The only strength-giving lehyams are for strengthening the small of the back. There are a few blood-creating vegetables like beetroot but there is no practice of eating them after a loss of blood, as for example after childbirth. The principle behind the village medicines (natu vaidyam) is to maintain the balance of forces which make up the human constitution.

The Ayurvedic doctor in Tiruvanmiyur explained the Tridosha theory. The Tridosha are Vatham, Pitham and Kapham. Vatham is related to Vayu (gas, athar) and in turn to astringent and sour foods; Pitham is heat and related to salty and sweet foods; Kapham is the relation between water and solids in the body and is associated with bitter and pungent foods. These three forces should maintain their specified relative proportions for a healthy constitution and towards this end Ayurvedic medicine (the Indian system of medicine) is designed. Of course, the villagers, with a few exceptions, do not explain their practices in health and medicine within this theoretical framework. But the medicines they use and the purposes they use them for, the special diets (pathyams) they follow on different occasions, are all variations of this basic theme. A "hot" body is imbalanced towards pitham; a "cold" body towards kapham. A person with a tendency to gas is imbalanced towards vayu. "Hot" foods increase body "heat" making one vulnerable to small-pox, and jaundice. One woman said, "I always see that my husband and I have lots of 'cooling' foods - that is why neither of us has ever got jaundice." Excessive "cold" foods "cool" the body, making one prone to colds and other respiratory troubles. Vayu foods produce gas, upset the stomach. If the lactating mother has vayu foods it makes the baby's abdomen bloat.

Everyone has a tendency towards one type of imbalance or the other. This is what characterizes people as of one particular type of another. For example, a person can be of a pitham type. But in actual fact, most people do not normally suffer from the symptoms of imbalance, so that in day-to-day existence, to maintain health, it is sufficient not to eat any one type of food in excess. It is only when circumstances (like an illness or pregnancy) cause a departure from the normal body state that special effort has to be made to bring the body back to a normal balance.

The Tridosha body types are also related to character and emotions. A pitham person is hot-headed, not steady, and can be cruel and arrogant. The Harijans, one woman said, "have kai masala (a medicine for after delivery) all the time"! Thereby derogatorily implying that they were

hot-headed people wantonly making themselves more so by excessive eating of something as "hot" as kai masala. The ideal is to be self-controlled, detached, content, etc., which ideal orthodox Brahmins strive for by forbidding foods like onions and garlic which are believed to be aphrodisiacal; meat and fish also make for passion - perhaps this maybe is why they are avoided after childbirth, when the woman is expected to keep calm and contented.

Any particular food item or medicine can have more than one characteristic, thus, childbirth lehyams which are very "hot" are good for curing the wound (punnu) and this quality being valued, the "hotness" is tolerated but subdued, for instance by giving lots of clarified butter (ghee) which is "cooling." Similarly, when raw eggs which are "hot" are given to the girl at first menses, gingelly oil which is "cold" is given to balance it. The Brahmins specially stress ghee in the lactating woman's diet. This is not a function of income. The additional ghee is also required because Brahmins advocate garlic in the woman's diet, as being milk-producing and garlic is "hot." Non-vegetarians who normally eat garlic anyhow say that eating shark (sorra) is milk-producing.

To sum up, a healthy body is one in which the delicate balance between the different forces is properly maintained. Different emphasis in diet, daily and special diets (pathyam) are the result, (apart of course, from the ever-important factor of income) of differing notions of the ideal body state. The Brahmins prefer keeping the body in a "cooler" state than just "balance" would imply.

Allopathic medicines and western, modern ideas of nutrition have been accommodated into this basic system of the maintenance of health. "English" medicine cures quickly but the illness is likely to come back, said one person. Village medicine (natu vaidyam) needs strict adherence to special diet (pathyam) and so people often prefer "English" medicine because that does not need any pathyam, was another opinion. Quick and visible results is the great attraction of English medicine. Perhaps this

is why doctors are not so favoured for dosham, because malnutrition is not cured easily and quickly; English medicine is not fulfilling what is expected of it. Where results are conspicuous English medicine is, without hesitation, adopted. In Odai Kuppam last year there was a small-pox epidemic. Some official must have thought to send for the van from the Infectious Diseases Hospital to take patients to the hospital. Seeing so many return safe from the hospital, this year Odai Kuppam's answer to curing small-pox is "send for the van."

Consciousness of positive nutrition is also finding its way into food culture. Horlicks, Viva, Ovaltine, all milk foods, are enviously quoted as making the child look good. If at all possible, one, two or three bottles are fed to the child. The idea of continuous nutrition is slow in taking root. Tonics are universally favoured, the oral counterpart in popularity of the injection. Women in their third and fourth pregnancies ask for tonics. Old people are very fond of them and, here again, the odd bottle or two is fed to children, but not in preference to Horlicks or Viva. Tonic is looked on as a medicine and therefore perhaps more fit for adults than for children. As generally expressed, children should not have too much medicine; but, doctors are visited more regularly for children than for adults! One woman had truly incorporated Ovaltine into her food culture. "Oval" as they call it, "helps get rid of excess water in the body," she said.

Bread collected at the bread center and mid-day meals are that much more food. How can the mother eat the bread when her children so obviously need more food? She invariably gives it to the child. A special tonic for her condition (pregnant or lactating) or pills will not go the way of the bread. Medicine which gives strength to the mother is not what will be thought to give strength to the child. Milk, milk food, and bread are "food" and within a general awareness of food scarcity food will, without hesitation, go to the child. (a)

Very tentative comparisons: What a child should and should not eat

(a) See discussion of intrafamily food distribution in Volume I of The Tamil Nadu Nutrition Study.

appears to be remarkably consistent across caste and income. Perhaps rice is given a couple of months earlier in a higher income group, but a child in a higher income group walks earlier (being healthier) which is the criterion for giving him rice.

The Brahmin child appears to have curd and buttermilk earlier than the other children. More cow's milk and fortified milk foods like Horlicks and Viva are given more consistently to the child in a higher income group. But (especially for recuperation from an illness) multi-vitamin tablets, ferrodol (iron tonic) seem to be given by slightly more educated families. The higher the income group, the less experience of doshams. "Yes, we have heard, but our children have never had it" is the answer. There is an indication by the Brahmins that it is not quite the "done" thing for a higher caste child to have a dosham.

NOTES

- (1) The Urban Crash Program: - The Government of Tamil Nadu distributes fortified bread at various centers to children between the ages of six months and three years and to pregnant and lactating mothers. Bread is delivered at Tiruvanmiyur for six centers in five villages. Tiruvanmiyur has two centers. It is collected from Tiruvanmiyur by the centers by a man who comes out on a cycle. The furthest center is about six to eight miles away. The bread is distributed between four and five-thirty every evening. Each center caters to 296 children and 108 pregnant and lactating women together. This list by no means exhausts the total number of children and women eligible for bread in any one village.

Each cardholder is given three slices of bread. During the holidays children gather at the center long before it opens. It is mostly school-going children between the ages of five and 11 or 12 who come to collect the bread. There are never more than two or three adults. Many children collect for three or four, and in a few cases for even 10 and 12 cardholders. They all form an exuberant queue which needs two or more adults to control. The person distributing the bread in most cases stands at a window (in the Panchayat Office or in the school) and hands out bread from this barred safety. Every child brings a small bag and carefully places the bread inside it. We saw very few children eat the bread on the spot. It is taken home to be shared with others. Some of the enterprising children who collect bread for others are given a slice for themselves by the cardholder. Child after child we questioned at all the six centers said that the bread was for a younger sibling, and they all shared it. "No, mother did not eat a slice." "But wasn't the card their mother's card?" "Yes," they'd mumble, "but she gives it to us." Women in their homes would smile at us and say "How can we eat it when they are all there," pointing to the children. Only by elimination did the woman ever get a slice. When there are no children in the household, she shares the bread with husband and mother-in-law.

- (2) There are a number of types of doshams: -

- (a) Pakshi dosham, the commonest type, is mentioned in the text.
- (b) Kuli dosham, if a child sees a woman who has her menses.
- (c) Grhabala dosham, if a child goes to a spot where another child has died.
- (d) Palakara dosham, if a pregnant woman goes out at a forbidden time (at noon and after sunset) and the breeze blows on her breast.
- (e) Sandukattu dosham, if a child is taken to a crossroad and then instead of going straight, the person turns at an angle.
- (f) If a child falls down and later shows signs of dosham, it is Taragara or Bhoomi dosham.
- (g) Mooaha dosham, (chiefly among Muslims). If a couple sleep together and then don't bathe before the baby sees them.

There are others but these were the main doshams mentioned. The cure for dosham is to go to a manthrawadi. In addition to the two in Tiruvanmiyur, two Muslims, one at Thousand Lights and the other at Ponneri, were mentioned as being good manthrawadis.

For Taragara dosham, one cure is to take pongal and betal loaf, betel coconut and kill a variety of blood-sucker (onan). Put all this where three roads meet and walk away without looking back. For Mogha dosham, vasamby is tied to the mother's neck and the child's wrist and the mother is given salt to eat. For pakshi dosham, one woman said, "a manthram could be said over some oil and this oil put on the child's head. If one puts castor oil every day on the child's head, this prevents dosham."

- (3) The manthrawadi does manthrams for one other common childrens illness - taking fright (bhayam). The sign of this is, the child won't sleep but will cry all night. People say he has taken fright at something.

Apart from curing childrens illnesses, manthrawadis also help a possessed person get rid of the demon (pisachi). They can also remove or cast evil spells at the customer's request. Madaithuraru

related a hair-raising ceremony which he performs at dead of night at the cremation grounds. This is for removing the "evil eye." He chants various manthrams and sacrifices a goat, and a cock, with the help of an assistant. The charges for this ceremony is Rs. 25/-.

The other manthrawadi, Selvaraj is a more benign person. He never casts evil spells. He says his greatest popularity apart from curing doshams is in helping women have easy deliveries. He chants some manthrams over a coconut and then breaks it, and soon after the delivery will take place. Selvaraj does not believe in village medicine (natu vaidyam)!

- (4) First Menses: The clothes the girl is wearing when she first has her menses are given away to the washerman (dhobi). In most castes, for the remaining days of the theetu, the dhobi supplies the clothes she will wear at a small cost. On the day the theetu is over she wears new clothes. The food and other articles required for the ceremony are provided by her mother's brother.
- (5) There are a few other cures for jaundice; each followed by just a few people. There is one woman who is well-known in the area she lives, for curing jaundice. She gives some leaf to be eaten which cures it very fast, but she would not tell us the name. She said the power would go out of the leaf if she mentioned the name.

An Iyer at Kodambakkam (in Madras City) gives three portions of some powder and the jaundice is cured. This is free. A special diet has to be followed for 22 days. No oily things should be eaten, nor the previous night's rice. Pumpkin and avathi khire (a) should be eaten.

(a) A variety of greens

- (6) During pregnancy: Two varieties of banana will also make the baby fair, and rose-petals will also. One woman said the rose petals are the poor man's counterpart of saffron.
- (7) Medicines during pregnancy: A concoction (Kashayam) of Sukku, Karajeeragam and Panna Vellum will help one to urinate easily. Cow's milk mixed with soda also facilitates urination. Black pepper (molagu) with castor oil taken in the later months will make it easy for the baby to come out. A root called Gerambu roasted and powdered also makes for easy delivery.

Mardani, ground with sugar and a small quantity eaten just once, will prevent the child from getting karapan.

The marwadi woman we interviewed said that in Rajasthan (where she belongs) there is "no nonsense about not eating during pregnancy. The more you eat, the better the baby will look." Also, "We don't have this business of saffron (kum kum pu) making the baby white, but then, there are no dark babies in Rajasthan, and we eat papaya, pineapple, everything we can eat, but here, I don't!"

- (8) Additional recipes for after delivery: For strengthening the small of the back (iddupu) boil Sadakuppu and make a decoction (kashayam) of it with palmtree jaggery, and drink for 12 days.

For pain in the womb - garlic and egg and castor oil.

Another recipe for strengthening the small of the back: Val molagu, nalla vembu, adi madalam, valla molagu nalla veru, rose petals kadakai and molaou - fry powder, mix with water, drain through a cloth and mix with palmtree jaggery - can be had for three months but is usually taken for 11 days or so.

Sago with garlic and sugar is another recipe for more milk. One family said that their family goddess said none of them should have

lehyams. One of the members of their family died in great pain after having some lehyam and it was after that the goddess forbade them.

- (9) Ayurvedic Theory: The traditional basis of Indian dietetics and medicine:

There are five states of Matter - Panchabhuta.

1. Prithvi - earth
2. Ap - water
3. Thejas - fire
4. Vayu - air
5. Akash - sky

Within the human body, these states combine to become the Tridhatu:

1. Vatha combines air and sky.
2. Pitha is fire.
3. Kapha combines earth and water.

Dhatu literally means "supporter." The Tridhatu are the three elementary and fundamental units or principles on which depends the building and sustenance of the body. The Tridhatu represent the Trigunas - the three attributes of matter.

1. Vatha represents Rajas which is Life or the Vitality principle.
2. Pittha represents Satwa which is Mind or the Psychic principle.
3. Kapha represents Tamas which is Matter or the Physical principle.

Everything in the world - plants, animals and human beings is the result of the differing arrangement and combination of the Tridhatu and Trigunas.

There are seven elementary tissue elements within the body: these are called the Saptadhatu.

1. Rasa - chyle
2. Rakta - blood
3. Medhas - fat
4. Mamsa - muscle
5. Asthi - bone
6. Majja - marrow
7. Shukra - reproductive elements

The Tridhatu acting upon and working through the Saptadhatu maintain and renew the body. When all the Tridhatu are in equilibrium, then the body is in a state of health. When there is disequilibrium, then ill-health and disease follow. In a state of disequilibrium, the Tridhatu are known as Tridoshas. "Dosham" literally means "fault." As Tridoshas, the Tridhatu become vitiating agents in their action towards the saptadhatu, which in their capacity as elements that can be vitiated, are known as dushyas.

Food that is taken into the body is transformed into the seven tissue elements (saptadhatu). The wrong type of food can cause disequilibrium of the Tridhatu. Wrong habits of living, too, cause Tradhatu disequilibrium, transforming them into harmful agents, or doshas.

Vatha associated with Rajas (the dynamic principle) is related to the physical phenomena of circulation, respiration, etc., and with the mental phenomena of enthusiasm, concentration, Pittha associated with Satwa, is related to physical phenomena like digestion and assimilation, and with mental phenomena like intelligence and clear conception. Kapha, associated with Tamas is related to the physical phenomena of the structure of the body, and with mental phenomena like courage and forbearance.

When Vatha, Pittha and Kapha are thrown off balance, the physical and mental phenomena that each is related to are adversely affected. Maintenance of correct interaction between and proper equilibrium of the dhatu is the concern of Ayurveda.

SIDNEY M. CANTOR ASSOCIATES INCORPORATED

A LIFE CYCLE

OLAPPALAYAM VILLAGE: COIMBATORE DISTRICT

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**CANTOR/ATAC
TAMIL NADU NUTRITION PROJECT
FIELD REPORT**

A LIFE CYCLE

OLAPPALAYAM VILLAGE: COIMBATORE DISTRICT

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I. INTRODUCTION

The object of this paper is fourfold:

- 1) to give a general description of important ritual events in the growth and development of an individual from his birth to marriage and parenthood;
- 2) to study the food behaviour during pregnancy, lactation, infancy and early childhood as well as to attempt to relate the cultural dietary beliefs to actual dietary practice;
- 3) to study briefly the relationship of western medicine and local medicine to the villagers of Olappalayam village and describe the common child care practices during illness; and
- 4) lastly, to point out interesting comparisons and contrasts between the village chosen for this report and the semi-urban village, Thiruvanmiyur, which Lakshmi Krishnamurthy studied in her report "A Life Cycle" (Aug. 1972).

II. METHODOLOGY AND DESCRIPTION OF THE VILLAGE

a) Village description

My data comes mainly from Olappalayam, a village of about 100 families, located off the Trichy Road in the very heart of ancient Kongunadu and modern Coimbatore District. The nearest town to Olappalayam, Kangayam, is only six miles away and connected by a direct bus route. Olappalayam is also well connected by bus routes to Erode, (32 miles), Tirupur (15 miles), Dharmapuri (16 miles), and Coimbatore city (55 miles). Olappalayam has its own Panchayat Union Primary School through grade 8. Beyond grade 8, children must travel to Kangayam

(6 miles) for high school. Olappalayam is the location of a maternity and child welfare subcenter of the Government Primary Health Center at Veilkoil, Dharapuram Taluk, and through this, has the services of a resident government midwife and an M. B. B. S. doctor who is attached to the Primary Health Center and comes usually one day per week.

Olappalayam has had electricity for the past seven years. There is a large village well with an electric pump which appears to be constantly out of order. The village's land is moderately fertile, but quite dry and water for irrigation is dependent on collection of rain water. The major crops sown are kambu, ragi, and cholam, cotton and tobacco.

Socially, Olappalayam is typical of villages in Coimbatore District. It is dominated by the Vellala Gounders, a large and powerful agricultural caste found throughout the District. They are the landowners in Olappalayam. The approximate caste composition of the village is as follows:

<u>Caste</u>	<u>No. of Families</u>
Brahmin (priest)	2
Kanakapillai (village accountant)	1
Vellala Gounder (agriculturist)	60
Mudhaliar (weavers, landowners)	4
Pandaram (non-Brahmin priest)	3
Udayar (potter)	2
Nadar (toddy-tapper)	6
Choli Asari (goldsmith)	5
Kongu Asari (carpenter)	2
Vannar (washerman)	2
Naicker	3
Navidar (barber)	1
	<u>91 families</u>

Except for a few individuals (approximately 5% according to my assistant), all others in the village are engaged in their traditional caste occupation. The Harijan Colony with approximately 50 families (Madaris) is located about one-half mile outside the village.

b) Methodology

The major single advantage of choosing Olappalayam was that it is the home of my assistant, K. Sundaram (Pandaram). This greatly facilitated the process of choosing reliable informants for our interviews; it also created a bond of trust between ourselves and the interviewees which is usually absent to the newcomer. This was important since the time schedule for the project was very short.

The total research in Olappalayam took only 12 days. Though most of my data comes from interviews in Olappalayam, much of the data, on child care and particularly child feeding of the preschool age child comes from previous extensive interviews in Vadakipalayam, a TNP experimental village near Pollachi town, 25 miles from Coimbatore city and nearly 70 miles from Olappalayam. A comparison of my notes from Vadakipalayam and Olappalayam shows that little difference exists in child care practices between the two villages.

Eleven knowledgeable women representing seven different castes were interviewed in open-ended interviews on their ceremonies, eating habits and beliefs, medical and child-care practices. Of these, nine women* were also asked to identify the characteristics (heating, cooling, gaseous, hard to digest, strengthening, etc.,) from a list of either 50 or 113 individual food items most common in their diets. They also indicated whether the food could be eaten during pregnancy, or lactation and when it could be first introduced in the diet of the small child. Each of these interviews took from four to six hours depending on whether the food questionnaire was also administered. Most interviews were conducted in two or three different time periods.

* See Appendix for caste

Besides these women, we interviewed one local midwife (Naicker caste), the government midwife and one of the two men in the village whom the villagers most often consult for Nattu Vaithiyam (local medicine).

For comparative purposes we also used a list of 113 individual food items which my assistant had administered to six male informants from Olappalayam and directly adjacent villages. His informants were asked simply to identify whether each food was heating or cooling.

In Olappalayam, the most common prescribed traditional cures for children's illnesses are contained in palmyrah leaf books (Yedu) which are passed down from generation to generation within a family. These books are found in many caste Hindu houses in Olappalayam and are still widely consulted by the villagers today. We were able to borrow four for translation. Of these, three were old and one was relatively new. The three had first to be translated from Old Tamil into modern Tamil and all were then translated into English. Translation was difficult because many specialized terms and translations for the various leaves and herbs could not be found in the dictionaries on hand.

III. LIFE CYCLE - Common practices, major events, and rituals from birth to parenthood.

Birth and Infancy: In Olappalayam, almost all children are born in the home with the assistance of the government trained midwife or of a local midwife who is usually the same caste as the mother. The government midwife gave the following birth statistics (1971) for Olappalayam and the 29 nearest villages (total population, 5119) which the government maternity subcenter services.

36 deliveries:	government midwife
41 deliveries:	local caste midwife
35 pregnancies:	girls went to their mother's village for deliveries.
4 deliveries:	hospital with private doctor
<u>116</u> total deliveries	

Most caste Hindu women still prefer their local midwife for deliveries. The government midwife's services are used primarily by the Harijans. The Harijans have no midwife of their own and no caste Hindu midwife will deliver a Harijan child. For these reasons, they are quick to accept government medical facilities.

As one Harijan women told me: "We don't know what else to do so we go to the hospital and the government midwife." This is the same situation prevailing in Thiruvanmiyur, a semi-urban village bordering Madras, as reported by Lakshmi Krishnamurthy.

Only four births, all to mothers from well-to-do families took place in a hospital under a private doctor's supervision. Our informants told us, and the midwife confirmed it, that the only deliveries which occur in a hospital are those of the well-to-do families or those who suspect or have been told by the midwife that the delivery may be difficult with complications which would require a doctor.

Women prefer to give birth in their homes if possible. The Primary Health Center is far away (6 miles) and private hospitals and doctors cost money. The maternity subcenter, though spacious, is identified as service for the poor and particularly for the Harijans. But, even the Harijans as well as other caste-Hindu mothers enjoy having their families near and feel the maternity center is inconvenient because of its distance and the difficulty of cooking and having relatives and small children visit. Only a few babies from the poorest families in the village are delivered every year in the maternity centers.

Because of ritual pollution, babies are technically born outside the house on an enclosed, or more often, open mud verandah. If the family is very poor and has no verandah, the woman may deliver inside the house, but all cooking utensils and clothes must be moved out.

Among caste Hindus, for 11 days after birth, the mother is considered to be in a state of pollution (teethu) and contaminates all that she is near. During these 11 days, she must not enter

the house and her clothes have to be washed separately. On the 11th day, the house will be cleaned and whitewashed. The washerman will come with a new set of clothes for the mother and the child will be given a new shirt. For caste Hindus, the Brahmin priest will come and perform the ritual puja (punniachinam)* to remove the pollution after which the mother is permitted in the house. At the same time, or on the 30th day, the priest may perform the ceremony for bestowing the child its name.

The Harijans have no priest to remove the pollution. As soon as the 3rd or 5th day after birth, the Harijan mother will bathe, the house will be cleaned and whitewashed, and all the utensils will be moved back in the house.

When the labour pains start the local midwife or government midwife, or sometimes both, are called to the home. The local midwife rubs the mother's stomach with castor oil to ease the pains. Toddy (fermented coconut or palmyra sap) and arack, the local answer to modern sedatives, may be on hand for the difficult labour pains. A Mudhaliar woman said that they also give a woman some castor oil to drink if the delivery is delayed or difficult. The Harijans remedy for excessive pain is fried cumin seed or pepper in hot water. Since the weight of the average baby rarely exceeds 5 to 5-1/2 pounds, according to the government midwife, most deliveries are normal and fairly easy. After birth, the cord is cut, and the

* Punniachinam: The traditional puja consists of putting raw rice on a banana leaf and, on top of that, a small vessel (sombu) filled with water and mango leaves and a coconut is set. The priest chants religious verses (Manthrams) over a fire of arasam sticks. To the water in the vessel is added tumeric and rice. The priest dips the vepan leaves (neemleaves) in the water and sprinkles them around. The same basic puja is performed with slight variation at weddings and other important ceremonies.

mother is made to lie straight while the pelvic area is massaged to rid the mother of the after birth.

The first three days the mother is bathed from the waist down only. On the third day, she is given her first oil bath and subsequently on the 5th, 7th, and 9th day after delivery. On these days her head is washed but not oiled and the mother is bathed only in heated water.

When the mother gives birth, her body is said to be unclean from the collection of blood; it is also said to be in a neutral - cool state. The baby on the contrary is very heated. At birth his stomach is also said to be full of blackness and debris which must come out. Directly after birth, the midwife or relative will rub the baby everywhere with castor oil. It is put in his nose and ears and he is given a drop or two to swallow to clean his stomach as well as to cool him. For the first 3-10 or even 30 days, he will be rubbed with oil and given a drop or two to drink to purge his insides. After that his oil baths will slowly be decreased until only once every two weeks and then once a month. Besides this, the child will be rubbed with turmeric powder mixed with one or two other ingredients. A boy will be rubbed ceremoniously with turmeric for four days only, while a girl will have turmeric applied daily until she is widowed. Turmeric is used as a depilatory to prevent hair growth. It is also thought to clean the skin and the yellow coloring it leaves is considered beautiful.

The last but most important event for the baby's first day is the calling of the village man to read the child's horoscope according to the timing and star of its birth. His horoscope will constantly be consulted to give direction to the parents for ordering the child's life.

Various small ceremonies and rituals are carried out with the small baby. These vary between communities and on the days they are performed. On the third day, the child begins to nurse for the first time. This event is accompanied by a series of rituals. The washerman will come to caste Hindus and bring the sari which will be used for the child's hammock (Toti), his bed for the next two years, and the child will be ceremoniously

put in it. Some people will tie a waist string on the child, most likely to ward off evil. On the seventh day or some time during the first three months, there is a small ceremony when different anklets of various alloys-silver, copper and bronze are put on the ankle of the child. These are thought to aid digestion and give strength; there is, as previously mentioned, a ceremony to name the child, and for the Brahmin and Chettiar caste, for the father's parents to see the child and for them to bring the mother and child to their home if she has given birth in her mother's home as is the traditional custom. Most families celebrate one or two ceremonies but no more. These ceremonies entail some expenses to the parents in terms of preparation of rice meals (instead of other less expensive grains commonly eaten by the average village) with sweets and vegetables and curds if the family can afford it.

At the birth of the child even the poor families will try to purchase the following items: soap and talcum powder for the baby, kumkum for the mother's tikka (red dot on forehead), a heavy sari for the baby's hammock and a new sari for the mother. At the birth of the first child or a male child, sweets will also be bought and given to relatives and visitors. These expenses rise with the increased income of a family.

Age 1 to 3: For the first year, the child is kept close to the mother; only after 10 months to one year will the mother return to work in the fields if her income is needed. If she is still nursing, the child will go with her and his hammock will be set up in a tree near to the mother's place to work. As he grows older, he will be taken care of by a grandmother or older person, or more likely by an older brother, or more commonly a sister who may be scarcely two or three years older than the child. Usually one child in the family will have to forget all schooling because she is needed to look after the younger child.

At least once during the first five or even 10 years of his life, a child will be taken to a temple and have his head shaved as an offering to the God. The first child will be taken to the

family God (Kula Deivam) if at all possible. Otherwise, the first and subsequent child will be taken to the temple of the diety after which he is named. Murugan, whose temples are usually built on hillsides, is also a popular God to receive their offerings. Offerings of coconut, banana, betel leaves, betel nut, sandalwood powder and camphor, the traditional ingredients of all pujas are made: In the home a special meal will be prepared. The head is shaved to appease the God and in the hope that the child will have a good life.

At the same time, the child's ears may be pierced (a duty of the goldsmith). All female but few male children, except among Brahmins and Chettiars, continue this custom. Traditionally ears were pierced because the wearing of gold earrings for both men and women was an important part of the wedding ceremony. This custom has died out for the men and with it slowly, the ear piercing of the male child.

(Note: If a child, male or female, dies without having had its head shaved or ears pierced, thorns from a plant in the burial ground are pierced through his ears before he is buried to represent at least this one childhood ceremony.)

Age 3 to 5: The small child will go most places that his mother goes. He goes to relatives homes, to the temple, goes to the market and attends all the village travelling plays and entertainment. Often he will follow his brother or sister to school and play on the school verandah until they recess at lunch. If the school has a balwady the 3 to 5 year old child may spend his mornings there or he may still follow his siblings to school as was the case in Vadakkipalayam. Olappalayam has provisions for a balwady but there has been no teacher for the last year.

Age 5 to 15: In the school age group 6 to 11, 82% of eligible children from Olappalayam are attending school. However, in this age group for the entire school, attrition from January 1972 to November 1972 was 18% and the attrition rate from age 12 to 15 was much greater. Girls leave school to help in the home, or to do coolie work or simply because their

parents prefer to keep them in the home after they have come of age. Boys leave primarily to do agricultural work. Since 59% of the children in Olappalayam's school are from landowning Gounder families, they will be expected to help their parents in the daily farm chores.

The school (total attendance, 162 children) is given 75 mid-day meals of rice and bulgar wheat. According to the school teachers, the food is well received, although the rice is much preferred to the wheat, and the peanut oil used is adamantly disliked.

During these years, the only ceremony which occurs for boys is the thread ceremony for boys of about age eight. This ceremony, however, is typically a Brahmin ceremony to initiate the boy into Hinduism (much like the Jewish Barmitzvah) and it is celebrated only by the Brahmin, Goldsmith, Gomuti Chettiar and Choli Asari castes in the Kongunadu area. For girls, the coming of age ceremony is the only important ceremony before marriage. Only during this menses is the girl's body considered to be very heated but in this and all subsequent menses she is considered in a state of pollution (a) (teethu) because of the pollution she must sleep separately, she is not allowed to touch any cooking vessels, her sari must be washed separately and she is not supposed to enter a temple during her first three days or participate in any ceremony or festival. At the end of her first menses, the girl's relatives are called for a meal and she is given a new sari and blouse. Special herbal preparations and various foods such as milk and banana are given to the girl during this period, but they differ from caste to caste. Unlike Lakshmi Krishnamurthy's observation, no one mentioned the girl's need for strengthening food during this period.

Age 15 to 20: (Adulthood) - In Olappalayam, most marriages occur between the ages of 15 to 20 for girls and 19 to 25 for boys. Boys of families with land will simply continue their agricultural work. Those few who have passed their final high school exam and are landless or from large families will seek jobs as clerks, school teachers, or other government posts. A few may also go to nearby towns to become factory laborers. Permanent salaried jobs

(a) an accumulation of blood in general, is considered to be polluting

are highly prized, particularly by parents eager to make a good marriage for their daughters. In general, however, the children are still expected to follow the traditional occupation and, in Olappalayam, most still do. Most of the uneducated, particularly the Harijans, will be employed as coolie laborers.

(Note: In Vadakipalayam where the major caste is a low landless Gounder caste (Padiachi), the vast majority of the villagers earn their living as agricultural coolie laborers. Usually, the majority of the villagers will be landless laborers.)

A wedding is the major celebration in a person's life. If an adult dies before marriage it is considered a great tragedy for his life is thought to have been incomplete.(a)

In Kongunadu, among all but the rich, wedding expenses are equally shared. The girl can be expected to bring cooking vessels, bedding and jewelry if she is well off, though this is a very flexible rule. She must, however, give clothes to the groom and feast the wedding party. The groom's family, who have sought out the girl, must provide her with her marriage necklace, "tali" and her wedding sari plus one. The groom must give his sisters and sister-in-laws each a sari and his family must also provide a sumptuous meal for all guests. The largest expense at a wedding is the food and it is not at all uncommon for families to incur long lasting debts from their children's marriages, usually to the local pawn broker.

After marriage, the couple will reside in the boy's village, with his parents if they have space, or as a separate unit in their own typical one-room house if they are poorer. Everyone looks anxiously for the first signs indicating that the bride is pregnant.

(a) Ritually, the unmarried adult in Olappalayam is not permitted to be cremated but instead he is buried without any ceremony.

Pregnancy: During her first pregnancy, the bride is active and if the family is very poor, she may even do outside work, at least through the first six months. In Kongunadu, only the Brahmin community performs elaborate ceremonies during pregnancy. They have three different ceremonies: one in the 5th month (masakkai), one in the 7th month (valakappu), and one in the 8th month (seemantham). Other villagers have only one special occasion (Kattichatha Virundhu), usually in the 7th month, when the brides' parents come to the boy's home to escort their daughter back to her native village for delivery. This occasion consists simply of making a sumptuous meal for the girl's party with three kinds of rice, usually lemon rice, coconut rice or tamarind rice, and curd rice, vegetables side dishes and a sweet.

IV. FOOD BELIEFS AND PRACTICES

a) Food characteristics

Throughout India, food is conceptualized primarily as having either heating or cooling properties. This belief forms a principle part of ayurvedic theory (a) which maintains that an individual's body state must, ideally, be kept in a proper state of equilibrium. Dietary practices are thought to directly help regulate the body's equilibrium through maintenance of a balance between hot and cold foods.

Foods also have secondary characteristics. Part of the description of a food might be that it is particularly good for the following parts of the body: blood, fat, muscle, bone, marrow, and reproductive elements. A food may also aid digestion or be easy to digest or it may be heavy and difficult to digest. Together, these properties cover the saptadhatus:

- (a) Note: For a brief summary of the principles of the ayurvedic theory, see Lakshmi Krishnamurthy's report "A Life Cycle"- Notes - Page 69.

the seven tissues (chyle, blood, fat, muscle, bone, marrow, and reproductive elements) which according to a yurvedic theory form the body.

A third basic characteristic of certain foods may be their tendency to produce gas or stomach swelling, or pitham, a condition which villagers describe as one of body pain, headache and dizziness. These two characteristics fit into the ayurvedic Tridosha theory, however, no one I talked to in the village was aware of the theory or could explain it further. Certain other foods and particularly certain spices are thought to have medicinal properties.

b) Hot and cold foods

The basic belief in the necessity of balance between hot and cold foods for good health is part of the conceptual framework of every adult villager in Olappalayam. Almost all villagers can spontaneously identify any known food as hot or cold, though newer or unfamiliar foods may evoke some confusion in identification.

In Olappalayam, six male informants, each of a different caste were asked to give the properties, hot or cold, to the 113 foods most common in their village. Of these 113 foods, there was total agreement of all six informants on the property of 56 items, five of the six informants agreed on the property of 21 items, and another 26 items had agreement from 4 of the 6 informants. Only on eight items were the six informants equally divided in opinion. My informants said that toddy and aack, both alcoholic beverages, could not be classified as hot or cold.

In Vadakipalayam, 70 miles away from Olappalayam, I asked eight different informants (of six different castes) to give the hot and cold characteristics to the 15 most common different grains. Of these, nine items had the total agreement of all eight respondents. All but one item

of the grains (barley) actually differed in value between Olappalayam and Vadakipalayam. Raw rice evoked the most confusion of opinion between both villages. Formally raw rice is classified as hot, and all people definitely see it as less cool than boiled rice, but only 50% of this sample actually classified it as heating. Three grains, samai, semia, and white flour (maida) are not common to either one or the other or both areas. On these grains several respondents said they didn't know what property to give it since they weren't familiar with it and several seemed to guess at the classification.

The general conclusion I have drawn is that food classifications are relatively uniform by localized region. Though variation by caste may be there for some food items, my limited sample seems to indicate that region is much more significant in determining food properties than is caste. This, of course, would have to be studied further, particularly in areas where there has been a great deal of migration from one region to another.

Difference of opinion on food by caste is most prominent between the Brahmin community and all other communities. In my survey my Brahmin informant assigned a heating characteristic to more foods than any other informant. In his eating habits the Brahmin also differs. He and some Chettiar groups are the only ones to eat raw rice, however, the Brahmin seems to compensate for the added heat by eating more cooling foods than others. Particularly after childbirth, the Brahmin seems to emphasize cooling foods where others emphasize neutral foods and purposely avoid very cooling foods.

c) Eating habits in the village

In Olappalayam and Vadakipalayam eating habits are identical. The only variation comes in the variety of grain most frequently sown in each area, and this is dependent not on culture, but on rainfall and soil type.

The average villager is poor. Whereas in the city even the poor eat rice because other grains are not available,

in the village rice is the luxury of the well-to-do only. Most villagers can afford rice only one or two days a week. Except for the Brahmin community who only eat raw rice, purchase of rice by the villagers is directly dependent on available income in the month. People carefully budget how much rice they will be able to buy along with the local grain which is in season. Below subsistence level families have no choice: they can only afford the cheapest local grain; often a coolie labourer's wages will be paid, in part, in this grain.

In Olappalayam, food is cooked usually twice a day, morning and evening. Cambu, ragi (millets) and Cholam (a maize) are the seasonal staples. These grains are eaten as Kali, a dry preparation where the grain has been fired in oil with seasoning first and then cooked in water, or as souru, a steamed preparation identical to that used for cooking rice. Along with the kali or souru, a thick gravy is made from locally available grams (greengram, cow gram, horse gram or dryfield bean). If a family cannot afford gram, they will pick various greens from the field as a last resort and make a gravy from them. Vegetables in general, will be eaten only two or three days a week. Seasonal vegetables available in the village are: brinjal, snake gourd, rage gourd, broad beans and avarakai. Most other vegetables can only be obtained in the local market (Santhai) which comes once a week.

As in most Indian villages, Olappalayam's residents do not have the opportunity to buy many of their locally produced products. Rice and vegetables, milk, chicken, and eggs are all sent to the market in Coimbatore. The food selection in the village is meager.

The diet of the well-to-do differs considerably from that of the poor. In the Harijan community, the poorest group in the village, milk products and rice are an unobtainable luxury and are eaten only when they are considered necessary to a persons' health; such a case would be milk for a small child whose mother's milk is not sufficient, and rice for a mother who has just delivered a child or for a very

sick person. Boiled rice is considered easier to digest than any other grain. Rice, however, is actually a relatively modern replacement for the traditional ragi which was eaten for generations before rice was first sown in Kongunadu.

Harijans are the only community who eat beef and because of its lower price (Rs. 2/per kilo) they can afford to eat it once or maybe even twice per week. They and others in the village attribute their added strength and their women's reputed ability to nurse their children better and longer to their beef eating. Beef is also considered by all in the village to be a cooling food, and, according to the villagers, it is this food which makes the Harijan's diet a balanced one between hot and cold.

The moment a person's income goes up above subsistence he will purchase rice. An average meal (sapadu) for an above subsistence person in the village would be rice, a dahl or vegetable, gravy, pepper water (rasam), and a few spoons of buttermilk or curds, occasionally. The well-to-do and salaried persons will eat one or two vegetable side dishes and curd or buttermilk as a daily practice. For the above subsistence the morning or evening meal, or both, usually is tiffin. Dosai and iddli (a rice and gram preparation) are confined to the well-to-do and festival days, otherwise kali from various grains and gravy is the usual staple for tiffin.

d) Status foods

Foods have definite status value. In general, local foods have a lower status than foods only obtainable at the market or in the town. High status foods are rice, milk, ghee, green gram, red gram, English vegetables (carrots, cabbage, peas, potatoes, etc.), fruit like oranges and apples, and non-vegetarian foods like mutton, chicken, and eggs. Even more recent high status additions are the enriched milk products, Horlicks, Bournvita, Viva, and tinned baby food and packaged biscuits. All these foods also tend to be cooling foods; they are also more expensive than local produce.

The emphasis on status foods appears very detrimental to basic nutrition. The Harijan diet of ragi, local greens, dahl, and beef is probably much more nutritious than rice, sparingly used green or red gram gravy, pepper water, and a spoon or two of buttermilk. However, given his choice, the average villager, even without beef, would opt for the rice diet. There appears to be a whole category of above subsistence but not well-to-do people whose diet suffers considerably because of present village concepts of status and non-status foods interlinked with concepts of hot and cold.

e) Food and the life cycle

Pregnancy: A child's life begins in pregnancy. During this time, the mother is allowed to eat almost all foods and to eat well. The food restrictions are limited to a few foods which are categorized as being very heating and causing indigestion and gas. All informants said that thinaï (millet) gingelly seeds, pappaya and pineapple will cause bleeding and abortion because of their intense heat. Other foods mentioned by one or more informants as bad in pregnancy are horse gram, agathi greens, palmyra fruit, varagu (a millet), and jackfruit which is supposed to hinder the fetus' blood circulation. All these foods are also heating, and even though some of the foods are not uniformly labelled hot and cold by all informants, those who mentioned them as bad in pregnancy conceptualize them as hot. A build up of heat in the body during pregnancy is considered very dangerous, so very hot foods are avoided and other hot foods are eaten only in moderation.

If a woman wants an abortion she will first eat as much heating foods as she can find. The midwife we talked to, however, said these foods won't necessarily cause an abortion, but they will ruin the body's health and leave the woman weak and shrivelled up.

(Note: The most effective local method of abortion (which is performed not by the midwives but by special women) is the insertion of a twig from the madar plant in through the cervix. The plant is said to be so heating that people who want to commit suicide are said to eat it.)

If not in actual medical practice at least than in belief, intense heat is associated with an actual burning up of the body's tissue.

During pregnancy, certain foods are termed particularly good for the mother. The mother's basic needs in pregnancy are seen as maintaining strength for the delivery and keeping healthy blood. Foods said to give strength are ragi, wheat (these also help bones and muscles), chicken and mutton curry, eggs, milk, and toddy. Foods that increase blood are beetroot, carrots, cabbage (all English vegetables), oranges, and onions. Onions and cashew-fruit are also said to facilitate digestion. Soura gourd and barley will be taken to facilitate urination. Soura gourd is also supposed to kill worms in children and barley also reduces swelling. Asafoetida will be taken to eliminate gas in the stomach. There are a few local recipes for eliminating vomiting which may occur in pregnancy, but, in general, the women say that each individual is different and she will have to find out herself which foods suit her and which do not.

Though the foods mentioned have the general agreement, that they're all particularly good in pregnancy, it is doubtful that foods reputed good for blood and strength are emphasized as routine foods. The general villager's attitude towards health is definitely not one of taking preventive precautions. If a woman is very weak, she will be given special foods but she will make no attempt to emphasize these foods until she reaches a weak condition. In the same way, the free vitamin and iron pills supplied by the government midwife during pregnancy are rarely picked up or taken. The women say they know they are supposed to be good, but they don't see any particular need to take them.

Childbirth: Great care is taken after childbirth to insure that the child will remain healthy. When born, an infant is considered to be in an extremely heated condition and his diet is fixed accordingly.

The mother begins to nurse the child only on the third day after her bath. Until then, the child receives nothing but castor oil to purge his insides or sugar water if he is born in a hospital, or the mother has accepted this modern replacement to castor oil. Each caste and probably different families within one caste have special concoctions which they give to the newborn infant. The following examples were given: heated dried ginger powder (Harijan); cinnamon clove, Kasa kasa heated (Pendaram); dried ginger, cumin, onion, kasa kasa kadelhora (Mudhaliar); Karapetti, mustard seed and pepper and in a combination of 24 herbs (Brahmin). All the above are given to the child from the first day on to clean its stomach, aid digestion, and to give it strength, thus helping the child to ward off any illness.

The informants all told me that the infant would die if the debris did not come out of the child; for that reason, they attribute great importance to the administration of these concoctions.

The mother's diet during these first three days is also special. During the first day she can have only coffee or bread and milk if she is in the hospital. Directly after birth, the mother is given a concoction of varying numbers of ingredients, but most important, dried ginger, sugar from the palmyrah, black pepper and garlic mixed in water to drink. She is supposed to take this for the first 10 to 30 days to rid her body of the dried blood and rubbish (asutam) left over from childbirth. These four ingredients are particularly important in the first month since they are also the basic ingredients along with valanghai and cumin used in the clear broth (rasam) which, with rice, is the staple of the mother's diet in her first month after delivery. Although the ingredients in rasam can be typed heating or cooling (all but Karapetti are cool), my informants told me these were never eaten except in combination so that here the hot and cold identification should not apply. Although their benefit is said to increase in combination, individually, garlic is said to increase milk, pepper to clean and remove

the cold from the stomach and dried ginger and palmyrah sugar (Karapetti) to increase digestion and strength.

The cardinal belief during lactation is that a child's illness is almost always the result of some "mistake" in the mother's diet or body state. Everything passes from the mother to the child. The extreme of this belief is the practice of restricting the mother's diet as though she were ill during any illness that the child might have. Since the mother is held solely responsible for her child's health, she is supposed to be very circumspect in her diet.

Some villagers have the practice of feeding the mother small amounts of many different otherwise taboo foods like mango, pappad, coconut and various vegetables on her second or third day after delivery. The belief here is that the child's acceptance of these foods will increase earlier if she eats them before —but not while— she first begins to nurse.

As soon as the child begins to nurse, the mother's diet is severely restricted. Most restrictions last only for the first 30 - 40 days, a time period sufficient for the child to build up strength enough for him to withstand stronger foods. Few villagers observe dietary restrictions beyond three months; after three months, only a few particularly noted bad foods will be avoided.

As previously mentioned, the mother's body at birth is relatively balanced between hot and cold, but the baby's body is very heated. Probably for this reason, the mother's diet is confined almost entirely to cooling foods; these foods are also characterized by the absence of any tendency towards gas, indigestion, or heaviness. Although informants agreed that mother's milk was always cooling no matter what she ate, still precautions are taken to insure a reduction of heat. By the same way, however, in all but the Brahmin family, very cooling foods like curds and buttermilk and oranges are avoided for fear of giving the child a cold. The following foods are most common for mothers in all communities during the first month of

lactation: (the number in parenthesis indicates the number of informants who said they take this food in the first month.)

<u>Grains</u>		<u>Non-vegetarian</u>	
Barley	7	Goats liver	3
Ragi	8 high acceptance	Beef	2
		(Harijans only)	
Boiled rice	8	Mutton	5
Raw rice	1	Egg	1
(Brahmin only)			
Wheat	5		
Puffed rice	5		
Javarisis (sago)	3		
Field Cambu	2		
<u>Grams</u>		<u>Dairy Products</u>	
Green gram	7	Ghee	2
Red gram	7	Cow's milk	7
Black gram	1	Goat's milk	2
(In Iddli)			
		Curds	2
		<u>Fermented Bars</u>	
		Arack	6
		Toddy	1
		
<u>Vegetables</u>		<u>Spices</u>	
Broad-beans	6	Mustard seed	
Ladies fingers	5	Cinnamon	
Rage gourd	5	Clove	
Cabbage	2	Cumin	
Agathi greens	3	Garlic	
Tomato	3	Ginger	
		Nutmeg	
		Omun	
<u>Fruit</u>		Black pepper	
Cashew fruit	6	Tamarind	
		Turmeric	

Most spices and herbs are permitted and even given in abundance, but again, always in combination and usually ground to a fine powder. These same herbs in various other combination also form the basis of the most common village cures for ordinary illnesses and ailments. All Karam (spicy hot) foods are also avoided. Only hot water can be taken since unheated water will cause colds. Most foods not listed will generally be avoided by most villagers or, if taken, eaten in very small quantity only. Except for green gram, red gram, and black gram which is used only in iddli, all other grams are generally avoided as being hot and gas producing. Most vegetables are also lumped in this category. Most oils, coconut and jaggery are also avoided.

The infant: For the first five or six months, the child will have only mother's milk. Diluted goats milk for poorer families or diluted cow's milk (1:2) may supplement the supply if it is really insufficient. Undiluted milk is thought to be indigestible. In cases where the mother's milk has dried up and the family is poor, a combination of mashed iddli (steamed rice and gram cake) and diluted milk will be given from the fourth or fifth month onward. The very poor will crumble cheaper local biscuits in diluted milk. Even these substitutes, however, will throw the poor families into debt.

By the 8th to 12th month, most families will begin introducing small quantities of rice with salt and a drop of oil to the child or mashed rice and sugar. In many communities the introduction of the first solid is also accompanied by a small ceremony. It is the washerman who must bring the first rice. Occasionally, iddli will also be given, and a few families may also add curds, though not too much for fear of the child's catching a cold. An occasional ripe banana may also be given along with treats of biscuits and puffed rice. The well-to-do will give diluted tinned formula (Glaxo and Amul) and Farex, a tinned baby cereal.

After the initial introduction of rice, the poorest families, particularly the Harijans, will switch over from rice to ragi kangi for their child after only a few weeks because they cannot afford rice. Ragi kangi, however, is time consuming to make and the busy mother may prefer begging rice or buying an occasional iddli. Often the Harijan mother will start other grains in the first year simply because of financial and time constraints. The more well-to-do castes will limit the child's diet to rice only for up to two or three years of age.

Age 1 - 2: After age one, a child is not given such preferential treatment. If the family is not well-to-do, bought milk, iddli and maybe even rice may cease. But, still introduction of new foods to the child is slow and haphazard. After one year they will be given the skimmed top of the rasam (pepper water) on their rice or ragi. Occasionally, they will be given the broth of the main gravy if it is not hot. A vegetable piece from the gravy may occasionally be given.

The general rule of thumb in timing of introduction of foods seems to center on the child himself. When he has teeth, is walking and actually reaches for the foods himself, the mother will permit him to take new foods if they are not too spicy hot. If the baby cries for a particular food he will also be fed, but he has to make his need felt. Often an older sibling will share a bite of his or her food without the mother's knowing.

I asked my nine informants to tell me which foods on my list were good for the young child and when all foods could be introduced in the child's diet. It became clear in the interview that the women do not have a clear time concept in terms of months and age of a child. Though the timings the informants gave are not what they practice, the juxtaposition of foods introduced late against those introduced early gives an indication of what foods are good for a young child and which are to be avoided. The following are the most frequently mentioned good and bad foods for a child with reputed food value. Quite logically, the foods thought good for a child tally with the foods the lactating mother can eat in her first month.

Foods good for a child (C = Cooling, H = Heating)

Grains

- C - barley (barley water is used as medicine during diarrihea and stomach ache)
- C - wheat (50% of informants)
- C - ragi Kanji (fat and strength)
- C - boiled rice (easy digestion)
- C - Javarasi (water only: for urine)

Grams - all for strength

- C - red gram
- C - green gram (but produce gas)
- C - black gram (only in Iddli)

Vegetables

- C - bread beans (strength)
- C - ladies fingers (strength)
- H - Brinjal (for increasing blood)
- C - rage gourd
- C - cabbage

Spices

- C - cumin (easy digestion)
- C - ginger (easy digestion)
- C - omum (medicine for stomach troubles)
- C - pepper (removes cold)
- C - turmeric (removes bad smell from the body)

Foods to be avoided

Grains

- thinai (H - stomach ache)
- maize (H - stomach ache, gas)
- cholam (H - stomach ache)
- Varagu (H - stomach ache)
- Semia (H)
- Arisi combu (H - stomach ache)

Foods to be avoided (continued)

Grams (all give indigestion, diarrhea, and gas)

Bengal gram - H
Cow gram - H
Field gram - H
Horse gram - H

Non-vegetarian

Pork - paralytic fever - C
Egg - severe diarrhea - H
Mutton - indigestion - C
Chicken - indigestion - C

Others

Tender coconut juice - will give cold
Palmyra juice - will give cold
Curds - will give cold if hot water is not added
Cauva - will give cold
Melon - will give cold

This list is not complete. In general, the women were informed only about foods they were accustomed to buying. Whether a child can eat English vegetables, for instance, is a hypothetical question, since these villagers rarely buy any except cabbage. When in doubt a mother will only give known, proven foods.

A mother might mention that a food is good for a child, but if it has to be prepared separately, chances are she won't give it. Special attention will be given to the child's diet only when he is ill.

Age 1 - 2: After age one or one and a half, most families will give the child only what they feel he can digest from their local meal plus mother's milk. Usually this amounts to only rice, iddli, rasam and sometimes gravy. In the poor family, rice or iddli may still be bought extra for the child, but only occasionally and not as a routine food. Milk will not be bought extra.

By age two - three, the child is eating practically everything that the adults eat.

General eating patterns vary, but they appear to vary more by income group than by caste group. The well-to-do have a tendency to delay introduction of vegetables, grams, and non-vegetarian dishes. The very poor, and particularly the Harijans, seem to introduce all foods including non-vegetarian dishes much earlier. Most of the foods a child eats are cooling foods and cooling foods seem also to be conspicuously marked by having a good effect on the body. Gaseous, heavy and indigestible foods are always termed hot and these are avoided. The diet of the more well-to-do is much more balanced towards cooling foods than that of the poor and the poor have little opportunity of altering their diet otherwise.

IV. MEDICINE IN THE VILLAGE

In Olappalayam, approximately 90% of the caste-Hindu residents prefer and use local village medicine (Nattu Vaidhyam) to English medicine. The 10% who use English medicine are primarily the young and/or the well-to-do. The Harijan colony uses both English and local medicine, and they are more apt to use the government public health services than others.

There are two men in Olappalayam who consult on Nattu Vaidhyam. Neither is particularly trained and both do it as a side hobby for free. Olappalayam has no resident "English" doctor or trained Ayurvedic doctor.

An older Mudhaliar shopkeeper is one of the two men to whom villagers go. He has his own set of time-honored cures for convulsions, digestion, stomach aches, fever, and whooping cough, but he is particularly consulted on these illnesses when they are caused by evil spirits. For regular ailments, he has a supply of all purpose tablets consisting of many ground herbs which he has secured with a book of directions from an ayurvedic firm in Tanjore. His and all Nattu Vaidhyam cures are accompanied by rigid dietary restrictions.

The duration of a single Nattu Vaidhyam treatment is calculated as a proportion of a mandallum, a period of 48 days. For an adult a treatment might last for a whole, 1/2 or 1/4 mandallum. A small

child's treatment will last only one day and consists of only three doses. During this time, the patient will be required to eat certain herbs and observe a diet which eliminates most gaseous foods. Gaseous foods are said to cause severe headaches if eaten simultaneously with a Nattu Vaidhyam treatment. The following foods are most commonly avoided; mustard, seeds, pepper, tamarind, field bean, cow gram, banana, potato, sweet potato, coconut, peanuts, and orange. When questioned why they preferred Nattu Vaidhyam to English medicine my informants replied that their local medicines gave a longer lasting cure than English medicine because they act on the entire body. Besides this, they said, it was more familiar to them and it also cost less than English medicine.

However, English medicine is recognized as good for some illnesses and some people. In one home, one child or adult might take only Nattu Vaidhyam and another only English medicine. This situation is justified, one informant said, because some bodies respond better to one or the other treatment. "Nattu Vaidhyam medicine is strong and hot and the treatment extended so a person must have a strong body to endure it. Weaker bodies will do better on English medicine."

From the list of ailments the visiting doctor from the Primary Health Center has treated, many villagers appear to accept English medicine for treatment of large sores and open wounds, broken bones, weakness, tooth ache, swollen limbs, fever, cough and colds, severe stomach cramps, diarrhea, impetago (children), and eye infections. Most often the villagers will first try their own local cures, and only when these do not appear successful will they finally consult the M. B. B. S. doctor. A few villagers simply do not trust English medicine and won't go at all because they are afraid that mistakes in the medicine may occur and be fatal. A few villagers "have the habit" of consulting only doctors from the beginning of an illness.

The preferred treatment with the English doctor is the common shot, (price Rs. 3)penicillin, which the villager thinks will cure any and every illness. Prescriptions given are not necessarily followed; often the patient cannot afford to purchase the entire prescription and instead he will buy only one or two individual tablets depending on what he can afford.

General physical illnesses

In general, infants under one year are thought to fall ill for two reasons: 1) the mother has eaten something which, when passed on to the child, has caused him to fall ill or, if she has stopped nursing, then there is a "mistake" in the child's body balance which is attributed to the food or the weather; and 2) evil spirits have visited the child.

The first type of illness is cured by the mother's restricting her diet to a few neutral cooling foods, and by the administration to the child of relatively simple herbal preparations. The following are the common illnesses of the first category among infants plus some of the cures my informants listed.

Stomach ache and diarrhea: The mothers envision this as a situation in which the milk in some way cannot leave the stomach. The cause for this may be something the mother has eaten. The cure consists of purging with castor oil, or administering various root and herbal preparations which are ground then put over a fire for a brief period. The water is wrung from the mixture and given.

Headache and fever: The mother's milk is put on a cloth on the forehead or castor oil applied to a beetle leaf is heated and put on the forehead.

Fever, cold, and cough: Powders of pepper and chitkaratkai (a medicinal herb) is dissolved in the juice extracted from the thiruneer pachilai (a new leaf of a particular plant).

The period of infancy from 0-12 months seems to be the only time that an Indian mother (in Olappalayam) regularly practices preventative medicine to keep her child from falling ill. Most women appear to administer to their child some herbal preparations as well as castor oil on particular days of the week to assure good digestion and to prevent colds and fever. One informant stressed a powdered mixture of omum, kasa, flower from the sweet flag plant and kadelnore; another recommended a powdered mixture of palmyra jaggery, dried ginger, pepper

and garlic; a third smeared raw egg white all over the child and particularly on his eyelids; and a fourth stressed dried ginger, onion, flower of the sweet flag plant and jadi kai (nut). A more cosmopolitan, literate Chettiar woman from the Ramnad District gives her children a powder of the following: tolasi, neem, kaluvapilai leaves, garlic and omum. In this mixture, all the ingredients are generally agreed upon by villagers in a large area to have medicinal properties. However, in the Olappalayam recipes, only omum, garlic, sweet flag plant and jadi kai have any medicinal or calming effects attributed individually to them. The women feel that their power to maintain a child's health occurs in combination.

The nature of a child's body balance is a bit perplexing and requires further study. Colds and fever are not differentiated in their herbal treatment and are, evidently, thought to be different manifestations of the same problem: a body imbalance. The diet during this period is sensitive to the principle of hot and cold. In general, during a fever slightly cooling, but primarily neutral, foods are given and heating, heavy foods are avoided. For a cold, very cooling foods are avoided and neutral foods (like rasam) and hot water are stressed. Very heating foods which one would expect to be given to counter-balance a cold are also avoided, although this might be because they are thought to be heavy or gaseous.

After infancy, during early childhood, general illnesses include the same common stomach ache and diarrhea, stomach swelling, sores, fever, colds, coughs and respiratory diseases, whooping cough, mumps, and convulsions. Again each informant gave me slightly varied recipes as a cure for each made from various herbal preparations plus some unique ingredients (like crocodile meat, bat, field rat as cures for whooping cough; and even the vegetarian Brahmin family administers crocodile meat on this occasion).

Illness from evil spirits

The most common cause of illness during childhood, according to my informants, is attacks by evil spirits. These illnesses require a much more elaborate treatment which will help the

child and at the same time appease the Gods. For these treatments, women go to the two previously mentioned men in the village who practice Ayurvedic medicine; they draw on the services of the Brahmin priest and they consort their family inherited cures in the Yedu (palmyra leaf books).

When and why do illnesses from evil spirits occur? At birth the child's horoscope is recorded and in the horoscope is transcribed all the potentially bad periods in the child's life. During these periods, the child is susceptible to various illnesses. The mother will pray for her child at the onset of each of these periods as a preventative measure, however, if the child does fall ill it will be assumed to be the "dosham" (literally: fault) indicated in the horoscope.

There are also various other types of dosham attributed to, for example, a child's seeing a dead body or a woman who has just had an abortion, the shadow of a hawk crossing the child, or a child's being touched by either parent before he has bathed after having had sexual relations. These types of doshams are, however, not very common in Olappalayam and, according to my informants, can be simply prevented. (For example, a dab of oil on the forehead counteracts the lack of a bath.) If a child contacts dosham, the mother will go to the temple and chant religious verses (manthrams) and go to the burial ground for herbs which are then waved around the child's head, often by the Brahmin priest. On the third day through the seventh after the event, the child's body is covered with sandalwood. Often a black string will be tied on the hips, wrist, or neck for protection against this type of spirit.

Another common reason for illness caused by external spirits is "Kann Dristi," the casting of the evil eye. An overly admired or praised child is most vulnerable, since anything too good may invite its own destruction through the envy or will of others not so fortunate or simply through its existence in a world where people feel that good has an absolute limit.

There seems to be a very fine line distinguishing illness due to a "mistake" in the body and those due from external circumstances such as evil spirits. Much seems to depend on the timing of the illness. For example, if it occurs on a very inauspicious day (which are frequent in the Tamil Calendar) or in a bad period augured in the horoscope or by a local fortune-teller, the illness may be taken as one being caused by external forces. Further, symptoms also provide clues. Diarrhea where the stool is green in color is always attributed to dosham. States where the eyes roll, the head is unsteady, convulsions, hysteria, plus combinations of fever and diahrrea, a swollen stomach, the child's peculiar whimpering, would first be analyzed as externally caused. Formerly, many of the common children's diseases —measles, whooping cough, mumps, chicken pox and small pox were thought to be caused by spirits. Even today, small pox is still considered to be a visitation by the Godess Mariamman, although the villagers are all inoculated against the disease and understand the medical reasoning behind the inoculation.

The cause for everyday colds, fevers, stomach upsets, diarrhea and sores will usually be thought to be due to a mistake in the body balance. None of my informants indicated causes which might be accepted by modern medicine. Colds are usually thought to be transmitted through water, usually after rains; the prevention is to give warm, but not necessarily boiled water, after rains. Sores are caused by an over-heated body and diarrhea by the unacceptability of a food in the child's system. Hygiene and germs are not a concept to my informants.

The cures for the more serious illnesses caused by spirits are contained in the family Yedu. These Yedu are passed down from generation to generation and stored with the picture of the family's idol in the puja room. At the onset of an illness, the Yedu is usually tied above the child's hammock as a sign of protection.

The Yedu

The four Yedu I examined were from families of the following castes: Choli Asari, Kongu Asari, Vellala Gounder, and Senguntha Mudhaliar. The oldest dates back about 100 years,

according to my informant, and one is of very recent origin. In Olappalayam, these palmyra leaf books are still widely followed for serious illnesses thought to be caused by external spirits. The most obvious difference between the older and the newer books is the profusion of detail in the older and the lack of detail and generality of the newer.

The format of all four Yedu is identical. Cures are indicated not by cumulative age, but by various cyclical timings beginning with the evil spirit which visits the child on his first day, first month, or first year. The time period covered by the Yedu varies from the time unit seven which covers the child through his seventh day, seventh month and seventh year, until 16 in the oldest book.

Each unit of time pertains to a cure of an attack by only one evil spirit which is named and has a different identification for each of the four castes. However, the sickness produced by each spirit appears to be identified through the different time units by a single name. Although the sickness is actually named throughout each unit in the oldest Yedu only, one might assume that this is just one of the details omitted as time passed.

The symptoms of the sickness vary slightly by time unit. The symptoms are general and diverse enough that they could be either distinct illnesses or they could overlap with one another. The time unit, where one would have a choice, would probably be ascertained by comparing the symptoms which most nearly match that of the child's.

Symptoms common to the most number of time periods and books include: fever, diarrhea, loss of appetite, dizziness, body pain, child's whimpering, and putrid smelling stool. Other frequently mentioned symptoms are: swollen stomach, rolling of eyes, vomiting, shivering, hiccoughing, sores and other skin eruptions, fits and wheezing. In all, the entire gamut of serious child illnesses can be found in the Yedu, with symptoms apparently of convulsions, epileptic fits, and other types of nervous disorders among the most common.

The pattern of treatments is identical among the four Yedu, although the items in the cure vary. There are four different steps in the cure of each illness. Two are supplications to the spirit and the Gods and two are a direct attack on the physical illness.

The first step almost always consists of drawing an image of the spirit from a rice or thinaï flour and offering red flowers and various specified food preparations to the spirit. Since the spirit is denoted in three of the four Yedu as being female, she is probably a representation of Kali, a reincarnation of Parvathi and the Goddess of Death, or perhaps, even of the local Goddess Mariamman. The offerings to the God are usually made in a specific spot in the village, often on the burial ground or at a four-way crossing and at a specific time.

The second step is an attempt to control the physical illness. Various leaves from trees and plants and herbs are ground to a powder and smeared over the body of the child. A small amount is put on the tongue of the child. These herbs are thought to enter the body by penetration.

The third step consists of the child's inhaling the smoke of several of various articles such as flowers, husks, grasses, dung, feathers, cow's tail hair, human and animal bones, buffalo's horn, snake skin, etc., which are charred over a fire. Smoke inhalation is used to purify the body and purge the illness.

The fourth step is the chanting of certain manthrams, usually by the priest, and the writing of a mystical diagram on copper which will then be tied around the child's wrist or arm. The manthrams and mystical diagram are used in seeking protection of the child from the Gods against the spirit's infliction.

If the illness is not cured by the treatment, the child will die. My informants said they would not attempt a treatment of English medicine for illnesses caused by evil spirits, no matter how sick the child might become. If the spirits have attacked, they said, then English medicine is useless. Individuals in the younger generation, however, may take exception to the views of their elders on this.

VI. CONCLUSIONS

A Comparison of Olappalayam with Thiruvanmiyur

The most significant observation about beliefs, customs, and practices between semi-urban Thiruvanmiyur, a village bordering Madras City, and rural Olappalayam is their distinct similarity. Beliefs and customs do not appear to be altered by the proximity of an urban center.

The most obvious influence the urban environment has had on the residents of Thiruvanmiyur is in the medical field. The women prefer the hospital for delivery and more villagers consult English doctors and use common English medicines. In Olappalayam, the change, over from village medicine to English medicine, is very slow. The Government Primary Health Center and Maternity Centers are just beginning to make some headway. In both villages the scheduled castes and tribes who have traditionally been deprived of village medical help are the most receptive to government medical services. Their large numbers alone could keep the limited government facilities full. The tendency in Olappalayam to use private English medicine is centered around the young and the affluent who can afford it. A similar pattern, though more diffuse, exists in Thiruvanmiyur.

The semi-urban child is much more likely to visit a doctor during his youth whereas the child from Olappalayam will probably be cured through village medicine. This child's illness is also more likely to be attributed to external causes like evil spirits or dosham than the child in semi-urban Thiruvanmiyur. Differences in illnesses caused by spirit are apparent, but the pattern of cures remains similar, although Olappalayam's cures appear to be the more elaborate of the two.

Local illnesses and cures and foods eaten and avoided during particular illnesses also bear similarities. Villagers from both Olappalayam and Thiruvanmiyur have concepts of hot and cold foods and which properties a food possesses. These beliefs influence their diet at critical times in their life such

as lactation for a woman, infancy, and illness. The concept of hot and cold is most conspicuously used in the diet of the lactating mother directly after birth and her diet leans heavily towards cooling foods. On a daily basis, however, the average villager's diet, excluding the Brahmin, is dictated far more by economic constraints than by dietary beliefs of hot and cold.

Although both these reports reached this conclusion, my findings on the use of hot and cold foods in the diet during illness is not as conclusive as Mrs. Krishnamurthy found for Thiruvanmiyur. In Thiruvanmiyur, cold foods are evidently given when the body's illness is due to increased body heat and hot foods are given when illness is due to excessive coolness of the body. Instead, in Olappalayam, the line of foods given during illness tends to be neutral to slightly cooling foods: neither very heating or cooling but definitely not gaseous, heavy, or hard to digest. My observation tends to show that hot and cold food beliefs, though extremely important concepts to the villager, are not as important in the daily diet and special diets as are the other food properties of gas producing, hard to digest and heavy. During any sensitive period or illness, foods with these properties are always avoided.

There is a good deal of overlap in the identification of hot and cold foods, foods with the property of strengthening, healthy, hard to digest, and gaseous. Generally, foods that are gaseous and hard to digest also tend to be hot foods: cooling foods are generally considered healthier and have a higher status and are costlier. There are, however, many exceptions to this rule, particularly with vegetables and fruits.

Mrs. Krishnamurthy's report does not contain systematic listings of foods and their properties and hot and cold qualities, so it is not possible to compare data to ascertain regional differences. Such a comparison across regions, particularly in areas where there has been migration, would be very worthwhile.

Food habits, although not food beliefs, are greatly affected by the semi-urban environment. First, the city dweller or the semi-urban dweller no longer really has the choice of grains. Rice is

the most readily available grain in the city, whereas in the village, rice remains the diet of the affluent and the Brahmins only. The poor afford themselves the luxury of a rice meal perhaps one or two days per week. The urban dweller also has a wider choice of diet through the market and distribution facilities of the city than his rural counterpart whose choice of vegetables and grams is limited to those locally grown. Further, the rural dweller faces the problem of a relatively stable wage amidst the competition of the higher food prices brought about by the demand for produce in the urban centers.

The attitude towards child rearing during the first two years of a child's life is almost identical between the villages. Mother's milk is the major staple from birth to 1-1/2 years of age. However, sometime after eight months, the child's diet will be supplemented primarily with rice or rice-based dishes. This is true even among the poor. Only the Harijans appear to introduce their particular diet to the child earlier than the other caste groups, but, again, this is more likely to be because of financial necessity than in the belief that it is better for the child than rice. By age 2-3, the child will be eating basically the identical food as its parents.

Lastly, the pattern of events in a child's life is similar between both villages. The rural child, however, is likely to drop out of school earlier than the urban child and possibly also earlier than the child in the semi-urban village. In general, the ceremonies a person celebrates and his life style are similar. Mrs. Krishnamurthy's data draws heavily from Brahmin informants (whereas mine includes only the single Brahmin family in Olappalayam); this is reflected in the specific ceremonies she mentions but it does coincide with the information I received from my Brahmin informant. However, the pattern of ceremonies across castes (though not the performance of individual rituals in a ceremony) appears to be extremely similar between villages with marriage the culminating event in a young person's life.

APPENDIX

1. Castes of my female informants in Olappalayam who answered the food questionnaire (plus interviews).

<u>Caste</u>	<u>Name</u>
Brahmin	-----
Vellala Gounder	-----
Nadai	Pakkiyammal
Nadari (Harijan)	Kutti
Choli Asari	Namagrammal
Madari (Harijan)	Nagamalli
Navidar	Govindammal
Vellala Gounder	-----
Pandaram	Pappamal

Others interviewed but without food questionnaires.

Pandaram
Mudhaliar

2. The six male informants who were asked to identify over 200 different food items are:

<u>Caste</u>	<u>Name</u>	<u>Age</u>
Naikkai	Ranganadikkan	58
Brahmin	Sundarakkurukal	44
Choli Asari	Laksmanna Asari	37
Kuravar	Nachi	57
Vannan	Kittanvannan	53
Nadar	Muthappan	48

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TWO ANTHROPOLOGICAL STUDIES

by

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Consultant, Cultural Anthropology

**CANTOR/ATAC
TAMIL NADU NUTRITION PROJECT
FIELD REPORT**

TWO ANTHROPOLOGICAL STUDIES

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A. Ranking of Social Status and Occupation in Tamil Nadu

The problems of ranking social differences (caste, occupation, jati) so that such rankings could be considered against nutrition status in the Tamil Nadu data analysis were not simple. The route by which the rankings were developed as well as the results are recorded in four memoranda which are compiled here under the title "Ranking of Social Status and Occupation in Tamil Nadu."

1. Caste Ranking I (20 October 1972)
2. Caste Ranking II (4 February 1973)
3. Occupational Ranking (11 March 1973)
4. Caste Ranking (Report from Previous Work in India)^(a)
Determination of Hierarchy (4 July 1971)

(a) This document was obtained from Mr. Clyde Swenson, 8/3/72, who originally requested it from Mr. Moffatt. Mr. Swenson, an agricultural economist was involved in a study of agricultural production in South India.

CASTE RANKING I
(October, 1972)

Introduction

The "incredible complexity of the caste system" keeps many American anthropologists in work, so let us not too harshly criticize the institution. For this reason alone, its characteristics are bound to be academic. However, just as we might hope that the basics of computer science could be made comprehensible to the layman, there is no reason why a Galbraithian talent in the field of anthropology should not be capable of rendering the baroque glories of caste clear to the Man in the Street. If the aforementioned Man is in addition, a member of the Tamil Nadu Nutrition Project, we can lower our sights still further. Our Man is not really interested in caste; he's merely interested in caste in its possible relation to nutrition. The job, therefore, becomes simple, bearing in mind that the author may be guilty of an occasional unacademic over-simplification in the interests of clear exposition.

Discussion of Caste

Caste in its pure form in South India is a rural institution, a form of social organization which works best in a limited area with a stable population. A single delineable caste system is often referred to as a "local caste hierarchy." Its territorial limits rarely exceed an area, 50 miles in radius. Within this area, there will typically exist 10 or 20 distinct castes, ranked by the people of the area in a single unilineal hierarchy. ^(a)

(a) In this context, there is a single word in most Indian languages for castes: jaadi or jati in the north. Mrs. Thiagarajan's caste qualifications probably refer to an academic dispute about the difference between varna (the Brahmin-Kshatriya-Vaishya-Sudra classification prevalent in the Sanskrit texts and in the north) and jati. Most anthropologists have now agreed to translate only the second term as "caste."

Brahmins are invariably ranked highest. Generally, the second-ranking caste in a local hierarchy is the "dominant caste," the caste with some sort of numerical, economic and political predominance in the region.

Dominance varies widely from region to region within Tamil Nadu, depending as it does, on local political history. The old Kongunad region centering on Coimbatore District, presents a strong form of dominance: there, one caste, the Kavundars (sometimes rendered as 'Gounders' in English), are over 50% of the population, own most of the land, and are the most efficient farmers in the entire state. The Reddiyars of Southern Chingleput are another strong case: a generation ago they were Zamindars, or hereditary titled landlords, with complete ownership of Zamine comprising 25 or 50 villages each. They retain much of their power today. At the other extreme, a local caste hierarchy may contain several landholding castes which divide the effective power between themselves. This constitutes dominance in a weaker form.

Below the dominant caste in a local hierarchy are found a number of "service castes" - castes which perform traditional duties within the village. Not all members of these groups perform the traditional work appropriate to their caste; thus not all members of the Barber (or Ambatten) caste work as barbers. (a) However, no one works as a barber who is not a member of the Barber caste. In Tamil Nadu, the service castes usually include the Village Priest (Pandaram or Ochan in Tamil), the Artisans (Kammallar), further sub-divided into Carpenter (Acari), Blacksmith (Karuman), Goldsmith (Tattan or Pattur), and two other groups; the Barber (Ambatten), and the Washerman (Vannan). Somewhat outside this set, are groups whose occupation is neither agricultural or village service: Herdsman (Idaiyar or Yadavar), Toddy-Tapper (Nadar), and Fisherman (Sembadavar and Natter).

(a) This is the convention in anthropology: if a caste name referring to a traditional occupation is translated into English, then it is capitalized. Barbers are members of the barbering caste. The actual occupation is written lower case: barbers are those who work as barbers.

The last and lowest category in the typical local hierarchy is the Harijans, or scheduled castes. There are three major Harijan castes in Tamil Nadu: Paraiyans, traditionally Drummers, concentrated in the northeast (Chingleput to Thanjavur), Pallans, Field Laborers, in the southeast (Thanjavur to Tinnevely), and Chakkilivans, Leather-workers, in the west (Coimbatore and Salem). All three make their actual livings as field laborers, though members of each caste perform their respective traditional occupations (drumming and leatherworking) when the work is available or necessary.

Caste and Nutrition

What does all this have to do with nutrition? First of all, the caste hierarchy has implications for the life-styles (which includes the food practices) of the groups forming it. One of the oldest theories around in Indian anthropology is "Sanskritization." The theory holds that any caste can work its way up a local hierarchy, over the generations, by emulating the practices of the caste at the top - The Brahmins. In food practices, this usually entails the adoption of vegetarianism in some form. "Sanskritization" has been subjected to a number of carping criticisms, however. No amount of Sanskritization seems to propel a Harijan caste out of untouchability; and some relatively high castes are quite un-Sanskritic in life-style.

Simplified Model

A more sophisticated model of the caste system holds that there are at least two foci of emulation at the top of a local hierarchy: the Brahmins and the dominant caste. In this view, the local dominant caste reaches some kind of accommodation with the Brahmins of the area; but by reason of the effective power of the dominant caste, it is not compelled to base all its claims for status on a perfectly Brahminic life-style. It might get away with eating meat, for example, the Kallars of the Madurai area are a case in point.

Given this second acceptable life-style, they, the lower castes in a hierarchy, can exercise some choice. In Coimbatore, Dr. Brenda Beck (University of British Columbia; University of Chicago Press) has outlined the following caste structure:

<u>Kavundar</u>	<u>Brahmin</u>
Village Priest	Village Accountant
Potter	Artisan
Barber	Herdsman
Washerman	Toddy-Tapper
	Harijan

Here, in some critical aspects of life-style, the castes directly dependent on the dominant Kavundars follow many of the Kavundar forms. The other castes, who are more peripheral in the traditional economy, or who entered the region at a latter period historically, tend to follow the Brahminic forms. The lower castes in each list follow only a few of the customs in each ideal life-style, and the difference between the two sets vanishes at the bottom. Hence, the v-shape of the diagram.

A model this neat may not be obtained everywhere in Tamil Nadu. The important point, however, is that the dynamics of caste are fully comprehensible at the level of local hierarchies, not on an all-Tamil Nadu basis. A Kavundar in Coimbatore, where the Kavundars are dominant, will probably act differently, and will certainly have far greater effect on non-Kavundars, than he will in Chingleput, where his caste is socially insignificant. Similarly, a Chettiyar in Chingleput is likely to be a very minor village merchant. In Chettinad (Ramanathapuram and southern Trichinopoly) he is a member of the most impressively dominant group in the State. And the customs of the service castes are likely to vary in a concomitant fashion.

There are other complexities. One is subcaste. Subcastes are castes within castes, distinguished from one another by characteristics as trivial as how a turban is tied, or as relevant as how food is cooked. Subcastes are a very local matter.

Religion

There is also the problem of religious community. The caste system is particularly well-integrated with the Hindu religion, but it is also notoriously effective in its ability to absorb non-Hindu and anti-caste influences. The Lingayats, an overtly anti-caste religious sect, founded in the 13th century, were by the 19th century divided into 10 or 12 ranked groups - priests at the top, followed by agricultural castes, followed by service castes. In Tamil Nadu, Christians tend to be Harijan converts and where they have not moved out of the village context, Harijan Christians are still treated like Harijans, and act mostly like Harijans. In some villages, Hindu Harijans and Christian Harijans are two distinct sub-castes within the Harijan community. A third generation convert living in the city, however, or a high caste convert, is quite a different man from a first generation village convert. Christian identity in itself, in other words, does not mean a whole lot; and there is no one Christian community following a certain set of behavioral characteristics.

Muslims and Jains, on the other hand, may be closer to unitary communities in Tamil Nadu (though in the north, single villages can contain half a dozen Muslim castes ranked in among a dozen Hindu castes). Muslims in some Tamil villages form a single in-marrying group, following their own customs; and Jains are reported in a section of North Arcot, leading a largely Brahminic way of life.

To come down to cases, the caste or community groups as they are now reported from the data collection field work are so confused as to be socially meaningless. Some of the confusion relates to an understandable lack of appreciation of the above points. Other difficulties derive from the complexities of local conditions and of the Tamil language.

It must be emphasized that the open question "what is your family caste"? can produce raw data of widely varying specificity. It is as if I reported my identity as "an American" or as "an upper-middle class WASP from central Connecticut"; the two statements would not be strictly comparable. A number of the second social category certainly could not be contrasted with a number of the first, since the first encompasses the second. It is like comparing peaches to fruit. Likewise, a "non-Brahmin" is not at the same level of contrast as a "Chettiyar."

There are other problems. The only way to tackle them is item by item. The following is the 65 "castes" listed in the pentile rankings, with a correction and additional information. One source is the still authoritative Castes and Tribes of Southern India, Edgar Thurston, 1909, seven volumes. (a)

(a) This encyclopedia of caste is available in most major university libraries in the U. S., and has been reprinted recently.

<u>Report Entry</u>	<u>Standard Spelling</u>	<u>Caste Description, or Other Explanation (Capitalized Occupations = Traditional Occupation of Caste in Question)</u>
1. Achari	Achari	Carpenter; sometimes a sub-caste of Artisan (Kammalar)
2. Asary	(another spelling of item 1)	
3. Asili	? Asili	Toddy-Tappers, Telugu speaking
4. Badagar	Badage	Agriculturalists, concentrated in Nilgiris.
5. Baptist		(religious category)
6. Batear	?	
7. Blacksmith	Karuman (or Kammalar)	Blacksmith
8. Brahmin	Brahmin	Priest
9. Catholic		(religious category)
10. Chettiar	Chettiyar	Merchants and money-lenders, dominant in Ramanathapuram.
11. Chitty	(another spelling of item 10)	
12. Christian		(religious category)
13. Dejar	Tevar	Caste title generally used by Maravars, Agriculturalists dominant in Madurai and Tinnevely.
14. Devanja	Devanja	Weavers, Telugu speaking

<u>Report Entry</u>	<u>Standard Spelling</u>	<u>Caste Description, or Other Explanation (Capitalized Occupations = Traditional Occupation of Caste in Question)</u>
15. Garmani	Gramani	Caste title used by some Nadars, Toddy-Tappers.
16. Gounder	Kavundar	Agriculturalists, dominant in Coimbatore.
17. Goldsmith	Tattan, Pattar (or Kammalar)	Goldsmith
18. Harijan	Harijan	Gandhi's name for all the un-touchable castes. In Tamil Nadu, however, usually reported only by Paraiyans, Drummers.
19. Hindu		(Broad religious category, encompassing every other entry here except Christian, Muslim and Jain.)
20. Iyer	Iyer	Brahmin subcastes; worshippers of Siva.
21. Jain	Jain	Religious community; <u>may</u> exist as single caste in North Arcot area.
22. Kallar	Kallar	Agriculturalists, formerly Brigands and Cattle-Thieves, dominant in Ramanathapuram and Madurai.
23. Kamma	Kamma	Reddiyar subcaste
24. Kenar	Kenar	Alternate name for Idaiyar caste, Herdsmen.
25. Kshatriya		(<u>varna</u> category; sometimes used as caste title by Naiyyakers)
26. Kurup	Kurup	Leatherworkers; Maliyali speaking.
27. Labbur	? Labbei	Muslim Betel-Dealers

<u>Report Entry</u>	<u>Standard Spelling</u>	<u>Caste Description, or Other Explanation (Capitalized Occupations = Traditional Occupation of Caste in Question)</u>
28. Maratha		(religious category; immigrants from Maharashtra. Containing many different castes in Tamil Nadu, Brahmin and Non-Brahmin)
29. Mooppanar	Muppanar	Caste title used by some Harijans.
30. Mudaliar	Mudaliyar	Agriculturalists, dominant in north-east Tamil Nadu.
31. Muslim		(religious category; possibly a single caste in some villages)
32. Mutharajar	Mutturaja	Village Watchmen, Telugu speaking.
33. Nadai	? Nadar	Toddy-Tappers, dominant in parts of Tinnevely.
34. Naickar	Naiyyaker	Agriculturalists, dominant in north-east Tamil Nadu.
35. Naidu	Naidu	Agriculturalists, Telugu speaking.
36. Nainar	Nainar	Caste title used by Jain
37. Nair	Nayar	Agriculturalists, large caste in Kerala.
38. Nakkemar	?	
39. Nathamar	?	
40. Nokkar	Nokkar	Naiyyaker subcaste, Beggers
41. Non-Brahmin		(large caste category, usually including all castes except Brahmins and Harijans)
42. Oddar	Oddar	Stonebreakers and Earthworkers.

<u>Report Entry</u>	<u>Standard Spelling</u>	<u>Caste Description, or Other Explanation (Capitalized Occupations = Traditional Occupation of Caste in Question)</u>
43. Paljia	Baliya	Reddiyar subcaste
44. Pallar	Pallar	Harijan caste, Agricultural Laborers.
45. Pandarsam	Pandaram	Village Priests
46. Panditham	Pandit	Brahmin title. Also in recent use by Barber caste.
47. Pannaiyar	Pannaiyar	Salt-Collectors
48. Patar - Pattar	Pattar	Goldsmith
49. Papayachi	Padaiyachi	Alternate name for Naiyyaker.
50. Pillai	Pillai	Vellalar caste title; sometimes used by lower castes in Vellalar-dominated areas.
51. Reddiar	Reddiyar	Agriculturalists, Telugu speaking, dominant in southern Chingleput.
52. Sakkaliu	Sakkiliyar	Harijan caste, Leatherworkers, Telugu speaking
53. Salitar	? Saley ? Saliyan	Weavers, Telugu speaking. Weavers, Tamil speaking
54. Servar	? Servai	Title used by several service castes.
55. Skaru	? Sakkeraya	Title used by Salt Collectors .
56. Telugu		(language spoken in Andhra Pradesh)
57. Thejar	Tevar (another spelling of item 13)	
58. Unlisted	Unlisted	(un-useful)
59. Vanniar	? Vanniyar ? Vaniyar	Alternate name for Naiyyaker Oil-Pressers

<u>Report Entry</u>	<u>Standard Spelling</u>	<u>Caste Description, or Other Explanation (Capitalized Occupations = Traditional Occupation of Caste in Question)</u>
60. Vdayar	Udaiyar	Agriculturalists, dominant in parts of central Tamil Nadu.
61. Vellala	Vellalar	Agriculturalists, dominant in north and central Tamil Nadu.
62. Verakula	? Virakula	(some kind of caste title; caste unidentified)
63. Visvakabme	Viswakarma	Title used by some Artisans, Kammalars. Refers to mythic claim that they are the true Brahmins.
64. Yadavar	Yadavar	Alternate name for Idaiyar.
65. Yodhula	?	

Combining entries which are related as subcastes, or which are identical, and following the points about caste dynamics mentioned earlier, the list may be reworked for caste as follows:

<u>Caste Category</u>	<u>Caste or Subcaste</u>
I. Brahmin	Brahmin Iyer subcaste
II. Dominant Castes	(mostly Agriculturalists) Bedaga Chettiyar Maravar Kavundar Kallar Naidu Reddiyar Kamma subcaste Baliya subcaste Mudaliyar Naiyyaker Nokkar subcaste Udaiyar Vellalar
III. Other Major Castes	Kammalar (Artisans) Achari (Carpenter) Karuman (Blacksmith) Pattar (Goldsmith) Nadar (Toddy-Tapper) Idaiyar (Herdsman) Oddar (Stone breaker) Pandaram (Village Priest)
IV. Harijans	Harijan (probably Paraiyan) Pallar Sakkiliyar

<u>Caste Category</u>	<u>Caste or Subcaste</u>
V. Other Castes	minor or significance unknown
	Devanja
	Jain
	Kurup
	Muslim
	Mutturaja
	Nayar
	Pannaiyar

The inclusion of "Jain" and "Muslim" under Heading V is only a guess. "Christian" or any Christian denomination cannot be so included.

The caste classifications in this second, reworked list may be of some use in data analysis, especially if the dominant castes are given appropriate weight in the areas they dominate. Brahmins are socially significant almost everywhere; and the whole Artisan group tends to follow the Brahmin forms regardless of the life-style of the local dominant group. Perhaps the set "Christian" could be sorted for internal consistency. If this consistency emerges, "Christians" would have to be compared to all the groups above (which are all "Hindu" religiously), unless the caste origins of the Christians in question were accessible.

CASTE RANKING II
(February, 1973)

Appendix I of this report is a sorting of the castes coded to date, from a glossary dated 15 November 1972. I am proposing:

1. Brahmin and Brahmin subcastes
2. High non-Brahmin castes
3. Middle non-Brahmin castes
4. Low non-Brahmin castes
5. Harijans and Tribals
6. Others

Confidence level is 90% on the collation of the caste names recorded with castes known to me or discoverable in Thurston. ^(a) The most difficult names turn out in most cases to be reported only by one or two marginal characters: thus, the small size of the castes under category 6 isn't going to affect the sample much. Category 6 is broken in two parts for you to consider:

- 6a. Those which can be identified but which can't be treated easily as "caste."
- b. Those which can't be identified.

It is recommended that 6b. be deleted, but if this is impossible, instincts and the subtleties of Tamil suggest that most of these groups fall in the range of categories 4 and 5. Communities in 6a. are followed by personal comments.

(a) Thurston, Edgar. "Castes and Tribes of Southern India;" Government Press, Madras.

With reference to the main categories: these are based on Tamil village concepts of caste rank, which relate to non-secular ideas about purity and impurity, food, man and god in the world, and other exquisitely complex Hindu concepts. Two important points about the caste rank order: 1) it is not an economic or class-like order (class in the western Marxist sense); and 2) it is highly consensual in any given village. The basic method by which the anthropologist discovers this order (working from opinion rankings elicited from two members of each caste in the village; and from independent research on food transactions between said castes) is described in detail by McKim Marriott. (a)

Though these rankings only apply in the context of a small local caste hierarchy, I'm giving you, somewhat against my better judgment, a Tamil Nadu-wide breakdown. Cut-off points are based on judgments of where the major discontinuities occur. Between Brahmins and the other castes, there is no doubt about a major life-style break. The breakdowns within the non-Brahmin group are not sharp, but generally can be described:

High non-Brahmin: mostly agriculturalist castes that have in many cases followed Brahmin patterns. (Category 2)

Middle non-Brahmin: the majority are agriculturalists, generally more independent of the Brahmins in their life-style. (Category 3)

Lower non-Brahmin: mostly village service castes. (Category 4)

Dominant castes, perhaps important to you in that they are foci of emulation distinct from the Brahmins, are almost exclusively in categories

(a) Marriott, McKim. "Caste Ranking and Food Transactions: a Matrix Analysis," in Structure and Change in Indian Society, Milton Singer and Bernard Cohn ed., Aldine press, Chicago, pp 133-172.

2 and 3, according to region. (See list). The Tamil Nadu-wide sorting is based on the assumption that, given categories are quite stable. That is, if we compare local village hierarchies between Chingleput and Coimbatore, any caste (provided it exists in both places) is likely to be in the same general category.

Dominance is a different matter and one more socioeconomic than caste. Appendix II lists the castes known to be dominant, together with the districts in which their dominance is reported. Since dominance is usually defined in terms of a combination of numerical preponderance, wealth and landholding, my suggestion is an independent computer check on this, e. g., for the castes mentioned in Appendix II, sort for some combination of these three variables, and see just how "dominant" they are. With the assumptions on dominance and what the computer reports, you could then feed back and compare these to food behavior. That is, if these dominant castes are independent foci of emulation, in the area of their dominance they may have an effect on the food behavior of the lower castes.

APPENDIX I

CASTE CATEGORIES BY GLOSSARY CODE

1. Brahmin and Brahmin subcastes

BHM (Brahmin)
IYR (Iyer)
VSA (Vaishnava, Iyengar)

2. High non-Brahmin castes

APC (Acharapayan Chettiyar)
BLJ (Baliga)
GDR (Gounder)
JAN (Jain)
KMM (Kollar, Kammalar, Kammar)
KMA (Kamma Reddi)
KKI (Kanakkar)
KNG (Karunigar)
KMD (Kamundhi Chettiyar)
KUL (Kullar)
MDL (Mudaliyar)
NNR (Nainar)
PTR (Pathan, Viswa...)
PAT (Pattar)
PTM (Pattam)
PTN (Pattani)
RAO (Rao)
SKG (Serkuruneegar)
SVC (Shiva Chettiyar)
VLR (Vellalar)
VVL (Viswalingam)

APPENDIX I

CASTE CATEGORIES BY GLOSSARY CODE

3. Middle non-Brahmin castes

AMR (Agamudaiar)
 ASR (Acari)
 AMB (Ambalakar)
 APU (Anuppu)
 BDH (Badaga)
 CHY (Chetty, Chettiar)
 AWL (Agammal)
 EDY (Idaiyar)
 GKL (Gurukkal)
 HEK (Hunoe Kurala)
 JNG (Jangamma)
 KMR (Kammavar)
 KLR (Karalar)
 KDN (Kannadian)
 CHV (Cheevalam)
 KGU (Kongu, Kungam)
 KHY (Kshatriya, Singh)
 LYT (Lingayat)
 MLY (Malaiyar)
 MYN (Malavaraiayan)
 MRV (Maravan, Kallar...)
 NCK (Naicker)
 NTU (Nattu)
 NAR (Nair)
 NTM (Nathanmar)
 OLG (Ohili Gounder)
 PCH (Patchi-Baliga)
 PDM (Pandaram)
 PLD (Palundar)
 PDC (Padayatchi..)
 PLI (Pillai)
 PSI (Poosari)
 PNN (Poonon)
 RJT (Rajput)
 RJU (Raja)
 RDI (Reddi)
 SGH (Sengutha)
 SHK (Sheik, Sabib)
 SWT (Sowrashtra)
 TLV (Thuluva)
 UYR (Uddaiyar)
 VKL (Vokkaliga)

4. Low non-Brahmin castes

BBR (Barber...)
 BYR (Boyar)
 CLP (Cholappunar)
 DGR (Devangar)
 DBI (Dhobi)
 DVM (Devanmar)
 DRG (Dharmarajakudi)
 EKL (Ekali)
 ERR (Erucar)
 GMI (Gramani)
 KKL (Kaikolar)
 KVV (Kadavarayar)
 KTU (Kantu)
 KMZ (Kanauralar)
 KDK (Kodikka)
 KPU (Kumbu)
 KDR (Kudumbar)
 LBI (Labbai)
 MND (Manudi)
 MDR (Maduraiar)
 MRC (Maraikar)
 MYI (Malayali)
 MTI (Marteri)
 MSY (Maistry)
 MNV (Meenavar)
 MUR (Muthuraja)
 NDR (Nadar, Shanar)
 OOR (Odder)
 OOD (Oduvar)
 PMN (Pandmanabha)
 PYK (Palayakkar)
 PNR (Pannaiar)
 PTU (Pattusali)
 PNY (Panayeri)
 PTV (Pattanaiar)
 PNK (Panicker)
 PIK (Pandiyakatchi)
 PVR (Pulavar)
 RKL (Rajakulam, Nattar)
 RUT (Rawuthus)
 RBN (Rajaboyan)
 SHN (Sathani)

APPENDIX I

CASTE CATEGORIES BY GLOSSARY CODE

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|---|--|
| <p>4. <u>Low non-Brahmin castes</u> (continued)</p> <p>SLR (Saliar)
 SUN (Saniyan)
 SAT (Sait)
 SVR (Servar)
 SEV (Servai)
 UPL (Uppili)
 TVS (Thevas)
 VGY (Vadugayar)
 VAN (Vanniar)
 VNK (Vedanaicker)
 VKN (Vettaikaran)
 VRN (Veranodi)
 YKL (Yekali)
 TML (Thondamandalam)
 CTA (Chatha)</p> | <p>5. <u>Harijans and Tribals</u> (continued)</p> <p>PYR (Parayar)
 PLR (Pallar)
 SCT (Scheduled Tribe)
 SKR (Sankannar)
 SLI (Sakkiliyar)
 SBR (Sambar)
 SMN (Semman)
 SWP (Sweeper)
 TGN (Telugu Niogi)
 TVP (Thevandran)
 VDR (Vandayar)
 VPM (Valluyar)
 VLG (Valluvar Gounder)
 VYN (Vaidyan)
 VHN (Vaiharan)
 VDN (Vedan)
 VVA (Vettuva Gounder)
 VLN (Vallunar)
 VEN (Velan)
 VEL (Vellian)</p> |
| <p>5. <u>Harijans and Tribals</u></p> <p>ADR (Adi-Dravidar)
 ART (Arunthathi)
 CHL (Chakkali)
 DKM (Devendrakulam)
 ERU (Erular)
 HJN (Harijan)
 ILR (Irular)
 JHR (Jogii)
 KTN (Kothan)
 KUR (Kurumbar)
 KRV (Karavai)
 KVA (Kavara)
 KKR (Koukar)
 KIR (Kuraiar)
 KUV (Kuravan)
 MDI (Mandiri-Dom)
 MTI (Matheri)
 MNM (Maniam)
 MOP (Moopanar)</p> | |

APPENDIX I

CASTE CATEGORIES BY GLOSSARY CODE

6. Other

6a. Known, but not directly a caste

AGI (Anglo-Indian):	probably urban, social status unknown, very distinctive diet, in all probability.
CDY (Chowdry):	North Indian family name, perhaps caste specific, possibly a merchant.
JCB (Jacobite):	some kind of Christian, caste unknown.
MDW (Madhwa):	North Indian caste name?, merchant?
MRS (Maharashtra):	could be a caste designation, but anywhere in caste categories 1-4.
MEN (Menon):	maybe the family name of a Kerala Brahmin.
PST (Protestant):	roughly 75% likelihood of Harijan origin.
ROC (Roman Catholic):	90% likelihood of Harijan origin.
SVA (Saiva):	could be a member of any caste. Is probably claiming vegetarian food practices ("Saiva saapaaDu" = "vegetarian meals" colloquially).
VAI (Vaisyar):	a Vaishnavite. A Brahmin would be unlikely to use this term. Anyone else, categories 2-5, might.

APPENDIX I

CASTE CATEGORIES BY GLOSSARY CODE

6b. Caste named unidentifiable

BRK	(Barodhara Rajakulam)
CTR	(Chitoorar)
DSN	(Deswa)
EZI	(Ezhutheleam)
GCI	(Gatchi)
GWA	(Gowda)
KJM	(Kanjamma)
KNA	(Kannaria)
KMN	(Kamona)
KVS	(Kavasa)
KSU	(Kosava)
KUN	(Kuhwan)
KIA	(Kuriander)
MKP	(Marasakappu)
MOD	(Mannadiar)
NAK	(Nakakara)
NBR	(Nambiar)
PMI	(Poondamalli)
SFI	(Safi)
SLA	(Sohia)
SNI	(Sunni)
SYR	(Sadayar)
SRM	(Sairam)
SBI	(Sabi)
SGM	(Shangumugam)
SMJ	(Sooranaji)
THR	(Thesigai)
VLM	(Vellamma)
UTM	(Uthamadar)
YOM	(Yokeswarar)

APPENDIX II

CASTES SUSPECTED DOMINANT, BY DISTRICT

<u>Caste or group of castes</u>	<u>Districts and codes</u>
(here different subcastes within a caste may share power)	
(Chettiyar, if re-coded)	Ramnad, Madurai (I, F)
GDR (Gounder)	Coimbatore, Dharmapuri, Salem (B, C, J)
KMA, KMD, RDI (Kamma Reddi, Kamundhi Reddiyar, Reddy)	Chingleput, N. Arcot (A, H)
MDL (Mudaliyar)	Chingleput, Salem, Dharmapuri, N. Arcot, S. Arcot, (A, J, C, H, K)
VLR (Vellalar)	Thanjavur, S. Arcot, Trichy (L, K, M)
NCK (Naicker)	Chingleput, N. Arcot, S. Arcot, Thanjavur (S, H, K, L)
UYR (Uddaiyar)	N. Arcot, S. Arcot, Trichy (H, K, M)
PDC (Padayatchi)	Thanjavur (L)
MRV (Maravar, Kallar, Tevar)	Madurai, Ramnad, Tiruniveli (F, I, N)
BDG (Badaga)	Nilgiri (G)
NDR (Nadar)	Tiruniveli, Kanya Kumari (N, D)

OCCUPATIONAL RANKING
(March, 1973)

Occupational rankings are much more difficult to rationalize than caste rankings. On the other hand, some occupations are caste-associated, or caste-defined, or defining-of-the-caste (such as barber) and can hardly be dissociated from their concomitant caste ranks. On the other hand, most of the reported occupations are urban, many one-of-a-kind, and fit into class-occupational categories similar to those one might find in New York City. Another problem: if we took this list back to India, local rankings would be far less consensual and unilinear than those for caste. Another anthropologist tried to get occupational rankings from villagers in Coimbatore, and got only an unanalyzable mass of data. Everyone thought she was offering them the job in question, and ranked all non-village jobs as something like "very good job" or "best job." This ranking, of course, provides data.

Nevertheless, I have provided a pentile breakdown, which could be useful. In rank order, they can be roughly described:

- A. Professional and Business
- B. Professional, Business, Clerical or White Collar, Agriculturalist
- C. Professional, Business, Clerical, Agriculturalist
- D. Business, Worker-Servant
- E. Worker-Servant

Although I have tried to avoid western "white collar," "blue collar" distinctions, they are there. In terms of Tamil concepts of occupational prestige, I continue to maintain that this is a rank order: A over B over C over E. But almost nothing of this sort has been done academically so heroic estimates are involved.

The lower three pentiles will undoubtedly contain most of the sample, which is as it should be (the Indian occupational pyramid being very broad at the base and pointed at the top). I found I could identify almost all of the occupations on the list, or at least have a good strong intuition about them. All the clerks, regardless of the initials of their employing agencies, go unambiguously into pentile C. I cannot identify a "fried grass vendor" but you wouldn't meet him at the Savoy. "Court Amina" is a stumper. I had the most difficulty between pentiles A and B: a "builder" could be a top man in the construction business, or he could build thatch huts. Most of these are possibly top men but ambiguous occupational types have been put in pentile B. The ones in B followed by asterisks could belong in pentile A. You might consult the incomes for providing resolutions.

The following is a list comparing the ranking of occupations as done by an experienced field anthropologist and a high-caste South Indian.

SIDNEY M. CANTON ASSOCIATES INCORPORATED

<u>List of Occupations</u>	<u>American Anthropologist</u>	<u>A High-caste S. Indian</u>
Agents, shipping, air, etc.	B *	A
Accountant	B	C
Achari	D	E
Advocate	A	A
Agricultural coolie and basket weaving	E	E
Agricultural laborer (farm laborer, agricultural coolie)	E	E
Apprentice	D	C
Assistant Engineer	B	A
Assistant, Statistical	B	C
Assistant in Secretariat	C	C
Architect	A	A
Assistant in D. M. S. office	C	C
Astrologer, Palmist, etc.	D	C
Artist	C	E
Attender	E	C
Attender in silk farm	E	C
Auditor	A	C
Ayurvedic Physician	C	C
Ayurvedic medical shop (owner)	C	C
Ayyah	D	C
Banker	A	A
Bakery	D	E
Bank Agent	B	B
Bank employee	C	-
Barber	E	E
Binder	E	E
Block Development Officer	A	A
Beedi shopowner	D	C
Beedi folder (beedi making)	E	E
Bill collector	C	C
Blacksmith	D	E
Booking clerk	C	C
Boiler attender	E	C
Boiler maker in Southern Railway	D	B
Broker	B *	A
Builder	B *	B

SIDNEY M. CANTOR ASSOCIATES INCORPORATED

<u>List of Occupations</u>	<u>American Anthropologist</u>	<u>A High-caste S. Indian</u>
Bullock cart owner	D	E
Burmah shell worker	E	B
Bus driver	D	B
Bank clerk	C	C
Business	B *	A
Butcher	D	E
Butter merchant	D	C
Building maistry	D	E
Brass work	D	B
Broomstick	E	E
Carpenter	D	E
Cart puller	E	E
Cart driver (cartman)	E	E
Cashier	C	-
Casual laborer	E	E
Central Excise Inspector	A	C
Chartered Accountant	A	A
Chargeman	C	B
Chemist	B	B
Chief Accountant	A	C
Chillies vendor	D	C
Checking Inspector	B	C
Checking Inspector (transport)	B	B
Criminal Investigation Department	B	C
Cinema operator	D	C
Clerk	C	C
Clerk in railway	C	C
Clerk in Transport Department	C	C
Clerk in T. U. C. S.	C	C
Clerk in P. W. D.	C	C
Clerk in a shop	C	C
Clerk in E. O. H. C.	C	C
Cottage industry (manufacturing products)	D	B
Cloth business (cloth merchant)	C	B
Choir maker	E	E
Child infant, pre-school child	E	-
Cobbler, shoeman	E	E
Cook	D	E
Compositor	C	E

SIDNEY M. CANTOR ASSOCIATES INCORPORATED

<u>List of Occupations</u>	<u>American Anthropologist</u>	<u>A High-caste S. Indian</u>
Conductor	C	B
Contractor	C	B
Coolie	E	E
Coolie maistry	E	E
Coolie in mutton stall	E	E
Coolie (road work)	E	E
Coolie in a mill	E	E
Coolie and milk vendor	E	E
Cook drink shop (worker)	E	E
Co-operative Inspector	B	C
Cotton business	B	A
Court orderly	E	C
Court Amina	D	C
Craft teacher	C	C
Cultivator (agriculture, agriculturist, farmer, farming)	B	D
Cultivator and agricultural coolie	E	D
Cultivation and coolie (farming and coolie)	E	E
Cultivator and merchant	C	D
Cultivator and broker	B	A
Cultivator and village monsif	B	A
Cycle repairer	D	B
Cycle shop	D	B
Demonstrator (College)	B	C
Deputy Inspector	A	A
District Munsiff	A	A
Director	B *	A
Document writer	C	C
Doctor (All.)	B	A
Draftsman	C	C
Driver	D	B
D. T. S. Attender	D	C
Dyeing work	-	-
Electric Chargeman	D	C
Employee in telegraphic office	C	B
Enumerator (National Malaria Eradication Program)	B	C
Engineer	A	A

<u>List of Occupations</u>	<u>American Anthropologist</u>	<u>A High-caste S. Indian</u>
Factory Worker	D	B
Fancy goods merchant	C	C
Fireman (Railways & C)	C	C
Flower merchant	D	C
Flower vendor	D	C
Flour mill owner	B *	A
Fibre twisting	E	E
Fisherman (fishing)	E	E
Fitter	D	B
Field Assistant	C	C
Food grain business	C	C
Footwear repairer	E	E
Foreman	C	B
Fireworks proprietor	C	A
Fried grass vendor	E	E
Fruits seller	D	C
Fuel business	C	C
Gangman	E	B
Gas maker	C	B
General shop	D	C
Ginning	D	B
Coldcutting	D	B
Goldsmith	C	E
Groundnut business	D	A
Grocery shop	D	A
Gramsevak	C	C
Glass business	C	A
Grinder	D	B
Guide		C
Grocery merchant (Provision merchant)	C	
Gunny business	D	A
Handicraft	D	C
Havildar	D	C
Head clerk	B	C
Head Sorter	C	C
Head Constable	B	C

SIDNEY M. CANTOR ASSOCIATES INCORPORATED

<u>List of Occupations</u>	<u>American Anthropologist</u>	<u>A High-caste S. Indian</u>
Headmaster	B	C
Helper	E	C
Health Inspector	B	C
Head clerk in R. D. O.	C	C
Horse shoe tier	E	E
Housewife	C	
Housewife and coolie	E	E
Hotel owner (Hotelier)	B	A
Hotel server, stewards, etc.	D	E
House Tax Collector	B	C
House worker	D	E
Iddly vendor	D	E
Industrial laborer	D	B
Inspector, building & B	B	B
Inspector in a factory	B	B
Instrument player (musical, band player)	D	C
Inspector in a press	C	B
Insecticide spraying	D	E
Insurance agent	B	A
Iron merchant	D	A
Jail warden	C	C
Journalist	B *	C
Jewelry (making, selling)	C	B
Junior Engineer in Electricity Board	C	A
Junior Engineer in a silk worm factory	C	B
Junior Assistant	C	C
Junior Operator	D	B
Kalasi (in railway)	D	E
Karnam	B	C
Kavalkaran (see watchman)	E	E
Kerosene vendor	D	C

<u>List of Occupations</u>	<u>American Anthropologist</u>	<u>A High-caste S. Indian</u>
Laborer (manual laborer)	E	E
Laborer in temple	E	E
Laboratory Assistant	C	C
Laundering	E	B
Laboratory Technician	B	C
Laborer galvanizing plant	D	B
Landlady	C	A
Landlord	B	A
Laborer in power house	E	B
Laborer in a rice factory	E	B
Leather officer	C	A
Line Inspector	B	B
LIC Superintendent	B *	A
Linekeeper	D	B
Light business	C	C
Librarian	B	C
Lineman	C	B
Liquor shop	D	B
Livestock Assistant, Grade I.	C	C
Loadman (loadlifter)	D	E
Lodge owner	B	A
Lorry driver	D	B
Lorry (bus, etc.), cleaner	E	B
Lock repairer	D	E
Lascar in P. W. D.	D	C
Lascar Electricity Board	D	C
Maid servant (housemaid)	D	E
Maistry	D	B
Manager	B	A
Managing Director	A	A
Manager in State Bank of India	A	A
Manager in Fireworks factory	B	A
Match box maker	D	B
Mat weaving (mat making)	E	B
Maternity assistant	C	C
Mason	D	E

SIDNEY M. CANTOR ASSOCIATES INCORPORATED

<u>List of Occupations</u>	<u>American Anthropologist</u>	<u>A High-caste S. Indian</u>
Merchant	C	B
Medical practitioner	D	A
Messenger	E	E
Milk vendor	D	B
Mill worker (mill employee)	D	B
Midwife	E	C
Mirasudar	B	A
Money lender	C	A
Moulder	D	B
Man in harbor	D	B
Magistrate	A	A
Nadasware Vidwan	D	A
Nungipp	-	A
Officer	B	A
Oil business	D	A
Operator (machine)	D	B
Operator in a mill	D	B
Paddy grinding machanic	D	B
Painter	D	A
Pawn shop	C	C
Panchayat president (PTP)	C	A
Pawn broker	C	A
P. D. T. in co-operative bank	C	C
Pensioner	C	C
Petrol bunk worker	D	B
Pettyshop	D	C
Pettyshop owner	D	C
Photographer	C	C
Pig grassing	E	E
Plumber	D	E
Peon	E	C
Police Constable	C	C
Porter in railway	E	A
Porter	E	B
Provision store	C	C
Purohider, Poosari (Priest)	D	C
Press owner	B	A

SIDNEY M. CANTOR ASSOCIATES INCORPORATED

<u>List of Occupations</u>	<u>American Anthropologist</u>	<u>A High-caste S. Indian</u>
Printer	C ^m	B
Postmaster	C	C
Postman	D	C
Postal packer (clerical)	C	C
Postal peon	E	C
Popcorn vendor	D	C
Porter in a factory	E	B
Porter in refineries	E	B
Pot making (pot maker, pottery)	D	E
Public Relations Officer	B	A
Pump operator	D	B
Railway gangman	E	B
Railway guard	D	B
Readymade goods merchant	C	C
Retired	D	C
Retired Co-op, Sub Registrar	B	C
Retired Constable	C	C
Retired teacher	B	C
Representative (medical sales, etc.)	C	A
Revenue Inspector	B	A
Rice merchant	C	A
Rice mill owner	C	A
Rickshaw owner	E	B
Rickshaw puller	E	E
R. M. S. Sorter	D	C
Railway Protection Force Police	C	C
Sainick	D	E
Saloon owner	C	B
Salt merchant	D	B
Sanitary Inspector	C	A
Scavenger	E	-
Sculptor	C	E
Security Force (factory, etc.)	D	C
Servant	E	E
Selection Grade Clerk in Accountant-General Office	C	C

<u>List of Occupations</u>	<u>American Anthropologist</u>	<u>A High-caste S. Indian</u>
Salesman	C	B
Shop Assistant (shop employee, worker in shop)	D	C
Shopkeeper	D	C
Shoe mart	C	B
Supervisor-in-charge, Electricity Board	B *	B
Skilled laborer	D	E
Slaughter house (worker)	E	E
Soapnut power business	D	C
Soda company	D	B
Shepherd	E	E
Soldier in the army	C	C
Spinning master	C	C
Spinner in weaving mill	D	C
Spinning operator	D	B
Steel wire maker	D	B
Stenographer	C	C
Stonecutter	E	E
Stone work	E	E
Storekeeper	C	C
Stone mason	D	B
Student	C	-
Sub Registrar	C	A
Superintendent in Accountant General Office	B *	A
Subedar	C	C
Superintendent in MES	B	A
Superintendent in Agricultural Department	B	A
Supervisor	C	C
Supervisor in leather industry	C	B
Surveyor	C	B
Sweeper	E	E
Sweet seller	D	C
Tailor	D	E
Taxi driver	D	B
Teacher (school)	C	C
Teacher (college)	B	C
Tea shop owner, tea stall (tea shop)	D	C
Tea shop assistant	D	C

<u>List of Occupations</u>	<u>American Anthropologist</u>	<u>A High-caste S. Indian</u>
Tea factory (worker)	D	C
Tea estate worker	D	B
Tea master	C	B
Technician, mechanic	C	B
Telephone operator	C	C
Telephone inspector	B	B
Telegraphist	C	B
Textile workshop	D	B
Transport operators (lorry, bus, taxi owners)	D	C
Thalaiari	E	C
Ticket collector	C	C
Timber merchant	C	A
Tinker in P&T	D	E
Toddy tapper	E	E
Tractor driver	D	B
Tree climber	E	E
Turner	D	B
Typist	C	C
Unemployed (idle)	D	E
Upper Division Clerk (UDC)	C	C
Vegetable vendor	D	C
Vendor	D	C
Vessel maker	D	B
Vessels merchant	D	B
Village karnam	B	C
Village level worker	C	C
Village Monsif	B	A
Village police	C	C
Virologist	A	A
Visual repairing	C	B
Ward boy	E	C
Washerman (Jhoby)	E	E
Watchman, timekeeper, etc.	E	C
Weaver (weaving, handloom weaver, silk weaver)	D	E
Welder	D	E
Wireman	D	B

<u>List of Occupations</u>	<u>American Anthropologist</u>	<u>A High-caste S. Indian</u>
Wood cutter	E	E
Worker	E	E
Working in a church	D	C
Workshop driver	D	B
Worker in P. W. D.	D	C
Workshop coolie	E	B
Worker in cheroot factory	E	B
Worker in workshop	D	B
Workshop owner	C	A
Quality controlled	C	C

CASTE RANKING
(Report from Previous Work in India)
(July, 1971)

Determination of Hierarchy

To get the Hierarchy in an area, a good unit to work with is either the panchayat area (usually 3 to 10 villages) or the vattam - the revenue unit, which may take in a number of panchayats. Ask what castes there are in an area of this unit. Use the list (attached) to jog peoples' memory - c.f. Beteille for other caste names. Once you have the names, write them on slips of paper and ask people to arrange them according to who is highest and who is lowest. For this, you'll probably need a good deal of Tamil and rapport - a week's familiarity with the village, perhaps. And it's best to get the opinion ranking of number of people, and average them. Treat with suspicion any blanket denial of ranking, or any special plea which places, for example, Harijans above Brahmins. Sometimes a person's estimate of the relative rank of castes other than his own is more reliable than where he places his own - but not invariably. A check on the opinion rank, which usually gives about the same result, is a "transaction analysis." Simply ask who will accept cooked rice or water from whom. The people who accept are either of equal rank, or below, the givers. They are equal if the givers will accept a return gift of the same thing - if no return gift can be made, they are inferior.

Note: This whole technique is laid out immaculately in Marriott's paper in Structure and Change in Modern India, Singer and Cohn, eds., University of Chicago Press.

Major Tamil Castes, in Approximate Rank Order*

<u>Rank</u>	<u>Principal Name</u>	<u>Alternate Name</u>	<u>Traditional Occupation</u>
1	Ayyar	Brahmin	High-caste priest, religious scholar.
2	Vellalar	Pillai Mudalaiyar	Cultivator caste. A group of high cultivating castes will use this title as an honorific; get a more specific name.
3	Naidu		Cultivating caste; from Andhra.
4	Idaiyar		Cow herders.
5	Asari	Kammalar	Carpenter and other artisans.
6	Pandaram	Ochan	Village priest.
7	Udaiyar		Cultivating caste.
8	Kallar (rare in Thanjavur)		Traditionally cattle thieves ; now poor cultivators.
9	Valaiyar		Traditionally hunters in the forest.
10	Ambattam	Nayitan	Barber; sometimes funeral priest.
11	Vannan	Dhobi	Washerman.
Scheduled castes:			
12	Pallar		Agricultural laborers.
13	Paraiyan		Drummers in festivals and marriages; laborers.
14	Chakkiliyan		Leatherworkers and scavengers.

Ranking: 1 > all others - invariable
 2, 3 > all others - fairly constant
 4 - 9, rank order should be checked
 1 - 9 > 10, 11 .. invariable
 12 > 13 > 14 - invariable

* As given by Michael Moffatt, Thanjavur, July 4, 1971

Ranking of Castes by Eight Respondents in Marundanalur
Village, Thanjavur District

<u>Caste</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>Traditional Occupation*</u>
Brahmin	7	2	1	1	1	1	1	3	Priests
Thevar or Agamudiyar	1	1	5	8	3	3	3	3	Agriculturist
Maruthuvar or Barber	4	9	11	12	11	5	10	11	Barber
Pathar	11	8	2	11	7	3	8	7	Goldsmith
Servai	1	1	-	10	3	3	5	4	Agriculturist
Kallar	3	3	7	7	4	3	5	2	Agriculturist
Padayachi	3	5	8	9	6	3	6	2	Agriculturist
Konar	6	7	4	9	7	4	7	6	Cattle tending
Vannan	12	10	10	13	10	4	11	10	Washerman
Harijan	5	6	12	14	12	6	12	12	Ag. laborer
Naicker	8	9	6	4	8	3	4	5	Agriculturist
Vellalar or Pillai	2	4	3	3	2	2	2	1	Agriculturist
Nadar	9	9	9	6	9	3	7	9	Toddy-Tapper
Asari	10	11	2	11	7	5	9	8	Carpenter/blacksmith
Mudaliar	9	6	2	5	2	2	4	2	Agriculturist
Velar	-	-	1	-	5	-	-	-	Potter

Information about respondents:

<u>No.</u>	<u>Name</u>	<u>Occupation</u>	<u>Caste</u>	<u>Basis for Ranking</u>
1	Srinivasan	Owner operator	Barber	Economic
2	V. Ganesan	Owner operator	Agamudiyar	Economic and Social
3	Ponnuswami	Owner-tenant	Agamudiyar	Social
4	Vadivelu	Owner	Agamudiyar	Economic
5	K. T. Senbagam	Owner	Harijan	Social
6	Sadasevan	Owner	Brahmin	Social
7	Govindan	Owner-tenant	Harijan	Social
8	Ponniyan	Landless laborer	Harijan	Economic

* Traditional occupation as determined by enumerator

- Not able to assign rank

Ranking of Castes by Six Respondents in Karuppur
Village, Thanjavur District

<u>Caste</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>Traditional Occupation*</u>
Brahmin	1	1	1	1	1	1	Priests
Vannier	2	3	5	4	3	4	Agriculturists
Servai	2	3	6	5	4	5	Agriculturists
Kallar	2	3	2	2	2	2	Agriculturists
Padayachi	2	3	4	3	5	3	Agriculturists
Vellalar	2	3	4	-	-	-	Agriculturists
Pillai	2	2	2	-	-	-	Agriculturists
Ambalakar	3	6	7	6	5	5	Ag. laborers
Ambalam	4	6	-	-	5	-	
Maruthuvar or Barber	4	7	9	9	7	7	Barbers
Naicker	2	4	3	5	-	-	Agriculturists
Asari or Pathar	3	5	3	7	2	6	Carpenters and goldsmiths
Nadar	3	7	10	10	8	3	Toddy-tappers
Dobi	3	7	8	8	6	8	Washermen
Harijan	5	8	11	11	9	9	Ag. laborers

Information about respondents:

<u>No.</u>	<u>Name</u>	<u>Occupation</u>	<u>Caste</u>	<u>Basis for Ranking</u>
1	G. Ramamoorthy	Small operator	Brahmin	Social and Economic
2	Subbiah Vannier	Small operator	Vannier	Social and Economic
3	Subbiah Maravarayar	Med. operator	Kallar	Social and Economic
4	Chinniah Vaidyar	Ag. laborer & barber	Barber	Social
5	Swaminatha Servai	Owner-laborer	Servai	Social
6	V. Chinniyan	Farm servant	Harijan	Social

* Traditional occupation as determined by enumerator

- Not able to assign rank

B. An Anthropological Study of Balwady Operations and Functions

Official interest in the balwady or pre-school child center in Tamil Nadu is high. Current plans for extending balwady construction, hence participation, have taken precedence over other methods of food delivery. Balwady children are generally reckoned to be from 2-1/2 to 5 years of age. However, the balwady, while catering primarily to these children, does not exclude pre-balwady (indeterminate age range but probably 6 months to 2-1/2 years; women also are served in some of the centers. To a degree, the typical balwady may be directed at what are regarded as the most needy targets according to Tamil Nadu standards.

The intense interest in the balwady prompted a careful evaluation of the institution by a competent anthropologist. Recognizing the problems involved in securing quantitative data and anticipating the development of accurate information on intrafamily food distribution to establish a base line, the field team undertook to examine balwady functions in two representative blocks and more intensively in three equally representative villages.

The combined reports organized into a chronologically altered sequence represent a most useful document on balwady activity. These reports together with other explanatory notes are presented in their original form. They start with the balwady questionnaire which provides the structure of the study, continue with some notes on "use of an Anthropologist", then proceed through a succession of balwady surveys.

VILLAGE BALWADY QUESTIONNAIRE
(December, 1971)

To be administered in households with balwady-enrolled children.

I. Interview circumstances

- A. Date
- B. Village
- C. Accompanying local official; or any other special circumstances.

II. Household

- A. Caste
- B. Family composition (* = informant)

1. Adults

	<u>Name</u>	<u>Relation</u> <u>t. h.</u>	<u>Occupation</u>	<u>Income</u> (monthly)	<u>Education</u>
1.					
2.					
3.					
4.					

2. Children

- a. Total number. Ages and education of non-balwady children
- b. Names and ages of balwady children
- C. Is mother participating in program? If so, how does she feel about eating in public? Does she ever bring food away?
- (D. Quality of house. To be observed, not asked)

III. Balwady

- A. How does the child get to the balwady. Is he accompanied by anyone? Is the balwady too far away?

VILLAGE BALWADY QUESTIONNAIRE

- B. Who originally contacted the family about sending child, and what arguments were used?
- C. What does informant think of balwady food: quality and preparation? What food would he prefer being serve, if any? Has informant actually tasted food, or is he going on child's word about it?
- D. Does child get any bad effects from food? Does he ever bring food home, and, if so, does he share it?
- E. Given three goals of the balwady
1. Feeding
 2. Child care
 3. Learning, discipline and pre-school preparation)
which is most important (either/or check).
- F. Informant's general opinion of balwady: (caste make-up), character of balasevika and ayya, child's treatment, (local politics).
- IV. What special foods would the family like to give the children in the home, if ideal conditions prevailed?

USE OF AN ANTHROPOLOGIST
(April, 1972)

Concerning the culture of food, as opposed to the behavioral "food habits" for which data are being gathered, I think we are still lacking any kind of in-depth understanding. For valid "in-depth, open-ended" interviews, the anthropologist should work repeatedly with a few informants, returning frequently for clarification and expansion of material collected in earlier interviews. The technique permits not only probing and development of one's understanding of cultural ideas, but also familiarizes the anthropologist and the respondent with one another, leading, hopefully, to some confidence on the part of the respondents.

If an assistant is necessary for language purposes, the anthropologist should still be physically present, directing the interview by her. I don't buy the "open, blank mind" theory of interviewing. I can see the point of avoiding someone with obvious prejudices, say someone who thinks western nutritional ideas are the only "truth", and that the food beliefs in other cultures are a lot of primitive superstition (e.g., some of the Women's Christian College studies, which label beliefs about hot and cold foods "food fads and fancies"). But otherwise, as long as the anthropologist is careful to impress on the translator the need for careful, literal translations, and for an attitude of respect toward the respondent (a temperamental quality my second assistant didn't have), there should be no problem. (And the more training the assistant has in interviewing, the better). A tape recorder can be useful; when we were trying an interview in Ikkadu, I took notes during the first talk we had with the lady, then went over the tape carefully in the office as a preparation for the second interview.

The interview should be as loose as possible; they should be structured only by general attention to the two foci of investigation: let us say food, and childbirth and the early years of childhood. We might try to find out in the case of each respondent, as systematically as possible, the respondent's ideas about the process of pregnancy, its stages, the relation (if any) between the mother's and unborn baby's health, the process of childbirth, the diet restrictions, the relation between the mother's

health and her milk production after birth, and weaning process, the stages by which a young child starts to eat a normal adult diet. Some of this can be found in the Thanjavur and Ramanathapuram interviews, but the data are too atomistic: there is no feeling, in the case of a given interview, of any coherent understanding in the respondent's mind of the matters under investigation. Maybe this coherence doesn't exist, but the technique employed in these interviews (short taped interviews with no follow-through; the absence of the anthropologist during the sessions) doesn't really test its presence or absence.

To get down to specifics, here are a couple of examples of what I consider lack of probing in the Thanjavur interviews:

1. From interview 715

- Q. "Why do you fast [on a certain occasion]?"
A. "For the Mother Goddess"
[end of this line of questioning]

This should have been followed up by a question like "what would the Mother Goddess have done to you if you didn't fast"? The reply would probably involve something really nasty like the descent of a plague; the questioning could then be led around to ethno-theories of disease, with an emphasis on young children and child-bearing women.

2. From interview 60

- Q. "Your meals depend on your monetary condition or according to your own wishes?"
A. "Depends on monetary condition."

The answer is not surprising; the respondent is a Harijan woman. But the question is not followed up in any way by, "what would you like to eat if you could?" A general fault in these interviews is that they don't get at ideas in any depth; they consist of continual

monotonous questions like "do you eat X?", "do you avoid Y?", with an uncritical acceptance of the answers. A suspicious number of people say, on the subject of disease, only "we go to the hospital" - nothing on the supposed causes or cures or symptoms; no probing on alternative traditional cures (which informants might be unwilling to admit initially to outsiders).

The Mudaliyar woman we talked to in Ikkadu, for instance, first maintained she always went to western doctors. We asked her why. She said, because western medicines worked faster than Ayurvedic ones, but then allowed that the slower Ayurvedic medicines are good for jaundice and rheumatism.

In the same preliminary interview in Ikkadu (to see how much distraction a tape recorder was - not much), we pursued the following line of inquiry on the subject of rice. First, the respondent said she ate rice because it was her custom. When pressed on why it was the custom, she claimed rice was an ideal diet for the climate. Again, we asked why, and she said the "western" doctor had said so. She couldn't elaborate further, except to mention that she didn't like ragi, but would eat it if told to do so by the doctor. We then raised the contrast between rice, wheat and ragi. She said wheat and ragi were more strengthening than rice, and she would eat wheat when it was available, but that it usually wasn't.

On the analogy of meat - goat, for instance, is not so unclean as beef - I tried the question, "is rice intrinsically cleaner or purer than ragi?" But no matter how many different ways we asked this, it was senseless to the informant. We also tried color - perhaps the whiteness of rice made it more suspicious - but this also made no sense to her. She finally admitted that "lower people" ate ragi; she alluded to the touchy matter of social prestige.

Now I immediately hold this up as something closer to in-depth interviewing. We only have the view of one woman here, and it took a while to extract even this. But the segment suggests some systematic understanding [note: "structure" in anthropological jargon just means "system"; this is what we "structural anthropologists" spend our time trying to uncover]. That is, rice and ragi are opposed in social prestige; their

intrinsic qualities (purity, color) are not significant; and wheat is outside the prestige system: the respondent is willing to view it in something like simple nutritional terms. Social prestige was only mentioned at the end, though it was probably the key to the respondent's aversion to ragi. A simple acceptance of her first answer - "custom" - would have been completely unenlightening.

So this is the sort of interviewing I suggest other anthropologists undertake. Its statistical validity will be low, but it might give us some new ideas. Better to have depth with a few informants than breadth and superficiality with many. I'd look for garrulous old women who've done a lot of cooking and had children. Some urban-rural breakdown would be useful; for a social breakdown, I'd suggest a mix like 1 Brahmin: 4 non-Brahmins : 2 Harijans.

BALWADIES IN TIRUVALLUR BLOCK
(February, 1972)

(Conclusions and Miscellaneous Information)

Summary of Work to Date

We began working in Tiruvallur block, a panchayat union containing 48 panchayat villages (centering on a town 30 miles west of Madras city) in early November, 1971. Within this block, there are 10 balwadies, 7 fed through CARE, 3 through a central government scheme (the "composite demonstration" centers). Notable features at this stage were: (1) the crucial social opposition between Harijans and Caste Hindus in the villages, and in the balwadies, and (2) the relation of the balasevika and ayya to the local village political structure - and the apparently greater importance of the ayya with respect to food and who takes the food (since she cooks it, and part of its 'cleanliness' depends on her).

Our subsequent studies of individual villages were intended to probe these points further. We also wanted to investigate balwady composition in more detail, to see if finer social distinctions within the ranks of the Caste Hindus were critical; to ascertain, if possible, the motivations of the villagers for sending their children and women to balwadies; to infer the selection procedures by which applicants got into balwadies; and to provide some raw data on the actual functioning of balwadies - as opposed to the ideal picture given by the local officials.

Report I, Ikkadu, covered a large and complex village. In retrospect, Ikkadu is probably the best run balwady in the block, with the balasevika and ayya fulfilling both feeding and teaching goals conscientiously. The ayya is especially to be commended: for a monthly salary of one-quarter the balasevika's (Rs. 10 vs. Rs. 40), she does at least as much work as the balasevika - shepherding the kids to school, cleaning them up, helping keep order, and cooking the meals. Our principal criticism for Ikkadu, as in the other centers, was the unsystematic way in which "poorer" people were chosen for the balwady.

Reports II and III covered simpler villages. Report II supported what we suspected after the preliminary survey: a Harijan balasevika may be acceptable to Caste Hindus, but a Harijan ayya is not.^(a) Report III suggests that CSM^(b) has an important latent function: it may attract to the balwady feeding program only those people whose diets are seriously deficient.

Two more brief village observations have not been reported in full. One was in Kilanur, a mile north of Othikadu, where the village is Harijan-dominated, the balwady located in the colony, the balasevika and the ayya Harijans, and the food cooked in the colony. Nor surprisingly, balwady composition is 100% Harijan in Kilanur, both for children and mothers. We went into the village itself, about three furlongs back from the colony, and across a main road, and interviewed the karanam, a high caste Kannaka Pillai, about the situation. He began by saying that they (the Caste Hindus) wanted no trouble with the Harijans, and so let the Harijans make all decisions within the panchayat. He claimed if the balwady were closer to the village, 50 or 60 village children would like to join. Under further questioning, he indicated there was some caste feeling involved, especially from the higher of the Caste Hindus: Chattiyars and Mudaliyars. Here again, "distance" is the most readily proffered explanation for attendance of non-attendance; villagers are reluctant to own up to caste feeling, especially in front of outside questioners. The karanam (village accountant) finally mentioned that the Caste Hindus have more objection to the ayya being a Harijan than to the balasevika being one.

Differences in Income - As in all the villages we've compared, there is a considerable difference in average income levels between the village and the colony at Kilanur: Rs. 40 a month in the colony against Rs. 113 in the

(a) Though the ayya is a servant and the balasevika the teacher, since it is the ayya who handles the food and vessels, this is understandable.

(b) Corn-soy-milk (70-25-5) formulated food provided by the U. S. Food for Peace Program and distributed by voluntary agencies.

village. It is tempting to recommend a simple social solution to balwady recruitment: make them purely Harijan programs. However, there do remain Caste Hindus as poor as Harijans; a potential function of the balwady program is to break down caste feeling rather than to perpetuate it; and Harijan balwady dominance would be politically unfeasible except in the relatively rare panchayats where Harijans are in the majority.

The second unreported village was Velliyur, another five or six miles north of Kilanur. Velliyur is relatively rich and prosperous looking, and the dominant Naidus are very much in control. The balasevika in this village is completely under the thumb of the ayya, a local Naidu, who feeds the children in her own house. Other balwady activities are conducted on a veranda across the street; we saw little evidence of these in practice. For reasons we didn't fully work out, the (registered) recipients were mostly Harijans (75%), despite the village being only 30% Harijan. But the ayya is very contemptuous of the Harijans, complains about their "dirtiness", and feeds them separately. The Harijans reciprocated her feelings most demonstratively (when we talked with them in the privacy of the colony). This was, in short, the only village where we found real evidence of overt discrimination against balwady Harijans (as opposed to the more subtle and common failure to enroll them in fair numbers). It was also the only village without a Harijan balasevika, and where the local Caste Hindu ayya dominated the balasevika so thoroughly.

Our preliminary data from Kancheepuram block (the next area of study) suggest that the high portion of Harijan balasevikas in Tiruvallur is atypical; there has been a strong Christian mission in Ikkadu, the head village of the block, since 1829. So the problem of discrimination against Harijans within balwadies may be more widespread than these first studies have indicated.

Tiruvallur block is also slightly atypical in its high percentage of Harijans - 37.1% against the (Chingleput) district average of 31.8%. This means a higher density of villages with Harijans in an absolute majority and with some consequent political power (e. g., Othikadu and Kilanur). Since 1967, the block has been in an Member of the Legislative Assembly (MLA) constituency reserved for a Harijan (only a Harijan can serve as its MLA, though we have not been able to trace any direct relation between this and, say, the high number of Harijan balasevikas in the block.

Harijan percentages of 30% or more are common in low-lying, rice-growing areas - Chingleput and Thanjavur, for example, - but the statewide average is 18%. Thus the complexion of Harijan-Caste Hindu relations in highland areas like Ramanathapuram and Coimbatore, and the effect of these relations on the balwady program, should be far different than in Chingleput and Thanjavur.

Balwady Selection: The History of the Balwady Program and Village Politics

In our local village studies, we have tried to infer the actual means by which applicants are chosen for balwadies at the village level. Though the mukya sevika (block level women's welfare worker), the gram sevika ("village" level worker - here, two to the block), the balasevika and the ayya uniformly maintain that "poverty" is the criterion of selection, our first three studies have shown that it is not (not systematically and consistently, at least). Two factors seem to be at work: the diachronic and the synchronic [anthropologists like to use jargon, or rather highly refined conceptual tools, occasionally]; or in other words, the history of the balwady program, and the present position of the balwady within the village structure.

Historically, as Mr. Rajagopalan and other statisticians in the Tamil Nadu Study have incisively pointed out, the balwady program in Tamil Nadu was instituted without any feeding goals in mind. The program began way back in 1962, when Block Development Officers (BDO) in certain select blocks were asked to choose panchayats for balwady location. The only specified criterion was local responses: the villagers had to provide some space for the balwady. Also an applicant village was expected to contain a madar sangam (a local woman's society) to encourage local involvement in the balwady (we've found little evidence of these - occasionally they exist in theory, with a woman paid Rs. 10 per month to conduct them, but their activities are minimal). The BDO selected the balasevikas, and the mukya sevika^(a) was to train them for one month at the block level. The intensive program in Kanchapuram (which covers all the villages in that block) was initiated at this time.

In 1967, the balwady program was expanded and tightened up: about 1,000 balwadies were opened in 47 blocks in Tamil Nadu (Tamil Nadu has a total of 347 blocks), and the balasevikas were put through three months of training at some center in Tambaram. They are now trained at a "Rural Education Training Center" in Coimbatore. They were required in 1967 to have at least an 8th standard education; the present requirement has been upped to Secondary School Learning Certificate (SSLC). The Tiruvallur balwadies were started at this time. The most important point in all this history, however, is that, according to the definition of the program at the Women's Welfare Department, any villager could enroll his child: income was not an issue.

In 1971, CARE began its feeding program through existing balwadies. For CARE, income is a criterion: the target beneficiaries are intended to be those most in need of supplemental feeding (assuming this group is coterminous with the low income group in a village). A question we

(a) Head of balasevikas in the block.

haven't quite answered is, were the balwadies reconstituted in 1971 according to these new goals? According to Mrs. Vasanta Kumari (Women's Welfare), new instructions were not given in any detail. Yet, if this is the case, why do all the balasevikas, in Tiruvallur at least, claim the children are from poorer families in the village? Vasanta Kumari does say the Department has advised the balasevikas to admit all children who apply, but only to feed the poorest forty. But in actual practice, almost all the children who are admitted are fed - nor could the balwadies as presently set up (and presently staffed) handle children in numbers much over forty (at least for effective teaching).

To complicate things further, our village observation that "poverty" is not a uniformly applied criterion might be explained by the recent introduction of feeding: perhaps the present enrollments reflect the pre-feeding policies. Yet there is not clear evidence that the new goals are being implemented: that since 1971, new applicants are being selected on the uniform basis of low income.

Comparison with the school mid-day meals program throws the contradictions in the balwady program into better perspective. With mid-day meals, all the children in the village are admitted, and then the headmaster selects the neediest third for CSM feeding. Like the balasevika, the headmaster asserts that poverty is his sole criterion; in contrast to the balasevika's statements, his statements appear to be correct. Our first perfunctory check on lists of school-fed children (five or six households checked randomly in three villages show only genuinely poor kids as recipients. If this is uniformly true, two explanations are possible. One is the historical confusion described above: the balasevika simply doesn't know what criteria to apply. The second is the present structure of the balwady program, and its fit into the village.

To begin with, both the schools and the balwadies have to make a decision on whom to feed; neither can feed all their age-eligible children. But the decision points are different. The headmaster first enrolls all age-eligible school children, and then decides which ones to feed, on (presumably) the single basis of their dietary need. The balasevika, on the other hand, makes her decision at the point of enrollment, and children are enrolled in balwadies for facilities other than the food: child care and the simple teaching provided. Second (in comparing the school and balwady feeding situations), the headmaster is high in the village prestige system. His informal authority is probably on a level with the formal authority of the panchayat president and the monsif(a) in the village. This is only an impression; there exists a fairly scientific ranking test we can apply, if necessary, to check the point. The headmasters also appear well settled in to the villages: they really know household by household who has money and who hasn't. The balasevika and the ayya, on the other hand, have no appreciable prestige in the village, so they are far less immune to local pressure contrary to the "poverty" criterion (as, perhaps, in the case of Perumalpet and the local well-to-do Naidus, balwady Report III). And in Tiruvallur block, at least, the balasevika is less knowledgeable about the village, as an outsider, than the headmaster (though this factor is probably atypical).

All this reduces to one point and two proposals. Voluntary agencies and the Women's Welfare Department have not sorted out the goals of the balwady program. Two options are open:

1. To expand the balwadies so, like the schools, they can accept all age-eligible children and then feed only the poorest. This is probably financially unfeasible.
2. To really re-institute the balwadies according to the feeding goals, with clear instructions to the balasevikas, and systematic village surveys to locate the poorest

(a) Village level judicial officer

children. The village headmaster might be of help here, first for his local knowledge, second for his greater influence within the village. The village accountant (the karanam) also tends to be able to provide on call, village population and income distributions. Finally, the mukya sevika might be enlisted for her (hopefully) greater authority vis-a-vis the balasevika.

Balwady Site Location

Clear definition and implementation of balwady goals is only half of the problem; the balwady must also be physically and socially accessible to the target groups. On the basis of work to date, it seems clear that the optimum balwady site in a village is one mid-way between the village and the colony (village = where the Caste Hindus live; colony = where the Harijans live). There is no doubt whatsoever that balwady location in the colony eliminates participation of the Caste Hindus (with, see Report II, Caste Hindu women reacting more strongly than their children to colony and Harijan influences of any kind). And location in the village makes it more difficult for colony children to attend. One factor is simply distance: if the balwady is centered in the village, and concentric recruitment is carried out (as in Ikkadu, Report I), the colony will not be reached even at the enrollment stage, in all probability. Also, it is common for the main colony to be two or more furlongs away from the village, and the maximum range of a balwady-age child is no more than three furlongs (1/3 mile), unaccompanied. One-half mile is possible, but only with regular arrangements for an escort - the ayya, or possibly (but less reliably) older brothers and sisters. If a main motor road or large pond lie between the colony and the village, whatever the distance, an escort is necessary. A second argument against village location is the subtle matter of caste feeling: if the balwady is in the Brahmin area, for example, or near a Caste Hindu temple, villagers will probably see to it that the Harijans stay away. The (generally empty) area between the village and the colony, on the other hand, is neutral ground, without strong associations for the Caste Hindus or for the Harijans.

Procedures - The present selection procedures do not take much account of this point. First of all, most balwadies are located where space has been donated; all donated spots in Tiruvallur, with one exception, have been in private village houses, or in the panchayat headquarters building - generally centered in the village. The exception is Kilanur, mentioned above, politically dominated by Harijans.

Secondly, where new buildings are being put up explicitly as balwadies, the official criteria for site selection take account of the village-colony matter only as a footnote. The procedure for site selection is as follows. First, the village officials are asked to come up with possible sites. Under the present system, the land in question must already be government-owned - by the local panchayat, the panchayat union, or "vested" in the government (and in precise bureaucratic words). In the second stage, the potential sites are inspected by the Woman's Welfare Department and the block level engineer. Thirdly, a CARE field officer looks over the available sites and makes the final decision. His decision criteria are mostly technical. A site may be rejected (according to CARE field officers we've interviewed) for being on low-lying ground, for lacking an approach road, for being in unhygienic surroundings, or for being close to a large body of water or a main road. The CARE officer must work with the sites offered, but he can reject them all and request that steps one and two be repeated and new sites suggested. If two sites are offered which are equally acceptable on technical grounds, and one is village-centered while the other is accessible to both village and colony, the CARE officers say they will choose the second. But if a single site is available and technically acceptable, but is far from the colony, they will still accept it. In other words, though the CARE officers take some account of the village-colony criterion, this is subordinated to the technical criteria: they will reject sites on technical grounds, but not on social grounds.

Two final recommendations:

1. CARE (and other agencies involved in balwady site location) make social considerations at least as important as technical ones. In particular, about one-quarter mile

(where possible) should be the balwady's maximum distance from the village and the colony, and a site located outside of both (or perhaps on the edge of the village closest to the colony) is preferable to location in the center of the village.

2. Where government land is unavailable in a location like this, a provision be made for land purchase. CARE is already spending about Rs. 6500 per balwady site; our very tentative estimate of land prices in this part of Chingleput is a maximum of Rs. 1000 per site. If it is procedurally or legally impossible to purchase land, perhaps the presently required local contribution of Rs. 500 toward building costs could be applied to land purchase.

BALWADY REPORT I: IKKADU
(January, 1972)

Subject

The subject of this report is a single balwady, or pre-school child center, in Tiruvallur block. Following on our survey of 9 of the 10 balwadies in Tiruvallur block, we are here looking into a single balwady in more depth, to investigate its social composition, the principles of selection of fed children and mothers, the feelings of the villagers towards the program, and the general administration of the balwady program at the local level.

Research Methods

These have been a little sloppy, due in part to a turnover of three research assistants during the month, and to elementary errors such as mapping the village at the end of the survey rather than at the beginning. We have combined informal observation with the administering of a short questionnaire, revised and condensed three times in the course of the research. We didn't try for complete coverage with the questionnaire, but applied it in rough proportion to the social and economic groups represented within the balwady. After giving 29 of the things, we felt we knew what was going on, and that additional coverage wasn't worth the time. For the record, the 29 households interviewed, accounted for 25 balwady-age children, 5 pre-balwady children, and 7 mothers. An additional 6 balwady-fed children were located who were not on the balasevika's official list.

The Village

Ikkadu is one mile north of the town of Tiruvallur, in turn, about 30 miles west of Madras. It is a large village, probable population about 4,600 (1961 census figure + 22%), with a broad distribution of castes and a number of outlying hamlets. The village is on a main road, the site of the block headquarters, and of amenities like a primary health center; it is relatively progressive, in other words.

The operating range of a pre-school child is not more than two or three furlongs ("furlong" is the indigenous term); accordingly, all children and mothers are found within the main village and closest Harijan colony (see attached map). This area comprises about two-third of the village population, 548 out of 762 households. The excluded hamlets are predominately Harijan and scheduled tribe (Irulas; as poor as Harijans and and ranking just above them) in composition.

The village power structure is fuzzy at best. The current panchayat president is a Harijan, but he was elected only a year ago, and seems very unsure of himself. In the recent election, the non-Harijan vote was apparently split by six candidates; previous panchayat presidents have belonged to the dominant caste, Mudaliyar. We only met the panchayat president once, on our first visit to Ikkadu (15 November 1971); since then, he has been lying very low. At that time, he tried to get us to exert influence to locate the main balwady building mid-way between the village and the colony [personal note: I wish we had]; as an index of his lack of power, the site has since been fixed near the present site (presently the balwady is in the panchayat office), immediately next to the largest temple and the Brahmin households. The village munsif is a Mudaliyar, and the accountant a Kannaka Pillai (a traditional high caste specializing in this profession); they don't appear to cooperate very enthusiastically. Most likely, all functional decisions about this balwady are made in the block headquarters across the street, and by the gram sevika,^(a) balasevika, and balwady ayya.

The Balwady: General Impressions

As noted in the progress report, the balasevika in Ikkadu is a Harijan Christian from another village, about two miles away. The ayya is a local woman of the Acari (Artisan) caste. This is the typical pattern in the balwadies of Tiruvallur block (the balasevika an outsider, the ayya a local woman), and results in the ayya's having more influence than her subordinate position to the balasevika would suggest. However, it may not be the typical pattern in other blocks.

^(a) Village level women's extension worker

Both women seem to be doing their jobs conscientiously and with some competence. None of the villagers interviewed complained about their personal characteristics. A few people complained that their children were being dunned for 2 or 3 paise contributions for firewood, but this is a legitimate part of the local contribution required in the balwady program, as far as we could tell. No notable corruption was discovered.

We observed the feeding program on three different occasions, and it seemed to be run well. Even if the balasevika is not feeding the exact child on the exact day recorded in her little book, the food appears to get to kids who need it. If extra children show up, she does her best; we observed between 35 and 45 children being fed, on different days, in the first sitting. Some food is taken away, despite the balasevikas efforts, but the villagers who admitted doing this mostly claimed that the recipient still ate it. In two cases where the recipient wasn't eating the CSM umpa,^(a) the mother said he was too young, that the food gave him diarrhea, and his older siblings took it.

Balwady Composition

According to age distribution figures for rural Chingleput (1961 Census), a village the size of Ikkadu should have something on the order of 500 age-eligible children in the 2-1/2 to 5 year old bracket, 380 in the 0 to 2-1/2 (there's something contradictory about these figures, but I leave it to the statisticians), and about 300 pregnant and lactating women. Since the balwady feeding programs allows for only 40 recipients in each bracket, the balwady is very much under pressure here, and during feeding times, many non-enrolled people (mostly adults, labelled "just beggars" by the balasevika) have to be locked out. A possible balwady reform would be to scale the balwadies to the size of the villages. In this block, a neighboring village with a population of 600 has a balwady exactly the same size, and the officials there probably have trouble coming up with enough eligibles.

^(a) A recipe made up with CSM

If one strong criticism could be made of the local administration in Ikkadu, it is that the balasevika and ayya did not originally make a proper survey in the village and Harijan colony, and then admit only those most in need of the child care and feeding facilities of the balwady. In fact, what seems to have happened is that the balasevika worked out concentrically from the balwady, while the ayya recruited in her section of the village, until they had filled the quotas of balwady children, pre-balwady children, and mothers. On the attached map, the respondents whose number are circled (the numbers refer to the questionnaire code) reported that they had first heard of the balwady from the balasevika. These are mostly clustered around the balwady building. The respondents with numbers in triangles, in the area of the ayya's house, had been recruited by the ayya; and the remaining respondents had entered their children, or themselves, on their own initiative.

The Harijans were most vocally critical of this survey method. Though the ayya claimed she had gone into the colony, the Harijans we talked to (numbering about half a dozen) agreed that no house-to-house survey had been made. The only two Harijan families with children in the balwady (respondents 3 and 12 on the map) had heard about the balwady in the village; one father is a village peon, and he told the other family. The balasevika and ayya made the usual claims that Harijans were unwilling to come because of the distance; but the gram sevika remarked more candidly that the caste people would stop sending their children if there were too many Harijans - that Harijan children are "dirty." In our last day of field work, we were accosted very forcefully by a group of Harijans coolies on a back street in the village, who told us how badly they needed a balwady of their own, especially for its child care facilities: most Harijan mothers and fathers have to work outside the household (very true, and a real distinction between Harijans and most caste Hindus). On the subject of caste feeling, however, it should be noted that none of the Harijan or low caste families participating in the balwady (though there are far too few of them) complained about discrimination against their children: the balasevika and ayya treat all the children equally, they agreed.

As for a more detailed caste breakdown, the following table compares the caste composition in the village to that in the balwady. The castes are ranked, high to low, in terms of the locally reported order.

<u>Caste Name</u>	<u>Number of Households in Village</u>	<u>Number of Balwady Recipients</u>	<u>Number Interviewed</u>
Brahmin	3		
Kannaka Pillai	7	1	
Chettiyar	13	1	1
Mudaliyar	250 (30%)	24 (19%)	6
Idaiyar (shepherd)	21 (2.5%)	24 (19%)	5
Naidu	9	2	2
Acari (artisan)	14 (1.7%)	17 (14%)	4
Naikker	5 (0.6%)	22 (17%)	3
Muslim	12 (1.4%)	17 (14%)	3
Pandaram (temple servant)	3	2	1
Nadar	5	4	1
Vannan (washerman)	3		
Ambattan (barber)	1	2	1
Irula (tribal)	21		
Joi (tribal)	4		
Harijan	450 (55%)	9 (7%)	2

(defensive notes on the table: Muslims in Ikkadu, though theoretically members of a separate religion, live on the same street, intermarry, and are ranked by the Hindu caste members - for most purposes, they can be treated as a caste. The second column, households in the village, refers to the entire village, not just to the section on the map. The third column lumps balwady children, pre-balwady children and mothers. It totals 125 rather than 120, a reflection of the pressure on this feeding program: five extra women are being fed. The unlikelihood of drawing 22 recipients from 5 Naikker households is a result of some confusion about a group sometimes called "Taliyari" (village servant); some of these 22 may be Naidu).

The disproportion at the bottom (Harijans) has already been discussed. The under-presentation of Mudaliyars is not out of line with their slightly superior economic status, and with their greater tendency to be fussy about the purity of the food their children take. This is impressionistic: we weren't able to find Mudaliyars with un-enrolled age-eligible children who had any strongly defined feelings about the balwady.

The over-representation of Idaiyars, Acaris, Naickers and Muslims in the balwady is probably due to the recruiting methods - the location of these groups relative to the balwady and to the ayya's house (see map). In the case of the Idaiyars and Naickers, it may also represent a genuine attempt to locate poor people: these groups earn their livings from cattle-keeping and beedie making, respectively, and earn about Rs. 50 per month per household.

In economic terms, the average income of the balwady families we interviewed was somewhat lower than the village average. We located a list, drawn up hurriedly during the war for rationing purposes, giving the reported income of all the village households. Chandran (my present research assistant) feels the estimates may be high; I feel they may be just randomly inaccurate. In any case, assuming the list has some validity, the average household income for the area within the map come out as Rs. 120 per month. Against this, the balwady average (for 29 questionnaires) is Rs. 105 per month per household. Furthermore, if the colony is excluded from the village average, since the balwady is not effectively serving the colony, the difference is even greater: Rs. 150 per month per household in the main caste village, against Rs. 105 in the balwady families. Families with high incomes are not being uniformly excluded from the feeding: 6 out of the 29 are above the village average, one with an income as high as Rs. 300 per month. But the balasevika has made some attempt to select against the richer children: one Naidu family, with an income of Rs. 250 per month, reported that their daughter was eating the balwady food up to one month ago, when the balasevika decided her family was too well off and she didn't need the food (it's just occurred to me that the balasevika did this at about the same time we first showed up in the village). The girl is still attending, though she isn't eating there.

One last point on the economics of the village. The reported average income in the colony is Rs. 58 per month per household. This, in addition to the child care needs of the Harijans, makes their exclusion from the balwady particularly unfortunate.

To sum up on balwady composition, the initial survey was badly done, and there has been no systematic attempt to get at the neediest families even in the village itself. But despite this, due to some efforts on the part of the local officials, and probably to self-selection by the families contacted, the balwady is (within the main caste village) serving needier families than the average. Caste feeling apparently entered into the initial set up of the balwady, but it is not a factor in its day-to-day operations.

Attitudes Toward the Balwady

In general, the families interviewed were very positive about the balwady: they felt the program was run decently, that the children were learning something, and that the discipline was good for them. This seemed an honestly held opinion; it didn't vary with the presence or absence of local officials. We tried on our second revision of the questionnaire to elicit suggestions for the improvement of the program. None of them were very perspicacious, but they indicated a positive interest in the balwady program ("a bigger balwady, more food, teaching reading and writing").

In our initial interview of the balasevika, she claimed that if it weren't for the feeding program, the children wouldn't attend the balwady. However, there are eight children enrolled and attending regularly who don't eat. And, when we broke down the functions of the balwady into three categories - feeding, child care and learning - and asked the respondents to rank them (item III E on the questionnaire), learning scored highest by far. There is undoubtedly some bias here: the villagers in some cases

clearly felt they should say this. Or even if they did value learning in the abstract, their concrete motivation may have been food. Nevertheless, all but the poorest maintained that they could afford to feed their children; that the small amount of money or food saved by the mid-day meal was insignificant. And none of them commented spontaneously on the nutritious bonus of CSM (can't say we were expecting they would). Even those who admitted that their children needed the food would emphasize that the other two aspects of the program were important: no one was willing to say they were sending their children purely for the feeding.

On the ranking of balwady goals, scoring a first choice as 3, a second as 2, a third as 1, and "no opinion" or "irrelevant" as 0, the composite preference for the entire sample is as follows (26 out of 29 were willing to rank):

Learning	61
Child care	52
Food	33

The lower income families came out with the same composite ranking, but they narrowed the gap in numerical terms. For the 14 families with incomes of Rs. 100 per month or less, the scores were:

Learning	33
Child care	26
Feeding	22

Within our small sample, there was no discernible relation between caste or caste rank and goal preferences.

Although food ranked third in this context, there were plenty of comments about its quality in the balwady. One or two people claimed they actually like the CSM. Negative comments were as follows:

<u>Comment</u>	<u>Number of Complaints</u>
CSM gives the child dysentery, diarrhea or indigestion	13
Food is badly prepared (only half cooked)	4
The food tastes or smells bad	4
Insects are found	3

In the case of the stomach complaints, more than half were mild: people said that the younger children (pre-balwady) children had the most problems, or that the children had diarrhea for two or three months but then adjusted. Everyone we pressed on the issue said they would rather have rice or wheat, or at least a more varied diet with CSM than upma every day. But this ayya doesn't do a bad job with her limited resources: her product is less reminiscent of library paste than some we've tasted.

A cultural difficulty encountered in Tanjore the unwillingness of pregnant and lactating women to eat in public (i. e., in the balwady) did not seem too strong in Ikkadu. Of six mothers responding on this question (we only asked it on our third revision of the questionnaire), just two said they were "shy" and had to bring their food home. They both claimed they consumed it themselves. Perhaps significantly, they were both Mudaliyars (high ranking); but of the remaining four, who said they didn't mind, one was also a Mudaliyar (the other three were Idaiyar, Acari and Naikker). In our two observations of the second sitting in balwady feeding, about 35 women were present both times. No one expressed any disapproval of the children eating together across caste lines.

The final major question on our questionnaire was not directly related to the balwady study, but to a study of Tamil food behavior. In actual interviewing, we kept it loose: "what special food does the family actually give, or would like to give, to pre-six year olds." We stressed the ideal because most people said they couldn't afford any differences in practice. The question produced the following results:

<u>Preference for Young Children</u>	<u>Number of Times Mentioned</u>
More milk	14
More eggs	11
More fruits	10
Apples	3
Oranges	2
Horlicks, ovaltine	8
More meat	6
Biscuits	4
Tonics	3
More ghee	3
More rice	2
Greens	1

Other replies, mentioned once each:

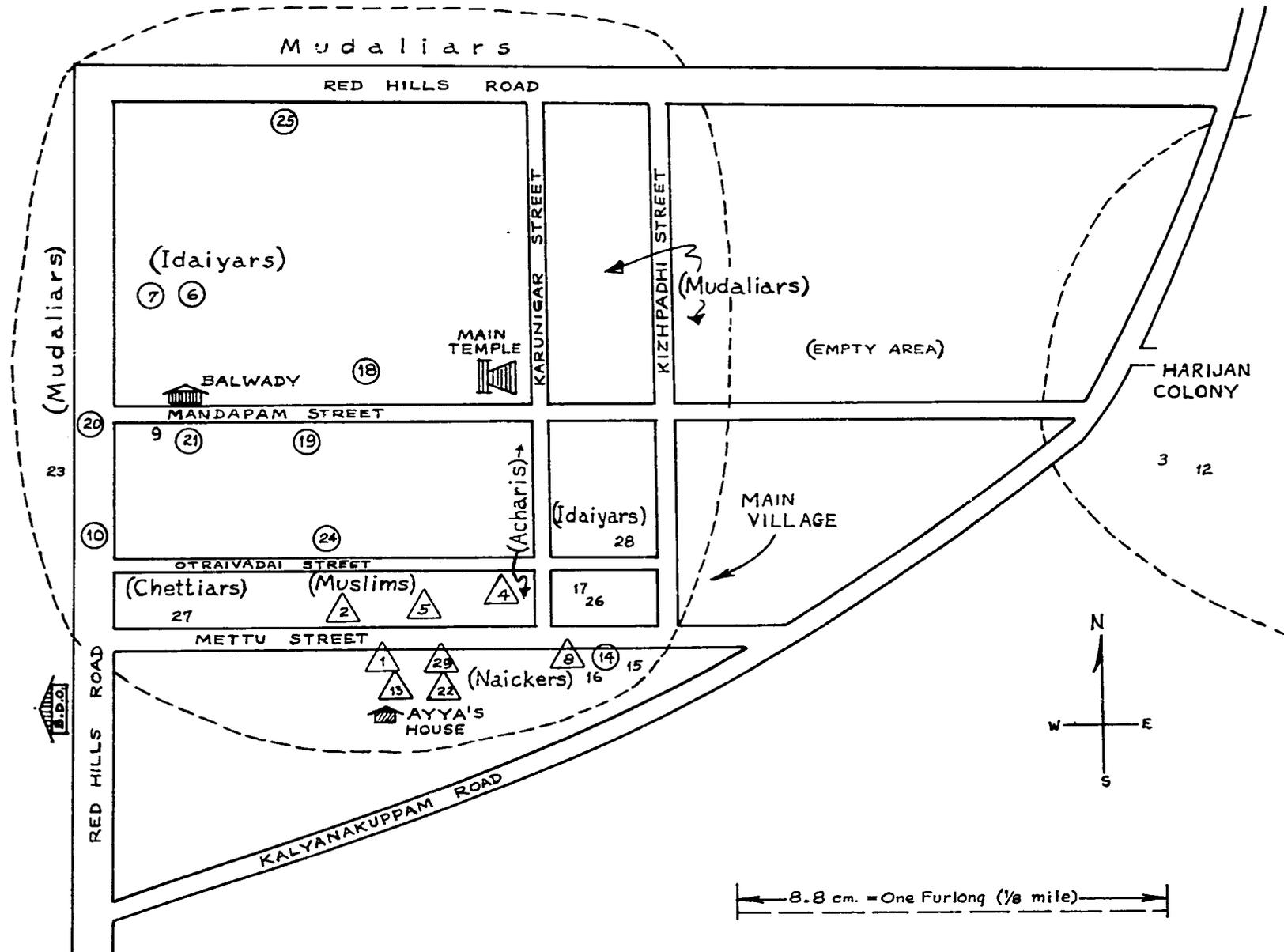
Ragi
Curd
Itli, dosai (rice and gram mixture)
Extra vegetable
Dry fish
Amul (baby food)
Bread
More sambar (spicy soup)
Chicken soup

Conclusions

With the major exception of the exclusion of Harijans, the balwady at Ikkadu is well run and serving its purposes; and local opinion toward it is favorable. From one point of view, the very size of the village here mitigates against access to the Harijans: a village this size may require a balwady twice the size, located mid-way between the village and the colony - or two separate balwadies. On the other hand, if a

balwady of the present size were to favor Harijans more uniformly, the very objection of the gram sevika (that caste people wouldn't send their children as willingly) would work in favor of the feeding goals: only the poorest of the non Harijans might send their children.

The real question here is whether or not a balance can be struck. Figures from our initial survey suggest that Harijans are either almost entirely excluded, or completely dominate the balwady. Accordingly, the next village we're investigating is one two miles to the north of Ikkadu, roughly 75% Harijan in the balwady (as against 50% Harijan in the village as a whole). Here we intend to concentrate on the enrolled non-Harijan families, on their social characteristics, their reasons for allowing their children to attend, and their attitudes about the balwady.



BALWADY REPORT II: OTHIKADU
(January, 1972)

Subject

This report follows on Balwady Report I (January 1972), and should be read in conjunction with it and the following, Report III. Here, we have studied with considerably more celerity a village smaller and simpler than Ikkadu, with similar aims: to determine the social composition and dynamics of a single balwady. We have concentrated particularly on the problem raised at the end of Report I: how do non-Harijan castes feel about a balwady dominated by Harijans?

Research Methods

We have followed the same as in Report I, only in this case more than half of the actual fieldwork was carried out by Chandran (who is experienced in independent data collection under the direction of an anthropologist). Twenty questionnaires were given.

The Village

Othikadu is three miles north of Triuvallur and about one-half mile off the main road. Its population is difficult to determine exactly; in 1961, it was part of a larger panchayat, with a caste Hindu (a Naidu) as panchayat president, but in 1964, it split off. The present estimated population is about 1200. The new village is very much Harijan dominated numerically (61% of the households are Harijan), and as a reflection of this, the panchayat president since 1964, Samuel, has been a Harijan. Unlike the newly elected Harijan panchayat president in Ikkadu, Samuel seems very self-confident and in control of his job. The dominant caste among the non-Harijans in Othikadu is Mudaliyar. The village monsif, a Mudaliyar, explains that Samuel does a decent job, and consults with the caste Hindus on all things concerning them. As a result, recognizing the majority of Harijan votes in the panchayat, the Mudaliyars have allowed Samuel to run unopposed in the last two elections. The monsif claims, however, that if Samuel were not acceptable to the Mudaliyars, they would spend some money and run a Mudaliyar against him; and that enough Harijans could be won over, since the Mudaliyars are in economic control of the village. This is apparently the case; no Harijans own any land at all, whereas the 50 land-holding Mudaliyar families own an average of nearly 10 acres each. A good deal of the Harijan income is derived from coolie labor on the Mudaliyar lands.

No income list was available for Othikadu, but from the monsif's estimates, the 60 Mudaliyar families (including 10 landless households) have an average income of about Rs. 250 per month. This compares with a probable Harijan average of Rs. 60 to 80. Of the 140 Harijan households, 90 are Christians, and a few of these do very well: the schoolmaster in the church school in the colony clears Rs. 220. Christian and Hindu Harijans live together in the same colony; we don't know whether or not they intermarry.

To sum up the village power structure, then, the Harijans have a measure of political power commensurate with their numbers, but this is closely circumscribed by the economic position of the Mudaliyars. On an issue of major importance to the Mudaliyars (e. g., an attempt to take over their temples), the Mudaliyars could probably bring the Harijans into line by economic sanctions (there are many cases of this sort of action reported in the south). The balwady is not such an issue, however.

Othikadu is not only smaller and less complex than Ikkadu; it is also more compact. The attached map, drawn to the same scale as the map in Report I, shows the entire village. Though the balwady is on the opposite side of the village from the colony, it is still only about a furlong and a half away. As a consequence, none of the families interviewed cited distance as a factor in attendance or non-attendance. With this spatial arrangement, distance might still be used as a rationalization if the balwady were caste Hindu^(a) dominated. But in this case, the people with any complaints, the Mudaliyars, are much too close to include distance as one of them.

(a) In terms of social organization, the Harijans are as much a "caste" (or a set of castes) as the non-Harijans, but because they've been traditionally excluded from so much of village life, the "outcaste" versus "caste Hindu" usage has grown. I follow the usage here because it's more concise, but it should be remembered that "caste" and "caste Hindu" have two different senses.

The Balwady: General Impressions

Following the typical pattern in Tiruvallur block, the balasevika is a Harijan Christian from another village, while the ayya is from Othikadu. This ayya is a Harijan also, however, and the balasevika lived in Othikadu up to a year ago. Though the balwady is located out of the colony, in the panchayat building, the food is cooked in the colony. To cap all this Harijan dominance, the new balwady building will be constructed next to the church school, on the edge of the colony.

The feeding program in Othikadu is not run as well as in Ikkadu. This may be partly due to the building size; the panchayat building at Othikadu is about half the size of the Ikkadu building. At Ikkadu, feeding was carried out in two shifts, with a locked door keeping others out. First, the balwady enrolled children and some smaller children were fed; second, mothers and some babies ate. In most balwadies we've observed, the 40 pre-balwady children provided for by the feeding program are something of a mystery. In Ikkadu, they seem to be split: some come with the older children and sit around the balwady most of the day, while others are brought in by the mothers. In Othikadu, everyone is fed in one mad rush. There's no way of sorting out who is who. Our four observations of the balwady suggest the confusion:

<u>Date</u>	<u>Time</u>	<u>Circumstances</u>	<u>Numbers Present</u>
16 Nov.	11:30	Before lunch	25 children
	12:00	Lunch time	15 more children arrive on the stroke of noon.
12 Jan.	11:15	Before lunch	11 children
	12:30	Lunch time	62 children and 10 women eating
13 Jan.	11:50	Before lunch	27 children
	1:00	Lunch time	50 children and 9 women eating; others arriving and leaving with food.
24 Jan.	11:15	Before lunch	18 children

In defense of the small number of women eating in the balwady, the panchayat president explains, first, that about 10 women (Harijans) regularly take the food in his house in the colony, where it is prepared; second, that the non-attendance of enrolled Mudaliyar women is due to their own feelings of caste prestige, and not his problem. He asserts that he originally tried to engage a Kuruvar woman who lived near the balwady building as ayya, but she was not reliable [she'd probably have been as unacceptable to the Mudaliyars as a Harijan, however]. Finally, he says that he initially gave uncooked CSM to Mudaliyar women, that they liked it and ate it when they cooked it themselves, but that he discovered this mode of distribution was not permitted, and had to stop.

The low balwady attendance before feeding times suggests that learning and child care are not particularly important to the villagers here. We added one more question to our questionnaire (one we'd dropped from an earlier draft): "does the child attend regularly and willingly?" Against the above evidence, the invariable response was positive, perhaps because Samuel and the balasevika seemed worried about our inquiries and were prompting the villagers between our visits. For example, on the 12th, some Harijans claimed their kids had left at the customary time, 8:00 a.m. When we pointed out there were only 11 children at the balwady, and none of them were theirs, they suggested that maybe the children were playing somewhere along the way, instead of attending. The balasevika tried to tell us that the pongal ^(a) season accounted for the low attendance; but only 18 children were present on the 24th of January, well after pongal.

Balwady Composition

In view of the observed irregularities of the program in Othikadu, the official feeding list should be taken with a large grain of salt. However, the following table which compares the listed balwady recipients with the caste composition of the village, suggests how directly the Harijan predominance in the running of the balwady affects its composition.

(a) Pongal = harvest

SIDNEY M. CANTOR ASSOCIATES INCORPORATED

<u>Caste Name</u>	<u>Approximate Number of Households in Village</u>	<u>Number of Balwady Recipients</u>	<u>Number Interviewed</u>
Brahmin	1		
Kannaka Pillai	2		
Mudaliyar	60 (26%)	21 (19%)	9
Chettiyar	1		
Udaiyar (potter)	8 (4%)		
Acari	5 (2%)	1	
Naidu	2		
Nadar	2 (1%)	1	1
Vannan	1		
Pujari	1		
Muslim	1		
Vettaikaran	2		
Irula	4		
Harijan	<u>140 (61%)</u>	<u>92 (80%)</u>	<u>10</u>
(Hindus and Christians)	230	115	20

According to the balasevika, a partial survey was made when the feeding program was instituted a year ago [note: though these balwadies were all set up in 1967, most of them seem to have been 'reinstated' in 1970 when the regular feeding programs started: most of the balasevikas claim to have done new surveys at this time.] One hundred and ninety-five eligibles in the three categories were located (97 balwady-age children, 53 pre-balwady and 45 pregnant and lactating women); from this list, 40 plus 40 plus 40 were selected "on the basis of poverty." It is doubtful that low income was the uniform basis of selection: Solomon, the Harijan school teacher with an income of Rs. 220 per month, has a child in the balwady, and Samuel admits to feeding four

women in his household with CSM. Among the Mudaliyars, only one of the nine interviewed was a landless family; the other eight have average incomes of Rs. 287 per month. Nevertheless, in generally favoring the Harijans, the balwady does reach the poorer people on the average, in a serendipitous sort of way.

The question of initial contact (III B on the questionnaire) shows no concentric pattern of recruiting, as in Ikkadu. It does show the importance of the panchayat president here, and the unimportance of the ayya: out of 19 respondents on this question, 11 were contacted by the balsevika, 5 by the panchayat president, and 2 by both. The 19th joined on her own initiative. Both the balasevika and the panchayat president recruited freely in the village and the colony.

Attitudes Toward the Balwady

As at Ikkadu, the reported attitude of the villagers toward the balwady was very favorable. Within the colony, at least, there was undoubtedly pressure on the Harijans by Samuel to respond favorably; Samuel feels very responsible for the balwady, and says he was concerned during the war that the program would be cut off. But the Mudaliyars as well expressed generally favorable opinions about the program and about the personal characters of the balasevika and ayya. It does seem clear that the ayya favors her own people: she picks up the Harijan children every morning, and cleans them up and combs their hair (we were told).

In light of the generally poor attendance of the balwady outside of feeding hours, however, we are growing increasingly suspicious of the value of question III E - the relative importance of feeding, child care and learning. Here, as in Ikkadu, the cumulative totals favored learning and child care (though the point spread is lower here):

Learning	48
Child care	45
Feeding	39

(first choice = 3 points, 2nd = 2, 3rd = 1, irrelevant = 0)

Unlike in Ikkadu, there was no notable difference between higher and lower income families on this point; in fact, of the four lowest income families we interviewed (Rs. 60 a month or less), two ranked learning over child care over feeding, one refused to rank, and only one ranked the food as most important. What we seem to be getting here, in other words, is the informants' abstract values; the concrete behavior is that most of the kids show up reliably only for the meals.

On the key matter of the caste Hindu's feeling about a Harijan-dominated balwady, the nine Mudaliyars interviewed distributed as follows:

1. Those with children enrolled: 4

There was no objection from any of these about their children sitting and eating with Harijan children, or eating food cooked by the Harijan ayya.

2. Those with women enrolled: 5

a. No objection to eating at the balwady: 1

Even this woman says she occasionally takes the food away, if she has household work to do.

b. Objection to eating food cooked by the Harijan ayya: 2

One woman takes the food home and gives it to her servants; the other is unclear as to whether or not she takes the food at all.

c. Those denying that they have anything to do with the program: 2
Both of these women were on the official list.

It seems clear that the Mudaliyars are much stricter about their women than their children - perfectly in line with what we know about village conceptions of prestige and purity. We were asked twice by Mudaliyars to use our influence to have the ayya changed. There is also some evidence

that the Mudaliyars will be less than happy when the balwady is moved to the colony: one mother says she keeps her school age six-year old at the balwady because the only village school is in the colony and she doesn't want him to "sit with the Harijans." Since he is sitting with quite a few Harijans in the balwady, what she is really objecting to is the colony and its higher association with untouchability.

Concerning the food itself, we found two informants, both Mudaliyars, who actually praised CSM: one said his child is notably healthier because of it, and the other claims his child likes CSM better than rice(1). Otherwise, we had the usual set of requests for rice, all from Harijans (7). Six of those questioned said their children had got diarrhea or dysentery from the balwady food, and one blamed a case of whooping cough on the vegetable oil used in the upma.

<u>Preference</u>	<u>Number of Times Mentioned</u>
Milk	13
Eggs	9
Fruit	8
Apple	1
Orange	1
Banana	1
Biscuit	6
Meat	5
Horlicks	4
Fish	3
Idli	2
More vegetables	2

Preference

Number of Times Mentioned

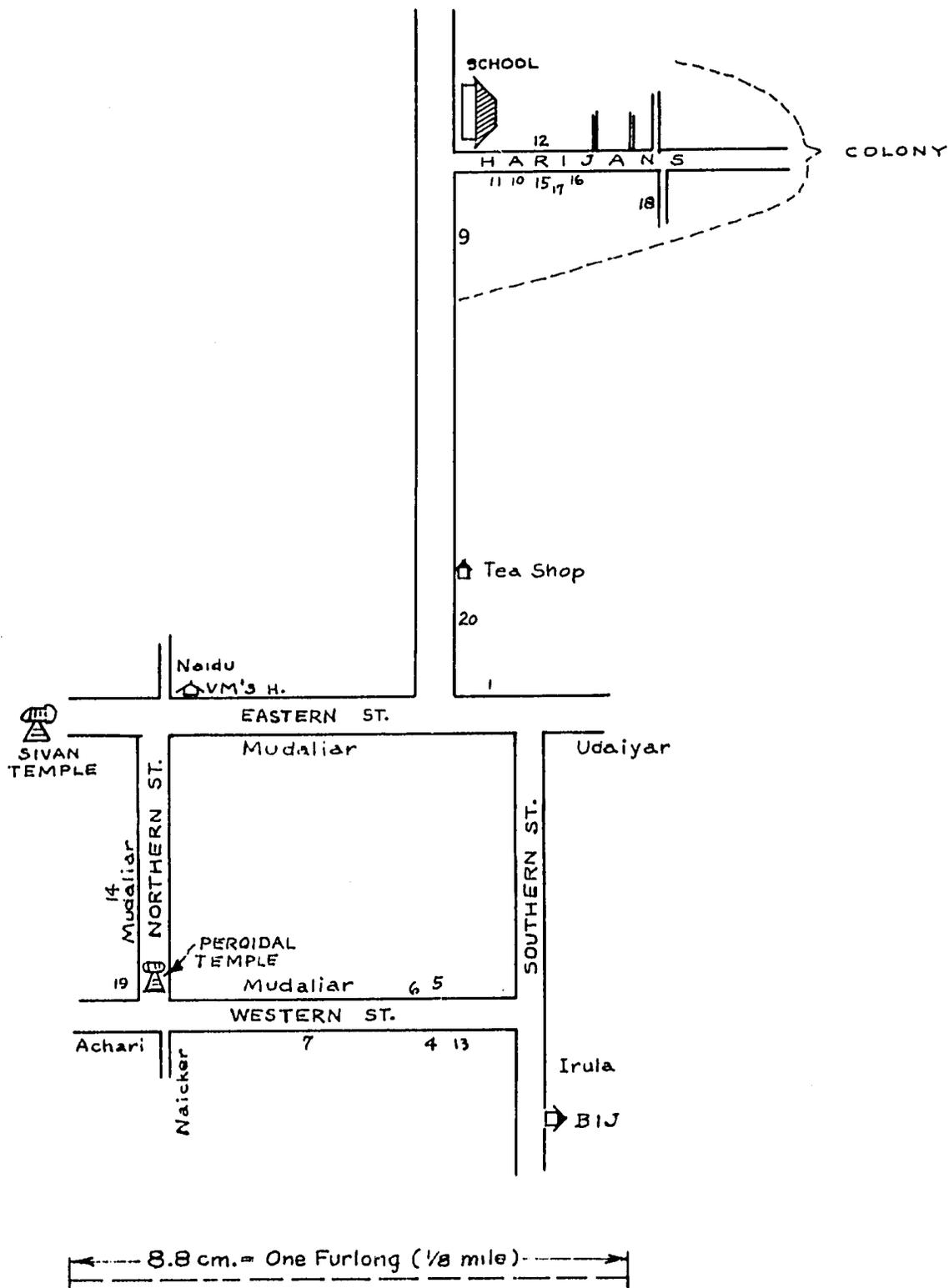
Other replies, mentioned once each:

Tiffin	(snack)
Night meal	
Soup	
Amul	(baby food)
Coffee	
Rice	
Vadai	(small cake)
Appam	(sweet biscuit)

Conclusions

Othikadu is probably more typical of the balwadies of Tiruvallur block than Ikkadu, in terms of its less than perfect administration. On the other hand, in favoring Harijans so completely, it (in all likelihood) effectively serves poorer people than does Ikkadu. As for the attitudes of caste Hindus toward a Harijan dominated balwady, the issue is not whether the Mudaliyars in this village need the balwady more than the Harijans - their income levels are roughly triple those of the Harijans, so they don't. The question is, in a village with large non-Harijan population lower in income than these Mudaliyars (i. e., where there is a strong non-Harijan need), what is the maximum tolerable degree of Harijan dominance? The evidence from Othikadu suggests that:

1. The balwady site can be outside of the village, but it should not be in the colony itself (this is further supported by the case of a nearby village, Kilanur, where the balwady is in the colony, and 100% of the balwady recipients are Harijans).
2. A Harijan balasevika is acceptable, but a Harijan ayya is not. Nor should the food be cooked in the colony.
3. A high degree of Harijan dominance will affect the attendance of non-Harijan mothers more than children.



BALWADY REPORT III: PERUMALPET
(February, 1972)

Subject

The subject of this report is Perumalpet, a village with a "composite demonstration center" balwady - i. e. a balwady not fed through CARE facilities. We chose it for our third in-depth study in Tiruvaliur block for this reason: to see what effect, if any, the provision of local food (rather than CSM) has on balwady composition. The reasoning is as follows:

1. CSM is less acceptable to the villagers than local foods (a frequently expressed opinion in the villages).
2. Despite the general assertion by the local officials (balasevika and ayya) that balwady selection is based on the economic need of the applicants, poverty is not a systematically applied criterion (see reports I and II).
3. Nevertheless, there is some rough tendency (in the two balwadies we've observed closely) for the poorer families to be enrolled.
4. Therefore, the CSM itself may operate a kind of selection. Or, to put it more bluntly, only children and mothers who are really hungry will eat the food.
5. If this is so, a composite demonstration center, providing rice, wheat, ragi and an occasional egg, will lack even this fortuitous (note the careful avoidance of the concept of "serendipity") selectivity on behalf of the lower income villagers.

The data from Perumalpet roughly support this line of reasoning. For the 21 balwady families interviewed, the average income is Rs. 203. The average village income is R. 204 (a). Harijan income figures were not

(a) In this and future reports "village" will refer to the entire panchayat area, "caste Hindu" and "Harijan" sections included. The local Chingleput term for the Harijan quarters, "Colony," will be used; and in opposition to Colony, "Village," with a capital "V", will indicate the area where the non-Harijans live. This corresponds to the Tamil usage as well; "uur" or "gramam" have restricted and unrestricted usages - in some cases, uur is opposed to "Colony" (or "ceri," in other parts of Tamil Nadu); in some cases it encompasses the Harijan and non-Harijan areas.

available; but Harijans do not participate in the program here, apparently for genuine reasons of distance: the largest Colony is at least one-half mile away. Finally, the balasevika herself mentioned the matter of food, saying she had strong pressure from local well-to-do Naidus "because this is a demonstration center where a better food is served."

Beyond providing a generally affirmative answer to the question of selectivity, Perumalpet is not particularly novel sociologically. Accordingly, the bulk of this report is intended to provide some information on the actual functioning of a non-voluntary agency fed center.

The Village

Perumalpet is about ten miles east of Tiruvallur and a mile off the main road; relative to the block headquarters, it is remote, and the Central Kitchen van (for the school) does not reach it. The population is about 2000. Though it is 71% Harijan according to the 1961 Census figures, and 52% by recent household figures, the Harijans are very much removed from Village life, and not only in distance: they have their own school, run by the Harijan Welfare Department. The panchayat president of Perumalpet is a Naidu; Naidus constitute about 60% of the (non-Harijan) population of the Village.

The Balwady

Composite demonstration center balwadies are under a scheme set up by the Central Government; "demonstration" refers to their goal of community activities over and above those of the balwady. For example, showing the local women how to cook nutritious food. They are administered in theory by the local Women's Welfare workers at the block level (mukya sevika and gram sevika), and by a committee within the village - here the balasevika, the panchayat president, the local school headmistress, and a Naidu woman. Their feeding numbers are smaller than in the CARE centers: 30 balwady-age children, 20 pre-balwady children, and 15 each

pregnant and lactating mothers, for a total of 80 rather than 120 recipients. A menu is drawn up monthly, and is much more ambitious than the voluntary agency menu. A notable difference is in providing separate menus for younger and older children. For example (this month, February)

For Balwady-age children and mothers (except the mothers don't take the snacks)

	<u>9:30 A. M.</u>	<u>Noon</u>	<u>3 P. M.</u>
Monday	Soaked green gram	Rice with sambar (soup), potatoes and greens	Bengal gram
Tuesday	"	Wheat kitchadi (stew), vegetables and fruit	Bengal gram (cooked)
Wednesday	"	(Same as Monday)	Bengal gram
Thursday	"	Ragi with greens and fruit	Bengal gram
Friday	"	(Same as Tuesday)	Bengal gram
Saturday	"	Wheat puttlu (cracked), greens and fruit	Bengal gram

Plus: Egg or fish twice a week.

For Pre-Balwady age children (noon meal only)

Monday	Rice gruel
Tuesday	Wheat gruel
Wednesday	Rice gruel
Thursday	Ragi gruel
Friday	Wheat gruel
Saturday	Ragi gruel

So much for the theory. In the realm of fact, the "demonstration" side of this program, as well as the local participation, is a dead letter (this according to Mrs. Vasanta Kumari, personnel assistant to the director at Women's Welfare). In Perumalpet, only the balasevika and the headmistress, of the local committee, take an active interest. The mukya sevika and gram sevika, who have three demonstration centers within their block, visit once a month and once a week respectively; they seem to be trying their best.

The real limitation is financial. The total budget in the demonstration centers is 15 paise/day/child and 25 paise/day/mother. The panchayat contributions are irregular, and the block funds often come late - requiring the headmistress and balasevika to purchase food out of their own meagre funds. Obviously they haven't the money in Perumalpet to keep up with their menu. By comparison, the value of the CSM and oil distributed in the CARE centers is 18 paise/day/recipient, to which is added 3 paise per day for condiments. (The totals are reasonably close, i. e. 15 and 18 paise respectively.) In Perumalpet, however, the first loss is the egg or fish: the balasevika says they provide this once every two weeks, and some local women complain that when they do, it is on a ratio of one egg to four children. The next loss appears to be side dishes: vegetables and fruits. Though we didn't observe during the snack periods, I'd be surprised if these were regularly carried out. The staples do seem to be provided, however, and to a number close to the listed number of recipients registered.

We did meet with the complaint that the ayya here is corrupt. Some village women (Naidus) say they have seen her taking rice to her house, and that when they've complained to her about her sloppy cooking methods, she has replied that for Rs. 10/month, she's not going to do any more than she has to. The same women complained that on days when officials visit (and there is plenty of forewarning about inspection days), more women and children are fed; and that the balasevika and ayya show the officials mothers from the relatively poor area near the balwady (the Acari, Vettaikaran and Barber section on the map) - to give the impression that they are serving the lower income groups.

Nevertheless, though the "demonstration" goals are not being met in Perumalpet, and the food program is less than perfect, the balasevika seems unusually good at teaching, and enthusiastic about her job. She was one of the few balasevikas we interviewed in our initial survey who didn't complain about her salary, and she says that since she has no children of her own, the balwady work makes her feel that she has many children. Her character, however, may also operate against the selection of poorer families: the Naidus may want their children to participate for the education provided.

Balwady Composition

Balwady composition compares with village composition as follows:

<u>Caste Name</u>	<u>Number of Households in Village</u>	<u>Number of Balwady Recipients</u>	<u>Number Interviewed</u>
Naidu	100 (27%)	32 (43%)	6
Reddiar	10	2	1
Kannaka Pillai	2	1	
Idaiyar	15	"	
Acari	6 (2%)	10 (13%)	3
Nadar	10		
Vettaikaran (worker)	25 (7%)	16 (21%)	2
Washerman	5		
Barber	5	4	2
Harijan	192 (52%)	9 (12%)	6 (plus one non-local Christian)

The Harijans participating come from a small Colony close to the Village (at the bottom of the map); these Harijans are not particularly poor by Village standards. There were some Harijans in the main Colony (at the top of the map) sending their children at one time, but they've stopped because there is no one to escort the children the four or five furlongs to the balwady, and there are several large pools enroute which they consider dangerous to the kids. As in Ikkadu, there's no suggestion of discrimination against the few Harijans who are attending the balwady.

Attitudes Toward the Balwady

Cumulative scores on the ranking question (the informants' relative preference for the feeding, child care and learning facilities of the balwady) came out in the same unilluminating direction as on reports I and II:

Feeding :	24
Child care :	34
Learning :	41

We're therefore revising the questionnaire for the fifth time, and dropping the question at this level of abstraction. Chandran's incisive rewording will be adopted henceforth: "Would you send your child to the balwady if no food were available?"

The respondents generally approved of the food provided, and the approval was on the average greater than in the CSM-fed centers. A number commented favorably on the variety in the menu (as compared with the frequent complaints in CARE centers about an unrelieved diet of CSM uppma). A systematic exception to their approval, however, concerned the food for pre-2½ year olds. Six respondents claimed the gruel preparations gave babies diarrhea, and two blamed jaundice on the gruel.

Our last question, food preferred for young children, produced the same

general results as in studies I and II (in particular, the first preference for milk and second for eggs):

<u>Preference for Young Children</u>	<u>Times Mentioned</u>
More milk	14
More eggs	9
Fruit	9
Apples	5
Oranges	4
Bananas	2
Grapes	1
More meat	8
Fish	4
Vegetables	4
Itlis	4
Horlicks	3

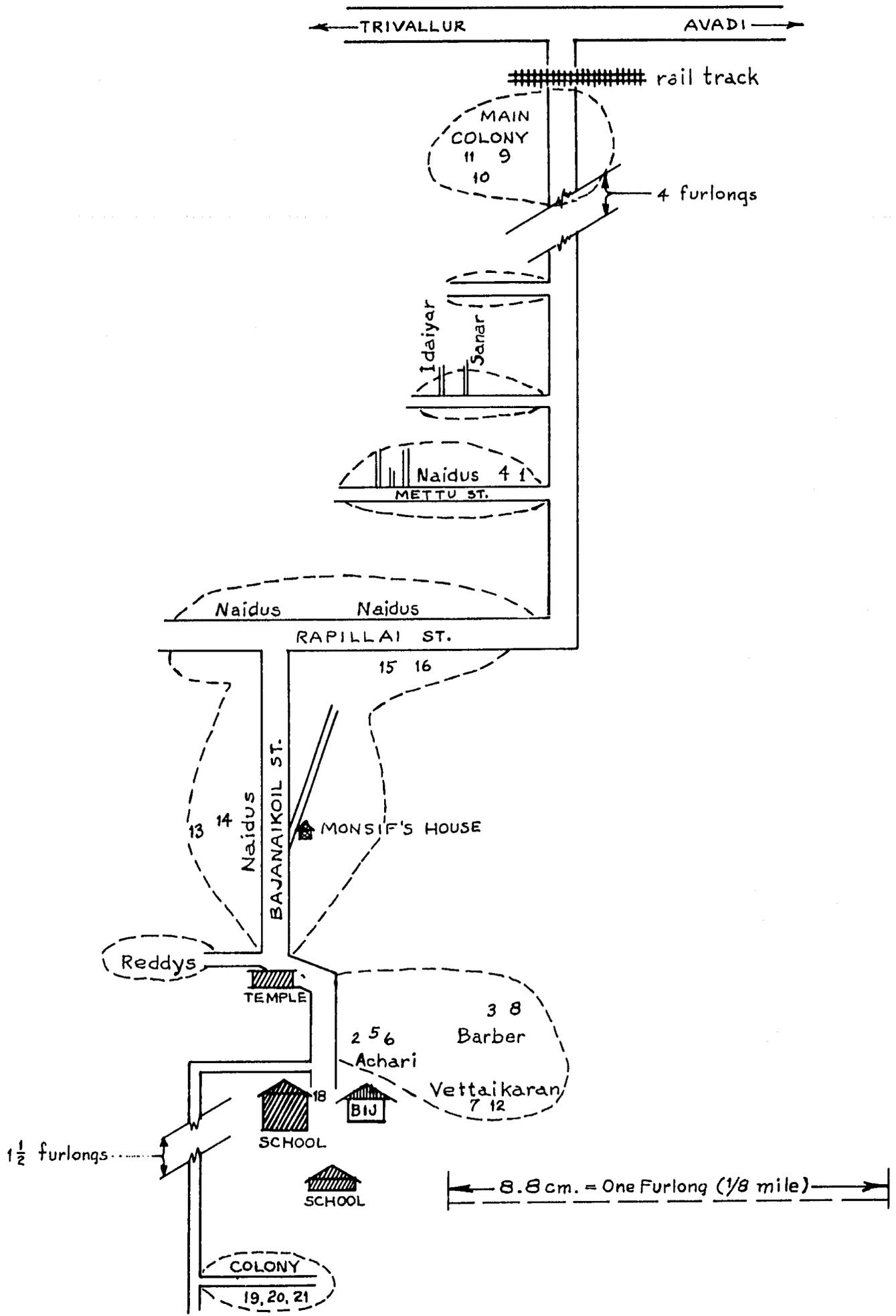
Items mentioned twice each: biscuits, more food, tonic, uppma, coffee, dosai, tiffin.

Items mentioned once each: rice, chicken, curd, ghee, good breakfast, more food.

Conclusions

The results from Perumalpet do not decisively prove that the provision of local food makes the selection of poorer families for the balwady impossible. There are at least two other factors operating in this village: the empirical distance of the main Colony, and the possibly counter-productive (with respect to feeding goals) excellence of the balasevika's teaching. The situation can be summed up less definitely as follows:

1. The balasevika in most villages is not particularly high in status, and is therefore vulnerable to local pressures.
2. Where local politics favor the Harijans (as in Othikadu), or where the balwady is not perceived as especially desirable by the dominant caste (as in Ikkadu), the balasevika has a chance to favor lower status applicants; or these applicants have a chance to get themselves enrolled.
3. In Perumalpet, however, local politics are caste-Hindu dominated, and the balwady is seen positively by the Naidus. Local food, rather than CSM, is one facet of its attraction. And the balasevika (here also a Harijan Christian from a neighboring village) is simply not a "big" enough person to resist pressure from the Naidus.



MANAGEMENT IN A TAMIL NADU VILLAGE
(April, 1972)

On the 12th and 14th of April, Chandran (my research assistant) went back to Ikkadu village, Tiruvallur block (the subject of Balwady Report I), and made a number of interesting discoveries. Our impressions from the first round of work (noted in "Conclusions", Tiruvallur block) were that, in terms of actual day-to-day functioning, the Ikkadu balwady was almost preternaturally exemplary. Feeding was carefully conducted in two shifts, balwady children first and pre-balwady children and mothers second; the balwady was always stocked with cheerful and busy children; the little mites were picked up dutifully every day by the balasevika; and there was no hint of corruption.

When Chandran went back on the 12th, not to check up but to do some new work on the pre-balwady children and mothers, the balasevika looked upset and pretended for some time to be too preoccupied to talk to him. On the 14th, Chandran returned to find her on unofficial leave (though the balwady was well stocked with kids, a tribute to the ayya). In the absence of the balasevika, he collected the following comments from Ikkadu villagers:

1. From an Acari woman, a lactating mother eating at the balwady:

"When people visit the balwady, things are done in a good way. On other days, things are very bad. The balasevika demands 10 paise from us, 5 paise to buy firewood and 5 paise to buy cooking oil. Firewood we understand, but we know that America gives cooking oil free.

Some time ago, a tall American visited this place to learn about the balwady. At the time, the balasevika called us and told us we should say things in her favor to the American. For example, 'the balwady is good,' 'the balasevika is good,' 'the balasevika and the ayya escort our children to the balwady,' and so on."

(Three other women, also eating at the balwady also agreed with her).

2. From a 17 year old school graduate, living across from the balwady:

"I wanted to tell these things to the American. But I can't speak English understandable to him. The balasevika in Thalakancheri (one mile away; Ikkadu is her native village) joins together with this balasevika and steals things, especially vegetable oil."

Children also noted that the actual feeding was quite different from what we'd observed earlier: when no visitors are expected, all the women take their food home with them, rather than eat at the balwady.

Given our new view, Ikkadu balwady is not all that bad. The balasevika may be cheating on the vegetable oil; the women are eating at home; the uniformly favorable attitudes toward the balwady on the villagers' questionnaires were influenced by the balasevika; and the children are probably not picked up as systematically as we were led to believe. However, most of the food is getting to the people, the ayya is doing her job more than adequately, and balwady attendance is quite good. It's not an exemplary balwady, in other words - it's only average. And hopefully, this kind of impression management is not as great a factor in our subsequent studies, which were much swifter. Whereas we spent over a month on Ikkadu, giving the balasevika lots of time to set things up the way she wanted.

BALWADIES IN KANCHIPURAM BLOCK
SUMMARY AND CONCLUSIONS
(May, 1972)

This report concerns a block of villages 50 miles southwest of Madras, about 30 miles south of Tiruvallur. The block centers on the old Tamil city of Kanchipuram. We studied the balwadies in this region to produce some data comparable to our Tiruvallur work. In some ways, it is more representative: if Tamil Nadu were to expand the balwady program massively, under present administrative conditions, the result would probably resemble Kanchipuram more closely than Tiruvallur. Kanchipuram is also more typical in its low percentage of Christian balasevikas: the only balwady in Tiruvallur with strong Caste-Hindu influence discriminated strongly against Harijans (Velliyur; see "Conclusions, Tiruvallur"), and we wanted to see if discrimination was a more general problem in Kanchipuram and elsewhere. We also tried to investigate the historical dimension of Tamil Nadu balwadies in more detail - the fact that balwadies were instituted some time before they became feeding centers, and their goals and recruiting methods are consequently somewhat fuzzy (see again, "Conclusions, Tiruvallur").

Research Methods

The field work for this round of research was carried out entirely by Mr. Chandran, during February and early March. Though he was acting on my general instructions, I was not supervising his work day by day. I asked Chandran to follow the same methods used in Tiruvallur: informal interviews with officials, from BDC down to balasevika, and about 20 questionnaires per village in the households of balwady attending children. The questionnaire was similar to the one used in Tiruvallur, with only one major change. Instead of instructing respondents that the balwady had three purposes (child care, education and feeding) and asking them to rank the goals, Chandran asked an open question, "What is the purpose of the balwady?"; and a concrete question, "Would you send the child if the feeding program did not exist, and/or would the child attend willingly without feedings?"

Chandran covered a diversity of villages, varying in size, caste composition and distance from the block headquarters. He began with a survey. I then asked him to study in depth only balwadies that were functioning to some reasonable degree, to make an impressionistic note of balwadies that were not functioning and why, but not to spend a lot of time on the latter. He also rejected for study villages which seemed very similar to ones we'd already studied. Thirteen villages were covered, of which five were chosen for in-depth study. The field work time for each of these was three days, plus two days for summation of data in the office (see "Management in a Tamil Nadu Village", April, 1972 for the importance of rapid studies).

Kanchipuram Block: General

Kanchipuram block, comprising 45 panchayat villages, was chosen in 1962 as one of seven blocks in Tamil Nadu for intensive balwady coverage: every village in the block was to have a balwady. By recent official count, 43 balwadies are on record, though five are listed as "vacant." Our own investigations, however, showed little relation between reality and the official list - the list is of unknown origin, on files in the Madras Women's Welfare Department. In any case, there are about four times the number of balwadies in Kanchipuram as in Tiruvallur, though Women's Welfare at the local level is no larger than it is in any other block: Kanchipuram has the standard block complement of one mukya sevika (block level worker) and two gram sevikas ("village" level workers).

One gram sevika we interviewed has 22 balwadies under her jurisdiction. She said that with her other official duties, mostly official paper work, she had almost no time for balwady supervision, and could only visit each balwady once a month [even this frequency seems unlikely]. She also complained that the block does not begin to have enough transportation to service the balwadies. Even on the few occasions when the jeep is available, it doesn't have the carrying capacity to supply 20 balwadies in a day. She'd like a trailer.

Balwady Goals - The mukya sevika in Kanchipuram is experienced and knowledgeable; she has had her posting there since 1965. She lists the goals of a balwady, in order of importance, as: (1) relief of mothers, (2) formation of good habits in children, and (3) provision of nourishing food (since 1971). So the feeding program, to her, is a recent and tertiary purpose. When we pressed her on whether she followed the original Women's Welfare recruiting (anyone could join) or the newer CARE goals (the poorer children are to be fed), she said poverty was of course an important consideration; but she was unclear whether she'd given balasevikas new instructions in 1971. One balasevika said that when the feeding program began, she was instructed to draw up new lists for pre-balwady and adult recipients on the basis of poverty, but that no new instructions were given concerning balwady age children. This particular balasevika does not conduct a balwady where mothers and pre-balwady children are being fed effectively, so whether or not she had carried out her instruction is a moot question.

Location of Balwady - The mukya sevika in Kanchipuram made two other points about balwadies. First, concerning the location of CARE-constructed buildings, she favors a site near the local school. This, she says, enables the school teachers to have some influence over balwady activities, and means school attending children can escort their younger brothers and sisters to the balwady. Much was made in our "Conclusions" report for Tiruvallur of the importance of locating the balwady in 'neutral' social ground, between the village and the colony; the Kanchipuram mukya sevika's proposal is an even better solution, provided the school is not squarely in the center of the village, on a Brahmin street, or beside a major temple (it rarely is).

Quality of Balasevika - Secondly, the mukya sevika emphasizes an obvious but important point: the quality of a balwady depends greatly [or perhaps entirely, given the minimal supervision from the block level] on the individual character of the balasevika, and the job as now set up is so unattractive - low salary, no fringe benefits, minimal promotion opportunities - that it only attracts the mediocre. In the 11 year duration

of the program in Kanchipuram, no balasevika has ever been removed from duty. The implication, I think, is that there aren't enough balasevika applicants for the mukya sevika to permit herself the luxury of dismissing bad ones. She says she disciplines a balasevika against whom there are complaints by transferring her - repeatedly, in some cases.

Kanchipuram Balwadies: Individual Cases

Chandran visited a total of 13 balwadies in Kanchipuram block more or less randomly. Of these, he rejected 8 for in-depth study, 2 because they were (probably) similar to balwadies already studied, and 6 because they appeared to be badly run or perhaps defunct. Three of these probably had some kind of feeding program in operation; the other three had totally incompetent balasevikas and, most likely, no food or educational programs going.

Of the five balwadies Chandran studied more closely, three were functioning well as child care, educational and feeding centers. The remaining two had poorly run feeding programs (e. g., children taking food home; frequent shut-downs) and no other activities worth mentioning (e. g., the balasevika arrives late and goes home after distributing the food). To sum this up (bearing in mind that our data on the unstudied eight are less reliable than on the studied five), the 13 balwadies break

Quality of Balwadies - The average quality of the balwadies in Kanchipuram, in other words, is lower than in Tiruvallur, where at least seven out of the nine balwadies we investigated were functioning adequately (with decent feeding programs and variable non-feeding programs). The difference is probably related to the different levels of supervision between Tiruvallur and Kanchipuram. Also, the Tiruvallur program was initiated in 1967, with better trained balasevikas. It may not be strictly fair to claim that Kanchipuram is more predictive of what balwadies would be like if the program were expanded in Tamil Nadu; changes are being made. But it seems fairly clear that 40 balwadies cannot be properly administered by three block level officers.

The quality of Kanchipuram balwadies is not a function of distance from the block headquarters. The top five balwadies are 2, 5-1/2, 6-1/2, 11 and 18 miles from block headquarters; the bottom three are 2, 6, and 8 miles. Two interpretations are possible: whatever block level supervision exists is applied absolutely uniformly; or, more likely, supervision is not much of a factor here - the quality of a balwady, as the mukya sevika suggests, depends on the individual character of the balasevika.

There follows a short description of the five balwadies we studied in some depth - roughly in decreasing order of excellence.

1. Kilambi

The village is medium in size (c. 2200 inhabitants), dominated numerically by Naickers, a middle ranking agricultural caste. The panchayat president, however, is a Yadevar (traditionally the Herdsman caste). His particular family owns half the village land; the sources of his influence is not far from hand. He says he is interested in the balwady, and seems tolerably informed about it. But since there are no complaints about it, he says, he interferes with the balwady in no way. About 40% of the village population is Harijan, but the main colony is attached to an outlying hamlet, a mile from the head village. Harijan participation in the balwady is consequently nil.

Kilambi balwady, providently not far from the main Madras-Bangalore road, is a showcase for visiting officials. It deserves to be; the balasevika there is without doubt the best we've seen. The building is a pukka CARE-built affair next to the village school. Real teaching seems to be going on; there are more teaching materials displayed on the walls in Kilambi than perhaps in all the other balwadies combined. The children are unusually alert and active. The feeding program is almost too well run to believe; the children sit in neat rows, the balasevika gives them each small portions and then returns with second helpings for those who want more, the ayya stands ready with water for those who are thirsty. The balasevika has reduced total feeding to 60; she says she can feed this number most adequately on her rations, and that the number meets the demand (not only are the Harijans a mile away, but the other hamlet probably contains half the remaining population of the village). We discovered no hint of corruption.

The villagers have a generally high opinion of the balwady and the balasevika. But there is undoubtedly some impression management going on in Kilambi, both for our benefit and for the benefit of the frequent visitors. In the first day of household interviewing, Chandran got opinions like "the balasevika is good", "she escorts our children to the balwady", by the second day, the tenor of comment had changed to "the balasevika is like gold to us." In Chandran's opinion, the balasevika got around to people after the first day; on the other hand, in the case of this village (as opposed to Ikkadu), her impression management is not that significant. She is valued by the villagers, and they don't mind freely doing her the favor of exaggerating the extent to which they value her. The balasevika is aware of how much she is on display; she says she never dares take leave for fear of being caught out by unannounced visitors. Finally, this particular lady was posted in an interior village up to 1971. When the feeding program began, and Kilambi became a much-viewed balwady, she was transferred here.

Excluding the Harijans in Kilambi, the relation between village caste composition and balwady composition is reasonably equitable. No strong caste feelings were detected.

<u>Caste</u>	<u>Percentage in the Village</u>	<u>Percentage in Balwady (for Balwady Children Only)</u>
Naikker	80%	58%
Naidu	2%	13%
Acari	1%	11%
Yedavar	16%	5%
Others	1%	13%

Naidus are a particularly poor community; both Naidus and Acaris live on the main road, close to the balwady.

2. Valathettam

A very small village, about 600 in population. Thirty percent Harijan by local estimates; 46% according to the 1961 census. The panchayat president is a member of the dominant caste, Naikker, and takes an interest in the balwady. The balasevika is sincere and competent; though she is a Caste Hindu, there are no complaints about any discrimination from the numerous Harijans in the program. Because Valathettam is so small, all eligible recipients can be fed, and are, Caste Hindus and Harijans. No uncomfortable recruitment criteria need be applied. The non-feeding activities of the balwady are not up to the Kilambi standards; Chandran notes with admirable understatement:

"The building is not a spacious one. If the 40 children are made to sit in the balwady, then, I am afraid, the balasevika has to stand outside the entrance. This, she says, mars her teaching program."

By caste, balwady composition in Valathettam, here including Harijans, compares favorably with village composition.

<u>Caste</u>	<u>Village Percentage</u>	<u>Balwady Composition (all Feeding Recipients)</u>
Naikker	54%	49%
Mudaliyar	11%	6%
Harijan	30%	45%
Other	5%	---

3. Aiyyangarkulam

The population is 2000, with a Harijan proportion of only 10%. There is a long standing rift among the caste Hindus between the dominant Mudaliyars and the Nattars, a low ranking caste traditionally engaged in fresh-water fishing. The Nattars say the Mudaliyars have always systematically excluded them from village activities; the Mudaliyars say the Nattars are disinterested in education and show no initiative. The Mudaliyar panchayat president apparently has had a strong influence on the balwady here. Up to very recently, the balwady was in a private home in the Mudaliyar section of the village. It has just been relocated in another house, also on Mudaliyar street. In its previous location, there were numerous complaints: that the houseowner was pilfering food, that the woman of the house (not the balasevika or the ayya) was nasty to Harijan participants, who were forced to go around to the back door to eat, and to eat after the Caste Hindus.

The balasevika, a recent trainee from a neighboring village, says she is going to try to correct these abuses. But it is Chandran's judgment that no Nattars will enter the balwady as long as it is located in the Mudaliyar section, which it will continue to be, if the panchayat president has his way. Nattars in the village told us they would like the new building in their section; they are not totally uninterested in the balwady, and have a real need for its child care facilities, since most of their women work.

Although the Nattars are excluded, Harijans are over-represented in the Aiyyangarkulam balwady. It is a "demonstration" balwady, rather than a CARE-fed one; of its 80 listed recipients, 59% are Harijan. The balasevika says the high proportion is due to clear instructions on the part of the mukya sevika to recruit from the colony. She complains, however, that only the Mudaliyar children attend full sessions in the balwady; the Harijans only see the balwady as a feeding center. She then has the problem that her balwady looks half empty out of feeding times.

The balasevika's complaint is borne out in one sense by responses on the question, "would your child attend without the feeding program?" Of the seven Harijans interviewed in Aiyyangarkulam, one said "maybe" and six said "no." All but three of the 13 Mudaliyars said "yes." In no other village, however, did this question produce answers of such consistency according to caste. In the other two villages with Harijans effectively in the balwady program, Harijans claimed with about the same frequency as non-Harijans that they sent their children for education (rather than for food only). What seems most probably in Aiyyangarkulam is that no real attempt has been made to bring Harijans into the other balwady programs. The balwady was probably exclusively a Mudaliyar affair up to a year ago, when Harijans were quickly recruited to meet the new feeding goals.

It should be noted that this village does not support the hypothesis from Balwady Report III, Perumalpet, February). There are so many other factors at work - caste feeling, village factionalism, the history of the balwady program - that, in Aiyyangarkulam at least, provision of local food rather than of CSM has no detectable effect on balwady composition or on the local functioning of the balwady.

4. Musaravakkam

Musaravakkam is a village of over 2000, about 30% Harijan. It is dominated by Naickers. The Naicker panchayat president says he does not pay much attention to the balwady, that he has more important things to worry about. The balwady is poorly constituted and poorly run; if problems in Aiyangarkulam stem from the active interests of the Mudaliyar caste as a whole, here they stem from village apathy and from the character of the balasevika, a Brahmin woman whom the mukya sevika calls "loose" [indian english: 'loose' = mentally, not necessarily morally, incompetent]. The feeding program is irregularly run, and Chandran had difficulty finding 16 mothers of the listed 40 balwady children to interview. This balwady program may exist mostly on paper.

Although 18% of the listed recipients in Musaravakkam are Harijans, Chandran could find no Harijan children who attended the balwady in practice. One reason is the proximity of the colony to a Harijan Welfare School, which provides Harijan school children not only with food, but with clothing and books. The children consequently don't go to the village, nor can they provide an escort for their younger brothers and sisters. Some women attend the balwady feeding program irregularly, when they're not working. They say they do this even if they are not pregnant or lactating - but with trepidation; they are uneasy around the Brahmin balasevika. Even within the village, Muslims and Acaris, who live across the village from the balwady site, complain that the balasevika has made no attempt to involve them in the program. The balasevika says she doesn't have time to "go around the village."

Other miscellaneous problems in Musaravakkam: the balwady is located in a small room on the ground floor of the water tank; and the ayya is 80 years old and incapable of doing her work.

5. Perumbakkam

The social characteristics of this village are almost irrelevant to our little study. The village is small, less than 1000, and Naikker dominated. There's a CARE building for the balwady. But the balasevika here makes the one in Museravakkam look good. She comes late by bus from Kanchipuram, and she takes even the feeding program very lightly. She told Chandran that she couldn't be bothered to see that the children eat in the balwady itself, since this takes time and "cuts short my lunch break." Chandran observed Naikker children throwing their CSM to the dogs; Harijan children, on the other hand, were eating it carefully and completely. Balwady attendance and feeding was very irregular, with many excuses on the part of the balasevika. Chandran talked with a number of parents of non-enrolled children here; their attitude was one of general receptivity to the balwady program, but not to this balwady or to this balasevika.

Further Observations and Conclusions

Although it is consistently asserted at the official level that "poverty" is the criterion of recruitment to any balwady, in Kanchipuram, as in Tiruvallur, reported incomes of balwady-enrolled households are not uniformly low. For the five villages just sketched, incomes are:

<u>Village</u>	<u>Number of Respondents</u>	<u>Average Income (per month)</u>	<u>Median</u>	<u>Range</u>
Kilambi	23	Rs. 122	Rs. 107	Rs. 60-250
Valathettam	22	131	105	45-400
Aiyyangarkulam	22	188	135	60-1000
Musaravakkam	16	159	135	90-350
Perumbakkam	17	110	110	60-500

We don't have house-by-house figures for these villages as a whole. But the above incomes fall well into the average income bracket for rural Tamil villages. Here, as in Tiruvallur, the explanation is probably the

history of the program. For 10 years, balwadies were only child care centers and the policy was to admit anyone who came. Food, and the goal of feeding according to economic need, are recent additions, still imperfectly assimilated.

However, they may not ever be perfectly assimilated. We suspected, on the basis of one village in Tiruvallur, that perhaps the school mid-day meals program reached the poorer children more consistently than the balwady program. And that its decision procedures - a single decision on the basis of need for food, facilitated by the local prestige and knowledge of the schoolmaster - could serve as a model for balwady recruitment. However, data from three villages in Kanchipuram do not particularly support the supposition. On the basis of 10 interviews to a village, they are:

<u>Village</u>	<u>Average Monthly Income</u>	<u>Median</u>	<u>Range</u>
Kilambi	Rs. 116	Rs. 120	Rs. 75-180
Valathettam	126	90	60-250
Musaravakkam	126	95	50-300

Averages and medians in Valathettam and Musaravakkam are slightly less than in the balwady program; the range is less in all three. But the differences are not vast.

There is one additional criterion often mentioned by balasevikas in Tiruvallur and Kanchipuram; children who attend regularly are favored over those who don't. Caste Hindu children may be slightly ahead of Harijans on this count. Although, as mentioned above, Harijans answer the concrete question on attendance about the same about the same as non-Harijans ("would your child continue to attend if there were no feeding program?"), on the open question, "what is the purpose of the balwady?", answers in the five villages distributed as follows:

<u>Child Care</u>	<u>Education</u> <u>("Training, Discipline")</u>	<u>Feeding</u>	<u>No idea</u>
<u>Caste Hindus</u>			
30%	46%	12%	12%
<u>Harijans</u>			
10%	15%	60%	15%

The figures are skewed by responses from Aiyyangarkulam; but even without Aiyyangarkulam, the Harijans score in the same direction. The result is quite different from Tiruvallur, where, when we set up the question in a leading fashion ("the balwady has three purposes: child care, education and feeding; please rank them in order of preference") there was no great difference between Harijans and non-Harijans. The open question is more informative, however; in Kanchipuram at least, feeding is more salient than the other two balwady goals in the minds of most Harijan parents. Since balasevikas want their balwadies to be attended outside of feeding hours as well as during the feeding, non-Harijan children may have a slight motivational advantage over Harijans.

This is not an insurmountable factor, however: a conscientiously run balwady, accessible to Harijans, will certainly thrive. Aiyyangarkulam points up again the disadvantages of the balwady being strongly associated with a single caste. Our Kanchipuram work has born out the general conclusion from Tiruvallur that the site of the balwady is crucial - it must be both physically and socially accessible to those who need it most. As noted above, provided that the village school is in neutral social ground, location of the balwady near the school is an excellent solution - especially since it helps solve the problem of who escorts the children to the balwady.

The Caste-Hindu identity of the balasevikas in Kanchipuram was not the problem that we anticipated. Only in Musaravakkam did Harijans mention discrimination on the part of the Brahmin balasevika - and this woman seems to be equally negative in her attitude toward some Caste-Hindus. Brahmin balasevikas, at the village level, are probably the most likely to give trouble. However, we briefly visited one balwady on the outskirts of Kanchipuram (not reported here) where a Brahmin balasevika seemed to be dealing well with a village and a balwady composed entirely of Harijans. The social identity and character of the ayya is not nearly so important as we found it to be in Tiruvallur; the situation was atypical in Tiruvallur, due to the high incidence of Harijan Christian balasevikas, and to the ayyas being local women, with some local influence.

Summing Up - This report has been repetitive of earlier work, since here we were checking old ideas (from Tiruvallur) in a new setting. To sum up, referring back to Tiruvallur:

1. Location of a balwady, socially and physically, remains important.
2. The social identity, particularly the caste, of the balasevikas is not as important as expected; far more critical is her individual character.
3. Only an occasional competent balasevika is likely to be found under present job conditions.
4. Present block level supervision is not adequate for an intensive balwady program.
5. Balwadies are not set up on the uniform criterion of economic need, but neither are the school mid-day meals programs.

BALWADIES : OUTSIDE RECIPIENTS

The bulk of our voluminous, not to say magisterial, work on the balwadies of Chingleput district, Tamil Nadu, has been focused on the balwady age child. However, this category constitutes only one-third of the food recipients in the CARE-fed centers. The other two-thirds, pre-balwady children and pregnant and lactating mothers, is an equally if not more important segment of the target group for the Tamil Nadu Study. This report represents a closer look at the latter group - at how the balwady feeding program is reaching its "outside recipients."

Insiders are better off - To begin with, in most of the balwadies studied, both in Tiruvallur and Kanchipuram, inside beneficiaries are more reliably fed than outside. A number of factors are involved. One is the by now familiar history of the balwady program: balwadies were initiated as child care centers for children in the 2½ to 5 year old bracket, and feeding was tacked on one and a half years ago. Despite some lack of completeness of our questionnaire on the theme "why does your child attend the balwady?", it did indicate that feeding was not the only motive for attendance; children in the enrolled age bracket attended for facilities other than food. A second factor is the simple inability of many outside recipients to make it to balwady at feeding times. The pre-balwady children are much too young to come unaccompanied; the mothers, particularly the lower income recipients most in need of the food, are frequently working in the fields at noon, and are often unwilling to make the trip for a small dole of CSM (a).

As a result of these difficulties, the balasevikas tend to concentrate their feeding efforts on the enrolled children; younger children and mothers come a distinct second. In Kilambi, for example, the "showcase" balwady of Kanchipuram block, the balasevika candidly admits that, though the requisite 120 recipients are listed in her book, she's reduced actual feeding to 59 recipients, according to regularity of attendance:

(a) Corn-soy-milk (70-25-5) formulated food provided by the U. S. Food For Peace program and distributed by voluntary agencies.

30 Balwady-age children
10 Pre-balwady age children
11 Pregnant women
8 Lactating mothers

Her estimate accorded nicely with spot checks we made in the village.

Additional Field Work - To look into this matter more closely, we did some additional field work in two villages investigated earlier; Ikkadu (the first village investigated in Tiruvallur) and Valathottam (the second village in Kanchipuram). From random household interviews, we can estimate regularity of attendance on the part of outside recipients. We further researched issues touched on before: the means by which the young pre-balwady children get to the balwady, the differential effects of CSM on pre-balwady vs. balwady age children, the women's feelings about the CSM, and their reactions to the idea of eating in public.

Once again, Ikkadu emerged (despite the new impressions noted in "Impression management in a Tamil village") as the balwady that gets food most regularly to the most people. 31 pre-balwady children are enrolled, and 38 pregnant and lactating mothers. The list is kept up to date: mothers are moved from the pregnant to the lactating list as they deliver, and the latter category is larger than the former. Of the 20 mothers randomly sampled, 18 said they ate daily. The other two take the food regularly and give it to their "children" (we didn't determine how young). And the parents of all eighteen pre-balwady children interviewed maintained uniformly that the recipients in question ate daily.

These two categories, pregnant and lactating mothers, and mothers of pre-balwady age children, overlap considerably. Eight of the randomly sampled mothers have pre-balwady children who are eating; 17 of the 18 pre-balwady children sampled are taken to the balwady by their mothers, who in turn are taking food. The 18th has a balwady-enrolled

elder brother; he goes to the balwady in the morning with his brother, sits around until lunch, and then goes home after the lunch break. Which solves the problem of how the little mites get there in Ikkadu.

Valathottam, which is probably more representative on the matter of outside recipients than Ikkadu, does not feed as regularly as Ikkadu. 36 pre-balwady children are on the balasevika's list, and 43 mothers. Pregnant mothers are only recruited after the fifth month, when the balasevika says she can visually confirm pregnancy. Out of 17 mothers interviewed, 13 said they ate "daily," against four who ate "irregularly" (e. g. once or twice a week). But among the 19 pre-balwady children sampled, only 8 ate daily, 5 ate irregularly, and 6 of the children never took food at the balwady. Four of the interviewed mothers had pre-balwady children eating; of the 19 pre-balwady children, 13 had mothers participating, 4 had balwady age siblings, and two had no relations in the program. One was brought in by his mother or the balasevika, but only reported making it two days a week. The other was accompanied in the morning by a school-going child, a relative.

Conclusions - Two conclusions can be based on these findings. First, attendance of outside recipients in the two villages can be estimated as follows:

	I Listed <u>Enrollment</u>	II Percent of Sample <u>Eating Regularly</u>	III Estimated Number of Enrolled Eating Regularly <u>(: I x II)</u>
<u>Ikkadu</u>			
a. Pre-balwady	31	18/20 = 90%	27.9
b. Mothers	38	18/18 = 100%	38
<u>Valathottam</u>			
a. Pre-balwady	35	8/19 = 42%	14.7
b. Mothers	43	13/17 = 76%	32.7

Or, in terms of the theoretical CARE goal of 40 recipients in each category, the two balwadies are reaching approximately the following percentages:

<u>Ikkadu</u>	
a. Pre-balwady	27.9/40 = 70%
b. Mothers	38/40 = 95%

<u>Valathottam</u>	
a. Pre-balwady	14.7/40 = 37%
b. Mothers	32.7/40 = 76%

(Two assumptions are made, both somewhat questionable.)

1. The samples are representative.
2. No child is eating who is not on the enrollment list.

Mother's Attendance - On the matter of the pre-balwady child's attendance, the mother's participation is critical: only if she comes to eat will her small children make it regularly. There is not so close a relationship between inside (balwady-age) participants and outside: the balwady enrolled child is not so likely to have a participating mother or younger sibling. This makes sense since the balwady age child is supposed to attend all morning and can't go home to pick up a younger brother or sister at lunch time. The finding has implications for recruitment. I suspected initially that the balasevikas had simply incorporated mothers and younger siblings of already enrolled balwady children when the feeding program started last year. But in fact, in both Ikkadu and Valathottam, new families were selected. So the balasevika's problem of choosing theoretically low income recipients does not end with the selection of balwady age children; she must make a second selection for outside recipients.

Acceptability of CSM - Besides attendance and its logistics, we tried in this work to estimate the acceptability of CSM to the outside recipients. For the pre-balwady child, Ikkadu again scored above Valathottam - a

fact not unrelated to objective reality (the difference in food preparation). Four parents of pre-balwady children said their children had occasional diarrhea or indigestion, against 14 who said the food was O. K. Three parents commented on the question of difference in tolerance between pre-balwady and the older balwady children: two said there was no difference, and one said her pre-balwady child actually liked the food better than her balwady child (c.f. Freud's "perverse polymorph" - a human being introduced to CSM early enough in life regards it as food). For the record, the 18 children sampled had recorded ages averaging about one year nine months, ranging from one year three months to two years six months. The actual ages are probably higher, since (leaving aside the unreliability of official age records) the list is at least a few months old.

In Valathottam, of the 13 sampled children who eat regularly or irregularly, four complain of diarrhea or indigestion. Two parents of non-eaters say their children are not participating due to the diarrhetic effect of CSM. No one in Valathottam mentioned differential effects between balwady and pre-balwady children. The pre-balwady children recorded ages averaging one year ten months, ranging from one year to three years.

So, among pre-balwady children, food acceptability is not a special problem; their complaints or mothers' complaints have about the same frequency as complaints of balwady age children.

Among the mothers in the two villages, only two out of 37 mentioned any bad reaction to the CSM. One said it made her giddy; another said she had occasional "burning" sensations after eating it (she didn't say where). With reference to their positive, as opposed to negative, attitudes about the food, three women of the 20 sampled in Ikkadu said that CSM was nutritious, when asked point blank; in each case, they quoted the bala-sevika's authority. Eight denied having any knowledge of nutritious or strengthening qualities of CSM. We also wanted to know how important the food was to them in a more general way, whether they saw it as a contribution to their total diet. On this question, two said the food was

especially welcome during pregnancy, three said it was "filling," two said it was welcome due to their poverty (that it was all they ate at mid-day), one said that any food is better than no food at all, and that (in her opinion) CSM qualified as food; and two said the balwady meals were only a supplement to their regular noon-day diets.

In Valathottam, six of the seventeen mothers asserted that, on the balasevika's authority, the food is "nourishing." Only one felt it was beneficial during pregnancy, and one lactating mother denied the hypothesis that supplementary CSM had any effect on her milk production. There were more complaints about the small quantity of food in Valathottam (probably again an aspect of objective reality): eight mothers said too little food was given to make much difference in their diet. One summed up the situation: "The food is two handfuls. How could it bring strength and energy?"

In the last analysis, the women's opinions of CSM are not all that strong one way or the other; the food is mildly acceptable to them, and certainly better than nothing.

Intercaste Dining - On the final matter under investigation, intercaste dining in the balwady, things break down more neatly. At Ikkadu, as we discovered recently, feeding of women does not take place in public; in our first round of work, the balasevika had carefully set up public feeding for our edification, but when we left the area, she went back to her old ways: distributing the food publicly to the mothers, and letting them take it home to consume it. So our question there, whether they felt shy about eating in public, became somewhat hypothetical. At this level of abstraction, only one of the 20 women in Ikkadu admitted to feelings of shyness - she was a Naikker, not particularly high ranking as a caste. The three Mudaliyar women questioned (Mudaliyar being the highest caste in the sample) uniformly maintained that they had no objection to eating in public, but they said it was more comfortable to eat at home. One said the food was very dry, and at home she could add sambar and enjoy it more. Though this is a

valid enough reason, it points up the difficulty of getting at the "real" reason for any piece of social behavior: her desire to eat at home is consistent with a perhaps unstated disinclination to eat with women from lower castes. But she doesn't have to mention the more touchy caste-related reason, since she's come up with an innocuous and common sense rationalization.

Almost all the other respondents in Ikkadu followed this pattern: after asserting that they had no objection to eating in public, they said that nevertheless they brought the food home for convenience. Some mentioned small children at home whom they had to get back to. One mother, a middle-ranking Naidu from a family with an income of Rs. 80 said, "We poor people can't afford to be shy." Two women mentioned that there was nothing to be shy of, since only women were present; one said she only felt shy when male officers were present.

A factor which allows the respondents in Ikkadu to maintain they have no feelings about intercaste dining is the absence of Harijans in that balwady. Valathottam is quite different. Of the women interviewed there, ten were Caste Hindus and seven were Harijans. The Caste Hindus systematically said they disliked eating in the balwady. Two mentioned the presence of Harijans; three objected to the congestion of the balwady, and at being watched by "all the children"; and two said they didn't mind eating in public themselves, but other women in their caste did, and they had to go along with the tacit group decision. Of the Harijans, on the other hand, all eight said they had no objection to eating at the balwady, and they seemed to take pride in just what displeased the Caste Hindu women. In the words of one Harijan, "I don't mind eating at the balwady. Even some Village Caste women eat there; why shouldn't I?"

Conclusions - Valathottam, then, supports conclusions from our balwady report II. Women are much more sensitive about intercaste dining than children. (There is apparently no difficulty with balwady or pre-balwady children); the presence of men makes them particularly sensitive and it is the division between Harijans and Caste Hindus which is most critical socially and culturally.

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FOOD BEHAVIOR

**Notes on Food Interviews in Two Districts
(November, 1971 through February, 1972)**

Judith Apte

**CANTOR/ATAC
TAMIL NADU NUTRITION PROJECT
FIELD REPORT**

FOOD BEHAVIOR

Notes on Food Interviews in Two Districts
(November, 1971 through February, 1972)

Judith Apte

Editor's Note

Data on food practices and general behavior, particularly that related to the Indian mothers' diet during pregnancy, the immediate post-partum and lactating periods and the infant's early diet as well as practices during weaning are presented in the following notes. Mrs. Apte was asked to concentrate on food identities, on traditional beliefs and practices regarding food and their persistence. She was asked to determine, if she could, the seriousness of mothers in following hot/cold food restrictions and to draw her own conclusions on the significance of her material as it might relate to the identity of products for commercial or mass production.

This was an attempt on the part of the project directors to see if it was possible to feed anthropological observations directly into the formulation practices of food technology. The approach is in contrast to the more structured observations reported in the other anthropology reports. Mrs. Apte's observations speak for themselves to the objective noted and are incorporated accordingly for the record of the project. The data presented refer principally to the Tanjore District and the Ramanathapuram District.

It should be noted that the Glossary on Food Preparations, compiled by Mrs. Apte, is most useful in considering product design.

1. The Diet of Pregnant Women in Tanjore District:
Data from Depth Interviews

Of the 33 interviews, 27 contained information on pregnant women. The foods that are good to eat during pregnancy range from "soup made of the breast bone of mutton or sheep" to castor oil and kashayam (home-made medicine). A positive aspect of the diet of pregnant women is that most fruits and vegetables are not only allowed but are actually termed good for them. Many fruits such as oranges, grapes, and apples are considered blood-producing along with "English" vegetables, such as beetroot, turnip, and kholrabi. Milk, ghee, garlic, and mango pickles are also considered good and blood-producing.

Tamarind and other sour foods are said to taste good to a pregnant woman. Banana, soda, milk, bread, coffee, tomato, custard apple, were also mentioned more than once as being good for them. But only one person mentioned liver, and two mentioned milk.

The body state during pregnancy seems to be rather ambiguous. According to some it is cold, to others, it is hot. Some say it is neither cold nor hot. Others, that a balance should be maintained between the two states. (a) The phrases used in this context are the following: "take neither hot nor cool foods", or "too much heat will spoil the embryo", or "too cold will prevent normal growth of the embryo and thus lead to an abnormal delivery ". My subjective conclusion is that the body is in somewhat of a heaty (or heating) state, though not necessarily hot, because many claim that heating (and gaseous) foods should be avoided, and because vegetables which are cooling are considered good. The foods mentioned more than once as being "bad" and thus should be avoided by pregnant women are only eggplant, pumpkin, and papaya. As stated above, gaseous and heating foods are also avoided.

(a) A straight-forward Ayurvedic concept.

Much depends on how the woman feels during pregnancy. If she doesn't feel well, she eats less, or has coffee and bread instead of meals. Coffee is given as an appetite depressor - as it is to children. In the later stages of pregnancy when she is tired and can do less work, she also eats less - sometimes no regular or full meals at all. (Note: the relationship here between work - an expenditure of physical energy - and intake of food for fuel. This may be a partial explanation for the inadequate diet of pregnant and lactating women as well as older and sick persons, as compared to the rest of the family.)

When pregnant women feel "faint or vomiting" they either have to fast or eat only sour things. Soda is considered good for a variety of ills and pains during this stage.

There are many traditional beliefs (old wive's tales) connected with pregnancy and food as might be expected. Those mentioned in the interviews for this district are the following:

1. Spicy foods make the pregnant woman's blood come out.
2. "If we don't give eatables liked by them, pus will come out of the child's ear."
3. Swelling of the hands and feet is due to heat (not specified, but heat may be that associated with consuming heating foods). Treatment is kashayam^(a) of large cumin seeds and betel^(b) leaves. Soda also makes the pains "disappear immediately."

(a) Home-prepared remedy.

(b) Betel is recognized as a tranquilizer and is the main ingredient of pan taken after meals as a "digestif."

4. Pumpkin will increase labor pains. Pumpkin is also considered water-producing and gaseous.
5. Jackfruit, if taken by a pregnant woman, will cause her baby to have fits.
6. Eggplant is avoided because it causes skin eruptions and eczema.
7. If extra food is taken during pregnancy, it will lead to irregularity in breathing, and even to choking.
8. Custard apple^(a) is too hot, it may lead to abortion. (But garlic is good because it is hot.)
9. Orange, grape, apple, and banana are good for giddiness and fainting.
10. "If the woman goes to a doctor while she is pregnant, the baby's head will be too big" and she'll have a difficult delivery. This does not seem to be related to food at first, but may have nutrition implications. It is desirable to have small babies because of ease at delivery. Thus a woman may make a connection between eating and the size of infant at birth and purposely restrict her intake of food to assure herself an easier delivery while the doctor may prescribe otherwise. (The matter may be largely academic because of lack of food.)

(a) In the western hemisphere "cherimoya".

Conclusions

Positive aspects:

1. Fruits are not only acceptable, but also good.
2. Most vegetables are also acceptable. "Blood-producing" vegetables are highly desired.
3. There doesn't seem to be any general taboos against non-vegetarian items.

Negative aspects:

1. There are many superstitions connected with food and pregnancy; see the large number picked up in few interviews.
2. Some of the most frequently used vegetables are avoided because they are heating or gaseous.
3. Food intake has to be restricted because of:
 - a. state of physical health during pregnancy (it is unlikely to be normal even for healthy women, and fainting, swelling, giddiness, etc., are probably more frequent among poorly nourished women.)
 - b. lack of physical activity (work).
 - c. possible worry about size of infant at birth.

2. The Diet of Lactating Mothers in Tanjore District:
Data from Depth Interviews

Of the 34 interviews, 32 contained information on lactating mothers. The caste break up is as follows, though no significant differences were observed by caste in this variable.

Brahmin	3
Non-Brahmin	12
Harijan	8
Harijan-Christian	3
Other	6

The post-partum food taboos in this district seem to be quite strong. Considering that we interviewed only low-income families where most of the income is spent on food, they still tend to be quite selective on what to feed women after childbirth and during lactation.

Here are the most frequently mentioned practices:

1. After delivery, the mother gets either nothing to eat for three days, or coffee only, or milk only, or coffee and bread. At least 23 interviews mention this. The reasons given vary from "the mother may catch cold" to a more plausible one "since she isn't moving about she would not be able to digest the food." Four interviews mention the above feeding pattern for 11 days instead of 3, and some for 7 days. Two interviews mention kanji (a) instead of coffee and/or bread.
2. The important numbers of days with relation to post-partum food taboos seem to be 3, 7, 11, and 16. Certain foods are prohibited for these lengths of time. Beyond that, one month, 40 days, 3 months, 6 to 7 months, and duration of lactation seem to be significant. For instance, after the commencement of rice eating or the eating of meals, there are still restrictions. Either no rice is

(a) Cereal gruel.

given for 16 days, or for 16 days rice and rasam only (no vegetables or meat), or for a month only one meal a day is given, or no meat or fish for 16 days, or no vegetables or tomatoes for 16 days. Or for 40 days vegetables, fish, eggs, and mutton are avoided (3 interviews mentioned this); 3 mentioned no milk, curd, or ghee for 3 months "because it creates trouble", and one claimed avoidance of vegetables for 3 months. Four responses said that one has to keep a diet (termed "pathiam") for 3 months, and 4 others claimed the same but the length of time was 6 to 7 months. One claimed the same for a whole year.

3. According to seven interviews, no leftover foods will be given to a lactating mother because "it will make her sick." (Note: "work-food" observations.)

The foods which should be avoided during lactation are the following: jackfruit, green plantain, and mango (mentioned 10, 6, and 8 times, respectively) because they cause fits and "manthem."^(a) Pumpkin, eggplant, and bottle gourd (5, 3, 2) are "gaseous" for lactating mothers. Other foods to avoid are guava (4), spices and vala fish (3), ground nuts and ash gourd (2), and yam and prawns (1). There is some disagreement about curds and buttermilk.

The foods which are good to eat during lactation are the following: rasam and kolambu (25), rasam with rice and/or pepper and garlic. Garlic by itself is claimed to be a milk producer (13), and is presumed to be included in the rasam or kolambu. Drumsticks are mentioned as good (8), brinjal (7), dry fish (5), country beans (4), bread and biscuits (3), sabre beans, snake gourd, banana and orange (2), and soda and tamarind (1). Tamarind is also presumed to be included in the rasam.

(a) Manthem - spells or fits or diarrhea.

While fresh fish seems to be avoided, dried fish is used. Curds and milk were mentioned twice as good to take for 3 months because "they cook the body." Blood-producing foods and strengthening foods as categories were mentioned once each.

Many lactating mothers get only one regular meal a day, and take nothing or coffee only for the other. One reason for this might be that among the families that cook only one meal a day and eat leftovers for the other (this is what most of the people we interviewed do) it may not be economically feasible to light a fire to cook a warm meal for the subject but she should not eat cold leftover meals, therefore, she gets substantially nothing. Coffee is usually bought from the outside and not prepared at home.

When the baby isn't well, the lactating mother has to reduce her intake of food so as not to harm the infant. She also does not fast on the days when otherwise she would while she is lactating. Brandy was mentioned a few times, only once was it actually taken, but others said it used to be the custom though it isn't any more.

The only discrepancies between the foods taken and avoided are milk products and eggplant. Eggplant is said to cause an itching sensation in the baby if eaten by the mother, so it is probably avoided by those who believe this. Milk products are not within the reach of the people we studied, so it may be desired or avoided for that reason.

Rasam and kolambu are both liquids usually taken with rice; it is possible that they visualize a correlation between liquids and the formation of milk in the breast. Coffee is also considered good, maybe for the same reason or maybe, and probably, just because they like it.

Keeping in mind that the diet of this population is already limited and deficient in calories as well as protein and other nutrients, the nursing mother is even more under-nourished than she would be otherwise while she is lactating because of the post-partum food taboos. The average diet in this area consist of rice (when they can afford it, otherwise millets) and a kolambu with pulses and/or vegetables added in small quantities. Those who claim to be non-vegetarian ("claim" because a non-vegetarian in India isn't a person who eats meat and fish, but one who would eat it if offered or if within his means) and eat fish or mutton, usually use 10 paise worth of fish for the whole family in the kolambu, and eat mutton or chicken at festivals and celebrations.

Besides the foods that lactating mothers are allowed to eat, they also take home-made medicines called "kashayam." These are made of spices and "sundries" with jaggery (raw sugar) added. For instance, neem leaves, pieces of red stone, and turmeric will be mixed into a paste; or jaggery, black cumin seed, omum, arsithippilli, tail pepper, ordinary pepper, white pepper, dried ginger, asafoetida, turmeric, brick and kadukai (gall nut) are mixed into a paste. This is given twice a day for 7 (or 9) days. Tonic, vitamin tablets, and aspirin are also mentioned occasionally.

The medical implications here need to be examined. Question 1: What does it do to the woman's system to be without food for 3 days or more (coffee and bread once or twice a day can hardly be considered "food"). Question 2: Even without the restrictions, the lactating mother's diet is insufficient, with the post-partum food taboos it is even more so. What effect does this have on her physiologically and on the nursing infant who gets no additional nourishment for a year or more. Women tend to lactate until the next pregnancy; with the high rate of infant mortality plus the large family size, an adult woman may spend most of her fertile years lactating - if she doesn't die of the strain earlier.

Summary

1. After delivery, the mother gets either nothing or only coffee and bread for three days. There are many other restrictions, but the most significant ones are no vegetables and/or meat and fish for 16 days.
2. For the duration of lactation no leftover meals may be given; this could mean either that she will have to cook a fresh meal for herself, which may put an economic burden on the family, or that she will have only bread and coffee instead of a rice meal for one of her two daily meals.
3. Jackfruit, mango, green plantain, eggplant, and pumpkin are the most frequently avoided vegetables. These are also the easily available, frequently used vegetables. Thus, this post-partum food taboo could leave the lactating mother with almost no vegetables in her diet.
4. Liquids, such as rasam and kolambu and garlic seem to be milk producers and are recommended to be taken as often as possible. Unfortunately, these contain only minimal nutrients.
5. The lactating mother has to reduce her intake of food when the infant is sick. Infants in India are often ill, especially in the lower economic strata. Thus, the mother will consume even fewer nutrients than may be apparent from the above.

Note: This information is totally consistent with the observed nutrition status of pregnant and/or lactating mothers in Tamil Nadu. They are, for the most part, quantitatively the worst off members of the family (see Vol. I Intra-family Food Distribution).

Recommendations

This type of information is useful in designing possible feeding programs for lactating mothers. Knowing what they avoid or consider especially good during lactation should be strongly considered for any such program. For instance, a soup-like mixture with lots of garlic is likely to be more acceptable than a vegetable curry of pumpkin or jackfruit.

3. The Diet of Pre-school Age Children in Tanjore District:
Data from Depth Interviews

Of the 34 interviews, 33 contained information on the diet of pre-school age children. No significant differences by caste could be discerned.

Nineteen interviews maintained that for three days after birth the infant gets sugar and water, one started nursing from birth on, one gave navangi leaves (must be the juice made from such leaves), and one castor oil. (They make their own castor oil by pressing what they call castor seeds.)

The length of time an infant is nursed (lactated) varied from 1 to 1-1/2 years (4), 2-3 years (12), 3-5 years (1) to (2) who claimed to nurse until the next pregnancy.

The age at which solids foods are introduced into the diet of the child also varied greatly.

<u>Age at which Solids Started</u>	<u>Number of Responses</u>
6 months	4
9-10 months	2
1 year	8
1-1/2-2 years	2
2 years	1
2-1/2-3 years	3

Three respondees claimed that solid foods are introduced when the child begins to walk, and this estimate ranged from two to three years (rather late it seems).

Solid food for children usually means rice with some liquid food or flavor added, such as rasam. Thirteen responses actually mentioned rice, some put pepper, cumin seed powder, and salt in it. Only (3) mentioned rasam "helps digestion," (3) kolambu and (2) buttermilk, but it is possible that the others presumed that the rice will be given with rasam, kolambu, or buttermilk (we don't know for sure). Dhal and sambar were mentioned by (6), only (1) added vegetables to the sambar, the others didn't specify. Rice kanji was the next mentioned home-prepared food (5), but cooloo (very similar to kanji only more liquid) was consumed by only one child. Leftovers were mentioned only once, but by a Brahmin family where the children ate the leftovers from the night before and the parents consumed only coffee. One person mentioned giving her child a "little bit of egg."

There is a large number of materials bought from the outside as weaning foods for children. The most frequent is bread (19), then sweets (11), coffee (11), biscuit (10), idli (10), and banana (7). Other items mentioned were tea, glucose, buns, peanuts, fruits, dosa or appam (2), and "Lactogen," gripe water, sugar cane, orange, apple, grapes, guava, cooked sweet potato, and rusk - once each.

If the mother's milk was insufficient, those who could afford it used cow's milk's (10), not buffalo's, usually diluted with water 1:1, and with sugar added; or Amul (8), or Glaxo (3). Bread was mentioned as something they would like to give if they had the money, or do give when they have the money.

Bread is not considered a "real" solid food, it seems to be used as a true weaning food. Soaked in coffee, or milk it can be fed to children of almost any age. Only "meals" are "real" solid foods, and meals for the group studied is rice either by itself or with a side dish. The term "rice meal" is frequently used. In illness, for instance, bread and coffee are given instead of "real" or "rice" foods. Note the similarity here with the lactating mother who gets bread and coffee after delivery in place of meals.

Only one person mentioned giving "strengthening foods" to her child, such as Amul, glucose, and Ovaltine.

The foods avoided for young children are mainly non-vegetarian items. Eggs (5), if given, "cause fits before the third year," and is also considered "gaseous." Mutton and fish (8) "can't be digested before the second year," or "is not digestible before three or four," before age three "it may lead to fits," can be given "before the third year," or should be avoided for 6 years. Fish is unacceptable because of "mullu" (the sharp, thin bones in fish).

Other foods avoided are: peas and groundnuts until 1.5 years because "it causes indigestion", jackfruit and nuts "causes manthem", which here was defined as "diarrhea and fits" (this word unfortunately has many connotations). Beetroot causes "bad smell"; on the whole, raw vegetables are not considered good at an early age. Chapaties should be avoided until a person is grown up. Cooloo was mentioned twice as not being good for pre-schoolers, and spicy foods, fruits, vegetables. sambar, and mint leaves, once.

Three interviews mention that children do not fast when adults do; among the Muslims, children don't fast even for Ramzan. (a)

There are many ways to stop a child from nursing, for instance: a coating of cow dung or neem oil on the breast brings about a change in the taste of milk. If neem leaves or "bitter" paint is applied to the breast, the child won't want to drink the milk.

There are foods which will keep the child from getting all kinds of illnesses. Thar-anur oil keeps away infantile paralysis. Betel juice and "tablets" keep the child from getting "cold," or any other illness. When the child has a cold, no leftover rice is given him. For stomach trouble,

(a) Muslim festival.

swelling, or other kinds of illness, "betel, vellangai (a kind of fruit), small jeera (cumin) and perungayam (asafoetida) are ground together, the juice filtered through a white cloth, and given to the children."

Summary

1. After birth, the infant gets sugar-water to drink. Nursing begins on the third day.
2. Lactating seems to go on for two to three years or longer.
3. Solid foods are introduced generally around one year. This food is either bread, or rice, or idli with a liquid such as coffee, rasam, or sambar. Unfortunately, eggs and other non-vegetarian items are avoided for as long as three years. It is possible that they cannot prepare mutton and chicken tender enough for young children to chew, and the kind of fish this segment of the population can afford has too many small sharp bones. Eggs may be avoided because they often cause allergies the first time they are introduced into a child's diet (egg taste is also a factor).
4. Breast milk will be supplemented by cow's milk or a commercial formula where economically feasible.

Recommendation

On the basis of the above, an acceptable weaning food would be a product; this could be fortified bread.

4. Body States, Hot/Cold, Gaseous, Strengthening, Blood-producing, Designation of Foods, etc., in Tanjore District:
Data from Depth Interviews

There does not seem to be agreement about which state the woman's body is in during various stages of life: cold or hot. Some people interviewed were quite positive about one or the other state, while others claimed that there are individual differences because each woman reacts differently from another woman, etc. Not foreseeing this discrepancy, we didn't try to get data on how it is possible to tell whether a woman is in one state rather than another. (a)

During pregnancy some claim that the woman is in one state or the other, and some that she is in neither and thus should avoid both "heating" and "cooling" foods. She may be in a warm or neutral state because cooling foods are considered good for her.

After delivery she is probably also in a "heating" condition (some said that she is cold for the first 3 days, and then hot) because she gets oil baths which are supposed to cool the body. Whatever her body state after delivery, when she is lactating she is considered to be somewhat warm since cooling foods and leftovers are avoided. The most frequent justification for this avoidance is that both mother and child will get fits if the mother becomes cold (the infant because he consumes mother's milk).

The only agreement with regard to the infant's body state is that it can be either cold or hot. This is probably true for the first three days when he gets only sugar-water, but after the commencement of nursing the infant is likely to acquire the same state as the lactating mother. Nobody seemed to worry at all about the body state of infants or even children. This may be due to the fact that they get only mother's milk for a long time. Children's body states were mentioned only with regard to illness, such as colds. When a child (or adult) has a cold no

(a) This is consistent with Ayurvedic ideas of "balance" and variation among individuals.

"cooling" vegetables or fruits are given him. During "heaty" illnesses such as pox or fevers, cooling foods are recommended (along with a layer of neem leaves on the bed. (Note similarity to other anthropology reports).

Even in a homogeneous area such as a single district, it appears to me to be difficult to classify foods into hot or cold categories. There are very few foods that were not claimed to be both during the course of different interviews. There are more foods classified as cooling than as heating.

Of all the foods that are claimed to be heating, there are only two items that are not classified also as cooling by other individuals. These are fish and dry fish. The most frequently mentioned heating foods other than fish are mango, jackfruit, eggplant, garlic, chili, chicken, mango pickles, tamarind, buffalo milk, raw rice, and mutton. Spicy foods are also claimed to be heating.

There are more foods, especially vegetables, that are classified as cooling. Aside from associating a "cold" body state during lactation with fits, the only other avoidance of cooling foods is when someone has a cold. Citrus fruits, which are clearly classified as cooling, are avoided during a cold, though many take vitamin C pills to make up for the vitamin deficiency (many in India make the connection between vitamin C and colds). Even highly educated individuals appear to avoid citrus fruits during a cold.

The foods that are claimed consistently to be cooling by several individuals are citrus fruits of all varieties, apple, grape, guava, leafy vegetables, okra, onions, various gourds, tomatoes (especially), buttermilk, and toddy. Cooling, in this sense, seems to equal "good"; that is, cooling vegetables are termed good.

Several reasons are given for foods being classified in one category or the other. For instance, the preparation of the food. Pickles are heating when prepared with green chilies, but cooling when preserved with ground mustard seed and lime juice. Raw egg is classified as cooling while boiled egg is heating. Leftover foods are cooling regardless of which grain or side dishes are included.

Cow's milk is considered closest to human milk; thus cow's milk is cooling but buffalo or goat's milk is heating. Chilies are said to make foods heating, but one individual classified them as cooling. Foods kept or cooked in earthenware or aluminum pots are cooling. (No information on which utensils are heating.)

Besides hot and cold, terms such as gaseous, strengthening, and blood-producing are frequently used to describe foods. The most frequently mentioned gaseous foods are potato, pumpkin, green plantain, cabbage, and bottle gourd.

Egg, sesame oil, and black gram are especially strengthening. These are given to girls when they start menses so that they will be able to work hard. Such red-colored foods as apple and beetroot are blood-producing along with turnip and kholrabi. But other red-colored foods such as tomatoes and red-skinned potato are not mentioned as such.

Some foods are said to cause "pitham" which is defined as vomiting, indigestion, fits, or liver trouble. These foods are coriander leaves, jackfruit, green plantain, bottle gourd, and drumstick.

Ginger is considered good for the liver, and bottle gourd is avoided by Brahmins though it is good especially since it contains "neera" (water).

Conclusions

1. Body state isn't as clear as some anthropologists would indicate. Answers such as "this food is avoided because the body is in a hot or cold state" are seldom encountered, although such answers were expected with greater frequency. The hot/cold dichotomy does not seem as important as anticipated. Answers rarely stated that certain foods were avoided because they were either too cooling or heating, even though the classification could be given. Also, there was limited consistency within a region on the classification of common foods.
2. It is possible in other work that available data on body states and hot/cold foods were gathered from single informants. This is an accepted practice in anthropology. But for applied social science purposes it is misleading because it gives certain cultural aspects more importance than they actually deserve.
3. The hot/cold dichotomy appears to be a cultural remnant; the tradition that certain foods should be avoided or eaten at particular times is still there, but the rationalization in terms of hot/cold seems confused. I asked several individuals why they avoid citrus foods during colds, and all said it is the "practice"; none said because they are cold foods. Only after looking at the data was I able to make the connection.
4. Gaseous, blood-producing, and strengthening foods seem to be much more real and frequently used categories at this time than hot and cold. Foods were claimed to be avoided because they are gaseous, and given because they are strengthening or blood-producing. More research is needed to resolve this question.

Note: Blood-producing, strengthening, gaseous, etc., are not inconsistent with the hot and cold terminology of Ayurvedic practice. They may indeed be interchangeable. The important observation here is the variation of concepts among foods from district to district.

5. Description of Food Items in Tanjore District

ADAI - A thick round disk that is pan fried in plenty of fat. The batter is made of coarsely-ground legumes such as (Cicer arictinum), (Cajanus cajan), (Paheolus aureus), or (Phaseolus mungo), rice, and asafoetida. Chopped onion or a vegetable such as cabbage or greens can also be added.

APPALAM - Dough made of legume-black gram (Phaseolus mungo) and rice, rolled out into thin small round disks, dried in the sun, and deep-fat fried just before use.

BIRYANI - Cooked rice (usually raw instead of boiled rice) with spices and vegetables and/or non-vegetarian items. Used for special occasions, especially Muslim.

CHAPATI - Unleavened bread. Dough made of whole wheat flour, salt, and shortening (with water). Pan fried in little fat; many varieties.

CHUTNEY - Cover term for a variety of items, both spicy hot and spicy sweet, that are used as side dishes. In Tamil Nadu it mainly refers to a paste made by coarsely grinding coconut meat, chilies, and other items which then can be thinned with water or buttermilk. Mango and tomato are also favorite ingredients for chutney.

CURRY - Cover term for any side dish that is cooked and usually has at least a little gravy.

COOLOO - Kali (see below) dissolved in water or buttermilk with flavorings added. Eaten with mango pickles or green chilies. Usually of drink consistency, but of various consistencies.

DOSAI - A thin pancake. The batter is made of rice and pulse (Phaseolus mungo), ratio of 4 : 1, both of which are soaked separately overnight, then ground and mixed together with added salt, and left to ferment further and pan fried in a little fat.

GARAM MASALA - A mixture of spices such as cloves, cardamom, and cinnamon.

IDLI - Steamed rice cakes, made of rice and black gram (Phaseolus mungo) which is soaked and fermented, then coarsely ground. Proportion of rice to legume is 2 : 1.

RAVA IDLI - Made of farina instead of rice, with less legume than above and with flavorings added.

KALI - Large balls made of a thick paste of grains that have been boiled in water with salt; mostly made of millets. Can be kept for 2 - 3 days immersed in water in an earthenware jar. Served with fish curry, buttermilk, or water; or with pickles or greens when still warm. About 1 to 2 per person for a meal.

KANJI - Porridge-like dishes. The most common one is cooked rice that has been fermented in water overnight with salt, chili, buttermilk, or other flavoring added. Can also be served with milk and sugar (or other sweetener). Used especially for illness and for fasting - a popular way of preparation for fasting is to make it from a legume (Phaseolus aureus) which has been boiled in water with milk, sugar, and spices added. Among low-income households, the previous night's cooked rice may be taken as kanji since it doesn't spoil while fermenting, but increases in yeast in the process.

KOLAMBU - A soup-like food of any or all or any combination of the following ingredients: legume, salt, tamarind juice, chili, vegetables, vathals (see below), etc. Most frequent accompaniment to rice.

KARA KOLAMBU - Without legume but with vegetables or vathal.

PULI KOLAMBU - With tamarind juice and other ingredients.

KOOTOO - A semisolid mixture of tamarind, vegetables, legumes (Phaseolus aureus or Cajanus cajan), coconut, chili, and pepper.

PORICHA KOOTOO - Without tamarind, and some of the ingredients are fried before grinding.

MASIYAL - Vegetables boiled into a pulp and seasoned.

GREENS MASIYAL - Cooked mashed greens with salt and powdered cumin seeds.

MURUKKU - Snack item made of rice flour and legume (either Cicer arictinum or Phaseolus mungo) which are mixed into a dough with flavorings and the dough pressed through a mold (much like a cookie mold) and deep fried.

PICKLE - A highly spiced preserved item (can last for years) that is served as a flavoring with rice and other staples. The most common pickles are made of citrus fruits, unripe mango, gooseberry, chili, beetroot, etc. Can also be made of fish and other non-vegetarian items. Ingredients used to make it include ground mustard seed, fenugreek seed, salt, chili powder, sesame or other oil, tamarind or lime juice, etc. As many ways of preparation as homes. Many people traditionally finish their meals with rice, curds, and pickles.

PODIMASS - Mashed vegetable (generally potato or plantain) with coconut and other seasoning. After mixing, it is pan fried.

POLI - A sweet chapati that has a filling inside. Filling can be of a variety of things, but poornam is the most frequently used. Poornam is made of raw sugar and legume (Cicer arictinum). Difficult to make. The dough is made of bleached white flour (called maida) with shortening and water. This is pressed into a palm-size disk into which a ball of the filling mixture is put, then the dough is closed around the ball. The ball is carefully rolled out and lightly pan fried in clarified butter (ghee).

PONGAL - Roasted raw rice cooked with legume (Phaseolus aureus) and salt. Mashed in appearance and seasoned with pepper, cumin seed, ginger, curry leaves, cashew, and clarified butter.

SWEET PONGAL - Cooked in milk and the legume (Cicer arictinum) is substituted for (Phaseolus aureus), with raw sugar, raisins, cardamoms, and saffron.

TAMARIND PONGAL - Uppuma (see below) made with tamarind juice. The word pongal signifies harvest and pongals (foods) are thus eaten seasonally.

PORIAL - Vegetables slowly fried in oil and seasoned with legumes, salt, chili, and coconut. Has no gravy or liquid. Pumpkin and sweet potatoes are flavored with raw sugar and coconut instead of chili, etc.

PURI - Made of whole wheat flour, much like a chapati, but smaller and deep-fat fried. With a potato-onion side dish (called masala) it is often served for the morning meal.

PUTTU - Steamed rice mixture, seasoned with coconut and sugar or with raw sugar syrup and cardamoms.

SUJI PUTTU - Substitute moistened suji for rice.

RAGI PUTTU - Substitute ragi for rice.

RASAM - A soup-like mixture with a watery portion on top and a thick precipitate on the bottom. Made of tamarind juice, salt, legume, chili powder, tomato, curry leaves, coriander leaves, etc.

LIME RASAM - Lime juice and ground pepper instead of tamarind and chili powder.

PEPPER RASAM - Ground pepper and ground cumin seed instead of chili powder and tomato.

GARLIC RASAM - Paste of fried garlic and chili instead of chili powder and tomato.

KANDA THIPPILLI RASAM - Paste of fried kanda thippilli pepper, red chilies, legume (Phaseolus mungo) and asafoetida instead of chili powder and tomato.

CUMIN RASAM - Paste of coriander seeds, red chilies, legume (Cajanus cajan), pepper, and cumin seeds instead of chili powder and tomato.

RICE MEAL - A meal in which the staple is usually rice, but often it is a millet cooked the same way as rice. It may have only the staple and water, or a variety of side dishes. One or two such meals are eaten per day.

CHOLAM RICE - Cooked broken cholam (Sorghum vulgare) used instead of rice.

COCONUT RICE - With coconut and other sweet-type flavorings added to rice.

LEMON RICE - With lemon and flavorings.

SAMBAR RICE - Cooked rice mixed with sambar.

TAMARIND RICE - Rice cooked in water with tamarind juice added to the water.

VARAGU RICE - Varagu grain (Paspalum scoribiculatum) cooked as rice.

ROTTI - A chapati that can be made out of ragi (Eleusine coracana) flour instead of wheat. Pan fried in a little shortening.

SWEET ROTTI - Raw sugar and/or coconut and cardamom are added to the dough.

SAMBAR - A kolambu (see above) made of legumes (Cajanus cajan or Phaseolus aureus) and a paste of roasted legume (Cicer arictinum) into which the spices such as coriander seeds and asafoetida are added in a powder form. Prepared with fresh vegetables, not with vathals (see below).

SAMEYAL - Cooked foods. "Same" means to cook.

SAVOURY - Any snack item that isn't sweet, such as murukku (see above) or vadai (see below).

SUNDAL - Curry or porial (see above) of legumes and pulses with coconut and spices.

TEA - Besides being the name of a drink, it is also the afternoon meal, consumed between the two cooked meals, anywhere from around 2 P.M. to 7 P.M. "Having tea" in the afternoon doesn't necessarily even include tea (in this area coffee is more popular) but the meal itself is called "tea". This meal may consist of only a drink, or may have one or more snack items added. (Note: tea is rapidly becoming a more popular drink in Tamil Nadu.)

THUVAYAL - A thick chutney (see above) of roasted legume (Phaseolus mungo) and red chilies with tamarind, and sometimes asafoetida.

COCONUT THUVAYAL - With coconut added.

BRINJAL THUVAYAL - With fried eggplants added.

CORIANDER THUVAYAL - With coriander leaves added.

CURRY LEAVES THUVAYAL - With curry leaves added.

ONION THUVAYAL - With onions added.

TIFFIN - Morning and/or afternoon small meal in which no staple is eaten (not a rice meal), only snacks. Idli, dosai, vadai (see above and below), etc., fall into this category. Coffee alone may be referred to as tiffin also.

UPPUMA - Cooked broken rice or farina seasoned with salt, chili, etc., fried in shortening and steamed with water. Chopped onions and vegetables can be added. With rice green, and with farina red, chilies are used. The seasoning can be boiled in the water before the water is added to the rice or farina.

VADAI - A fritter-like food, made of vegetables dipped into a paste of ground legume, water, and seasoning. Deep fried. Served by itself or as part of a meal.

VATHALS - A method of preserving vegetables in Tanjore district. Many ways of preparation. Eggplant, pumpkin, and sweet potato are dried in the sun without salt. Beans are boiled for 5 minutes, then drained and dried, then put back into the same water, dried again, into water, etc., until all the water is absorbed. Tamarind juice, curd, and thick buttermilk can also be used instead of water. Vathals can be deep fried, pickled, or added to kolambu (see above) or cooked as vegetable dishes when vegetables are out of season.

6. Diet of Pregnant Women in Ramanathapuram District:
Data from Depth Interviews

All 28 interviews contained some information on pregnant women.

Restrictions during pregnancy are few with regard to food. Avoidances are also not very numerous. A pregnant woman's diet is restricted mainly by her choice of which foods among the ones available she does or does not want to eat.

The body state during this period seems definitely hot and many of the notions deal with heat in the body. No interviewee claimed that cooling foods are good because the body is in a heating state, though foods usually classified as cooling, i.e. leftovers and citrus are said to be good.

Most women have problems with feeling faint, dizzy, and with morning sickness in the early stages of pregnancy. During this period they are not able to consume the foods normally eaten, such as rice and vegetables, and take snack items or cooloo instead. An interviewee said that during pregnancy she took only cooloo with lemon pickles, onion, and green chili because rice foods made her nauseous. Another woman said that when she felt nausea and giddiness, she took only tamarind kolambu, or no food at all for three or four days. Soda is believed to be good for one who is nauseous.

It is believed that the cravings of a pregnant woman should be satisfied, though some said it isn't always possible to do so. Husbands figure prominently in this area, apparently it is up to them to do something about it. (In Tanjore district one informant said that a husband satisfies his pregnant wife's cravings sometimes secretly, otherwise she may refuse to sleep with him - this may be the reason.)

The foods to be avoided during pregnancy are very few and with the exception of mango, none were mentioned more than once. The foods that are mentioned frequently as being good to eat, or just as something she does eat during this stage are vegetables, homemade medicines, and cooloo.

Four individuals said that strengthening foods should be given, though the foods mentioned to fall into this category varied. One person claimed that blood-producing foods should also be given, but said that the same foods are good for blood producing and for blood reducing.

The notions connected with pregnancy in this district are:

1. Itching in the leg due to heat during pregnancy can be cured by a homemade medicine which is the juice of a creeper plant called varillakothai.
2. When there is pain due to overheating (called "sootu vali") a kashayam made of pepper or cumin seeds and butter is given.
3. If a pregnant woman's craving isn't satisfied, pus will form in the baby.
4. If the body becomes too hot during pregnancy, the woman gets an itchy feeling. Tamarind water reduces the heat.
5. If mango, jackfruit, or jambu fruit is eaten by a pregnant woman, the infant will get fits even before his birth.
6. If papaya, pineapple, sesame seeds, and horsegram are eaten by a pregnant woman, it will spoil the embryo.
7. A pregnant woman's cravings have to be satisfied, otherwise pus will form in the child's ear.

8. If a pregnant woman's craving is not satisfied, her feet may swell.
9. Three-day-old cooloo prevents a woman from morning sickness.
10. Morning sickness comes only to women who are carrying male babies.
11. Garlic and rice are good for the digestion of pregnant women.
12. For fainting and pain in the hands and legs, pregnant women are supposed to take fenugreek water.

Conclusions

1. Avoidances are not numerous or strong, as for lactating mothers for instance. (Many people say "we don't avoid anything until delivery".)
2. The main problem is in the early stages of pregnancy when many do not feel like eating meals and the choice of other foods available to them is even less nutritive.
3. Sour things are considered good and healthy (in a feeding program this could be utilized).
4. Old wives tales and traditional beliefs are numerous. The important ones to take into consideration when designing a feeding program (or anything else that may have to do with pregnant women) are the notions about possible harm to the embryo. Harming the unborn child is of constant concern.

7. Diet of Lactating Mothers in Ramanathapuram District:
Data from Depth Interviews

The body condition of lactating mothers in Ramanathapuram district is ambiguous; according to some it is cold, and to others it is hot (one stated - it is "hot and dead tired"). It is important to know what state to recommend it should be kept in during lactation. It seems safe to assume that it should be kept somewhat warm or neutral. The many beliefs associated with cooling foods substantiate this.

All 28 interviews provided information on lactating mothers. Caste does not seem important with the exception that Brahmins are more likely to give at least some milk to the lactating mother than non-Brahmins. (Milk by itself is not allowed; they give coffee with an excess of milk.)

Meals are prohibited for the first 2 - 3 days after delivery (21 responses) or for as long as five days (2). Only coffee (presumably without milk, but sweetened with jaggery) and bread is given during these days. Even if a woman feels hungry she will not be given any foods; only one interviewee claimed that women do not feel hungry after delivery.

The most frequently mentioned foods to be avoided are: jackfruit (9), egg (8), fresh fish (8), mango (6), dry fish (5), mutton (5), and coconut (4). Other similar foods are brinjal, millets, tomato, potato, various gourds, and legumes.

The foods claimed to be good to eat during lactation or soon after delivery are rice and rasam with pepper, then coffee (17), bread (17), sago, rice or millet kanji (8), chicken (11), kolambu (10), thuvayal (7), dry fish (6), and milk in coffee (6). Flavorings used during this period are garlic (19) and ginger both dry and as juice (10) along with tamarind and asafoetida. Homemade medicine called "sarakku" is given in

varying quantities, flavored with jaggery and sesame oil. Surprisingly, 3 persons mentioned arrack and one brandy as being good for lactating mothers.

Milk-producing foods in this district are dried fish, kolambu, garlic, pepper rasam, and chicken. Chicken seems to take an important and ceremonial part in the diet of the lactating woman, often it is claimed that chicken has to be given on certain days after delivery, or it is given every other day after delivery for some time. We have no information on the amounts consumed. The non-vegetarian identity is noted.

Strengthening and blood-producing foods are also given to lactating mothers, but are not emphasized. One interviewee claimed that blood-producing foods are good, but strengthening foods are not good for these women.

The major problem with the diet of a lactating woman is that she is not supposed to eat or drink much. Medicines are given to hinder the appetite, and betel leaves taken to suppress thirst. There are many restrictions on the intake of nutrients.

After the initial period of coffee and bread only, she is still not able to have regular meals. She is given only one meal a day anywhere from 7 to 40 days. Coffee is often given in place of the other meal. A lactating mother is expected to be on a diet (meaning restriction and called "pathiyam") for 15 days, 40 days or during the major part of lactation. Statements such as "very little food should be taken during the first 22 days, 30 days, or even 3 - 4 months were frequent.

She is also restricted in the variety of foods she may eat. For the first 3 months she often has to eat the same rice meal every day. No milk, curd, butter, and ghee are allowed according to three responses. The restrictions are greatest with regard to vegetables because none are allowed anywhere from 9 days to 3 months. No oil allowed for 30 days, and fruits prohibited sometimes as long as 40 days.

No leftover meals (last night's cooked food) should be taken by a lactating mother. This may be the reasoning behind giving only a meal a day to them; since in most low-income households only one warm cooked meal a day is eaten (and leftovers from this meal are eaten for the next). A second cooked meal may not be economically feasible.

The following are beliefs connected with food during lactation. They are concerned with a variety of subjects such as healing of the uterus, indigestion, body state, and health of the infant.

1. Dry ginger, pepper, and jaggery are good for stomach pains.
2. Betel leaves ease digestion and heal wounds.
3. The delivered woman's body condition should be hot, otherwise she will get headaches, fever, and delirium.
4. Mango and jackfruit causes manthem.
5. Egg and mutton, if eaten by the lactating mother, will adversely affect the baby.
6. Garlic kolainbu keeps the mother from getting fits.
7. If cold foods such as egg, banana, sweet lime, and curd are taken after delivery, the baby will get a cold.

8. A lactating mother avoids vegetables because of the fear of after effects and because it may make her feel uneasy.
9. Pastes of asafoetida and turmeric or ginger juice heal the internal wounds after delivery.
10. Yesterday's rice water with salt, or cooloo of sorghum or ragi will keep the delivered woman from getting fever, shivering, fits, or pus formation internally.
11. Garlic and neem oil not only remove any remains from the uterus after delivery, but also prevents blood clotting in the uterus.
12. Dried ginger and kali prevent pus formation and colds.
13. Pulses and legumes lead to indigestion.
14. Chicken curry and gingelly oil strengthens the waist and limbs.
15. Ginger juice prevents pus formation, fever, cold, and shivering.
16. Milk and curd are avoided by lactating mothers because they may cause fits to the child.
17. Betel leaves stop thirst.
18. Meat other than chicken will make a lactating mother's body cold, but chicken keeps it hot so she won't have other troubles. So that the eating of chicken by the mother will not have any adverse effects on the nursing infant, in the food bag of the hen there will be a stone which they dissolve by scraping it, and the juice of this stone is then given to the child.

19. Jackfruit causes flame to the woman after delivery.
20. After delivery food is indigestible.
21. Since egg is a cold food, it may lead to delirium.
22. Orange after delivery will strengthen the body.
23. After the child himself starts eating food that the mother has been avoiding, then the mother can start eating it also.
24. If egg is taken before the child is two years of age, it will have an effect on him and he will get fits.
25. Food taken the first few days after delivery may give rise to some trouble or fever.
26. If yesterday's remains are eaten within the first five months after delivery, the child will catch cold.
27. No vegetables should be eaten as the sores (wounds) in the uterus take a long time to heal and may even turn septic.
28. Yesterday's food cools the body and thus may give some trouble.
29. Tomato cannot be digested if eaten less than 20 days after delivery.
30. For three months after delivery no brinjal, yam, and other vegetables are eaten because the mother will get sores in her body from them.
31. More than one rice meal a day for the first 40 days will cause stomach troubles.

32. A night meal after delivery (or during lactation) may lead to indigestion.
33. Along with a bath after delivery the lactating mother has to eat yesterday's leftover food from 7 houses because only then will her body agree with any type of food so she won't get any diseases.
34. Egg, potato, bottle gourd, mango, jackfruit, and guava may cause the child to have fits which may even lead to a fatal condition.
35. Leftover rice is bad for one's health.

Conclusions

1. The diet of a lactating mother in Ramanathapuram district is definitely a restricted one. If she can afford it, she can eat a non-vegetarian item such as chicken. But vegetables and fruits are either avoided completely, or are generally not considered good for her.
2. She is not only restricted in kind, but also in amount. It seems that eating as little as possible after delivery and during nursing is the accepted norm.
3. There is great concern for the health of the child. While the child is nursing, his illnesses are directly related to the mother's diet and milk and thus a connection is made between what she consumes and the child's reactions.
4. There are large numbers of beliefs connected with food and lactation. Either this district has more of them than Tanjore, or a more likely explanation is that the investigators were better trained and had more experience.

Recommendation

Since medicines are considered very important, are readily acceptable, and contain a variety of food components, it may be possible to give nutrients as medicines or tonics to lactating mothers. They would be accepted without the questions or problems that accompany acceptance of a new food item.

8. Diet of Pre-school Age Children in Ramanathapuram District:
Data from Depth Interviews

All 28 interviews contained information on the diet of infants and pre-school age children. No caste differences could be discerned.

The body state of an infant is hot according to some and cold according to others. It seems that a rather cool state is preferable, though not a very cold state since colds are to be avoided (see notions on colds).

Right after delivery for the first 2 - 3 days infants are given sugar - water (12 responses), jaggery water (1), a mixture of castor and neem oils with other ingredients (1), sugar and castor oil (3), or the breast (1).

All children are nursed anywhere from 1 year (5) to 3 years or until the next pregnancy. The earliest anyone stopped nursing of the people we interviewed was 8 months. About a year and a half is the period most mothers nurse a child (9). If breast milk is insufficient, it is supplemented by cow's milk mixed with water in a proportion of 1 : 1. Few supplement with Amul or another commercial formula though it is considered cheaper than cow's milk. The number that either supplements nursing or replaces it with milk or formula is very small. Some claimed that they just let the baby cry when he is hungry. One woman mentioned supplementing with rice but didn't say at what age.

Weaning begins as early as 3 months or as late as 3 years; one woman claimed that her 6 year old child still takes nothing but milk with flavorings. Six months was the mean for the introduction of solid foods, and one year for the initiation of meals. After that, many children get no milk at all. These meals consist of one or two items from an already limited adult diet.

Bread and coffee or mashed rice were mentioned as solid foods to start the child on. Rice featured prominently as the first solid food, mashed either with rasam, legumes, or banana. Two interviewees claimed that the child should start on the same solid foods as the mother was consuming while nursing and only after that move onto other items. Spicy foods are introduced slowly, and so are vegetables and non-vegetarian items. Some vegetables may not be given until the fourth year, and meats as late as the fifth year.

Several people mentioned giving the children leftovers in the morning. From interviews where the data is elaborate I would conclude that in these households the adults eat either nothing or have only coffee in the morning, but give the previous night's cooked food to the children. On the days that adults fast, some children are also made to fast, others are given either leftovers or coffee. (One person noted that if children cried from hunger while fasting, they are given coffee.)

Parents do buy food for their children to eat, sometimes for as much as Rs. 0.50/child/day. But in some areas we interviewed in this district there were no stores, so less edibles were bought for children than elsewhere. Bread, biscuits, cow's milk, and sweets were mentioned most frequently as food people would buy for children if they had the money.

The foods quoted most often as given to preschool-age children are bread (12), idli (10), biscuits (8), coffee (6), banana (6), cow's milk (5), sweets (4), and castor oil (4).

Hospitals, doctors, and store-bought medicine were mentioned constantly with relation to small children. Apparently, they worry about the health of infants much more than that of adults (including the preg-

nant and lactating women), and are willing to go to great lengths to have healthy babies. (This is true elsewhere also, mothers of small children are the easiest to help because they are willing to forego tradition, mothers-in-law wrath, etc., to save their babies.)

Egg and vegetables were the only items mentioned more than once as foods that should be avoided by small children.

The many beliefs dealing with food and pre-school age children (mainly infants) center around illnesses such as diarrhea, colds, and fits (probably convulsions).

1. For stomach trouble, an extraction of puduthalai (leafy green plant), bark of drumstick tree, drumstick leaves, betel leaves, omum, and etc., is given to children for three days.
2. If the baby is breast fed for more than one year, he will get sick.
3. For colds, children are given the juice of chithirathai (chittramulam is Plumabago zcylanica).
4. For diarrhea, sundakai, sweet flag plant (called "vasambu" in Tamil Acorus Calamus), pepper, and asafoetida are ground together and the juice is given to children.
5. For fits, garlic (and balm massage) are given.
6. For chicken pox and small pox, neem leaves and turmeric are good; fresh and dry fish should be avoided. (Fish is classified as heating and during small pox the body is in a very hot state, so only cooling foods are acceptable.)

7. For diarrhea, the juice of asafoetida and of sweet flag plant are given.
8. Diarrhea is due to insufficient amount of breast milk.
9. If the child's body is hot, fenugreek seeds are given with milk to cool it.
10. For the first 3 months castor oil is given (mixed with 2 - 3 drops of breast milk) so that the baby won't get any stomach troubles and that he can grow better.
11. For diarrhea, a powdered mixture of asafoetida and dry ginger is given to children.
12. In order that the eating of chicken by the mother should not have any adverse effects on the nursing infant, a stone from the hen's crop is dissolved by scraping and the solution of this stone is given to the child.
13. If the child gets a cold, certain roots such as sithirathai and country bean root, or siru keera root (Amarantus polygonoides) are boiled with pepper for 10 minutes. The water is strained and given to the child.
14. For diarrhea, sweet flag plant is made into a paste with honey and given to the child.
15. If egg is taken before the child is two years of age, it will have an effect on him and he will get convulsions.
16. If the child has a cold, he should avoid leftover food and get only milk and other foods bought from outside.
17. When a child suffers from smallpox, he should get only rice to eat.

18. When a child suffers from itch, he must avoid hot foods such as fish, and cow gram.
19. When a child suffers from cold or rash, he shouldn't get leftover rice.
20. In order to remove all the refuse ("unwanted") from the stomach of a new born baby, castor oil, neem oil, gingelly oil, garlic, asafoetida, turmeric, and jaggery are mixed in a clean vessel (in proportion "a little of each") and given to the infant whenever he cries.
21. To keep the body in a cool state, children take orange, grapes, and lime juice with sugar.
22. If children eat varagu they will suffer from sirangu (itch).
23. For diarrhea, either medicinal leaves, or a paste of asafoetida, curry leaves, omum, and poduthala is given.
24. When a child is not well if he is nursing, he gets only breast milk, but if he is older he gets coffee and bread.
25. When a child is ill, he gets kanji of sago or barley (Hordeum vulgare) with sugar but no milk.
26. Soda is good for a child's stomach trouble.

Conclusions

1. The diet of a pre-school age child in Ramanathapuram is deficient in vegetables and non-vegetarian foods (including eggs) because of custom and in fruits because of economics.
2. Motivation to feed the child "better" does not appear high, but motivation to keep him free from illness is very high.
3. While the infant is nursing no supplement is given for 6 months or more, yet breast milk may be of insufficient amount. Supplementary milk is economically unfeasible, and even when possible it is given diluted.
4. Cow's milk is preferred by all over buffalo milk.
5. Diarrhea is very frequent in this age group.

Question

Could there be a correlation between the number of beliefs about disease and the frequency of disease among infants and young children.

Recommendations

1. For infants, a low cost weaning food that is at least partially cow's milk and resembles milk as much as possible.
2. Bread-type products would definitely be acceptable.
3. New weaning foods often cause diarrhea; either the food should be improved or this fact explained to mothers in culturally acceptable terms.

9. Hot/Cold Concepts, Gas Producing Foods, etc., in Ramanathapuram District

Most of the data dealing with body states has already been incorporated into the reports on pregnant women, lactating mothers, and pre-school age children. All 26 interviews from this district contained some information on hot/cold foods.

The variety of vegetables and other foods consumed in Ramanathapuram is much more restricted than it is in Tanjore.

There is little more agreement on what foods are cooling or heating than there was in Tanjore district, but the number of responses is still too few to draw any real conclusions.

According to the data, among the cereals, varagu, wheat, and especially sorghum are heating, while bajra (kambu) is cooling. Among the non-vegetarian foods, fish is definitely heating while mutton and egg are cooling.

Most milk products seem to be cooling, with the exception of buffalo milk. It is possible, that when respondents claim certain milk products to be hot or cold, they think of cow or buffalo, depending on which they are used to. This could explain the discrepancy. It seems safe to assume that cow's milk and its products are cooling but buffalo milk and its products are more heating.

Vegetables are generally cooling, especially the various gourds, tomato, and sometimes even onion. Pulses and legumes tend to be cooling. Fruits are also claimed to be cooling much more frequently than heating, especially citrus fruits, apple, guava, and jackfruit.

Of the other foods, coriander, curry leaves, and coconut are cooling along with pickles made of citrus fruits while pickles made of mango are heating. Of the two foods frequently used for medicinal purposes, garlic and ginger, ginger tends to be cooling and there is no agreement on garlic.

Some foods were claimed to be "good for health". Some of these foods are egg and ghee (3), and (2) coconut, banana, fish, mutton, eggplant, coriander leaves, bitter gourd, garlic, tamarind, and curd.

Among the blood-producing, strengthening, and gas producing foods, only gas producing seems to be of any significance. Potato and banana (banana either as fruit or as vegetable) are quoted most often as being gas producing. These foods are avoided during lactation and illness.

Strengthening foods are used for specific occasions, such as when a girl attains maturity. Blood-producing and strengthening have positive connotations, while gas producing is obviously negative.

The notions that deal with both the positive and negative aspects of food and have not been mentioned so far are the following:

1. Egg is good for the health and is strengthening.
2. Raw egg is more strengthening than cooked egg.
3. Eggplant and egg are good for pains in the chest.
4. Coconut milk, onion, and especially garlic are good for gas trouble.

5. Green plantain and brinjal causes an itching and scratching sensation in the body called "karappan".
6. Betel leaves are good for the teeth.
7. Wheat causes paralysis.
8. The juice of coriander seeds is good for headaches.
9. Coriander leaves and ginger are good for pitham (liver trouble).
10. Ginger is good for stomach aches.
11. Tomato causes rheumatism.
12. Arrai green is iron producing.
13. Fish is cooling for the eye. (Note: when the eyes are cool, the body is cool also.)
14. Ash gourd may cause disease.
15. Mutton is good for the sick.
16. Buffalo milk is strengthening but causes disease.

Summary

1. Hot/cold dichotomy is not very significant. Comparatively few beliefs and responses (quoted in other reports on this district) dealt with this aspect of food. The other designations which deal with hot/cold only indirectly could be significant.

2. The variety of foods available to the lower economic strata in this district is extremely limited.
3. Gas producing foods have negative connotations, but are also the foods that are most frequently used in meals.

APPENDIX I

TAMIL NADU FOOD GLOSSARY
(Foods frequently mentioned in Tanjore depth interviews)

<u>English</u>	<u>Tamil</u>	<u>Latin Binomial</u>
<u>Cereals</u>		
Italian millet	Thenai	Setaria italica
-	Cambu	Pennisetum thyphoideum
Maize	Makka cholam	Zea mays
-	Ragi	Eleusine coracana
Rice	Pulungaresi	Oryza sativa
"	Pacharesi	"
-	Samai	Panicum miliare
Sanwa millet	Kudiraivalu	Echinochloa frumentacea
Sorghum	Cholam	Sorghum vulgare
-	Varagu	Paspalum scorbiculatum
Wheat	Gudumaimavu	Triticum spp.
"	Maidamavu	"
"	Rava	"
"	Suji	"
<u>Pulses and Legumes</u>		
Bengal gram	Pottukadalai	Cicer arictinum
Black gram	Ulundu	Phaseolus mungo
"	Uluthamparuppu	"
Cow gram	Karamani	Vigna catiang
"	Thattaipayir	"
Field bean	Mochai	Dolichos lablab
Green gram	Pachaipayaru	Phaseolus aureus
"	Pasiparuppu	"
Horse gram	Kollu	Dolichos biflorus
Peas	Pattani	Pisum sativum
Red gram	Thurparuppu	Cajanus cajan

Nuts and Oils

Almond	Badamkottai	<i>Prunus amygdalus</i>
Cashewnut	Mundiriperupu	<i>Anacardium occidentale</i>
Coconut	Tenga	<i>Cocos nucifera</i>
Groundnut	Nilakkadalai	<i>Arachis hypogea</i>
Groundnut cake	Kadalaipunnakku	"
Mustard seed	Kadugu	<i>Brassica nigra</i>
Sesame or gingelly	Ellu	<i>Sesamum indicum</i>
Sesame cake	Ellupunnakku	"

Leafy Vegetables

-	Agathi	<i>Sesbania grandiflora</i>
Amaranth	Mulaikeerai	<i>Amarantus gangeticus</i>
"	Araikeerai	<i>Amarantus tristis</i>
Drumstick leaves	Murungaikeerai	<i>Moringa oleifera</i>
Fenugreek leaves	Venthiakeerai	<i>Trigonella foenumgraecum</i>
-	Sakravartikeerai	<i>Amarantus spp.</i>
Gogu	Pulichchaikerai	<i>Hibiscus cannabinus</i>
-	Manathakkali	<i>Solanum nigrum</i>
-	Keppamenikeerai	<i>Acalypha indica</i>
-	Kuppakkeerai	<i>Amarantus viridis</i>
-	Ponnanganni	<i>Alternanthera sessilis</i>
Neem leaves	Veppailai	<i>Azadirachta indica</i>
Spinach	Pasalaikeerai	<i>Spinacea oleracea</i>

Roots and Tubers

Beet root	Betrut	<i>Beta vulgaris</i>
Carrot	Cerot	<i>Daucus carota</i>
"	Manjalmullangi	"
Colocasia	Seppankilhangu	<i>Colocasia antiquorum</i>
Kholrabi	Knolkhol	<i>Brassica oleracea</i>
Onion	Wengayom	<i>Allium cepa</i>
Potato	Urulaikilhangu	<i>Solanum tuberosum</i>
Radish	Mullangi	<i>Raphanus sativus</i>
Sweet potato	Sarkaraivallikilhangu	<i>Ipomoea batatas</i>
Yam, ordinary	Karunai kilhangu	<i>Thyphonium trilobatum</i>
Yam, elephant	Senaikilhangu	<i>Amorphophallus campanulatus</i>

Other Vegetables

Amaranth stem	Keeraithandu	Amarantus gangeticus
"	Thandukeerai	"
Ash gourd	Pushinikai	Benincasa hispida
Bitter gourd	Pavakkai	Momordica charabtis
Bottle gourd	Soraikkal	Lagenaria siceraria
Brinjal	Katrikai	Solanum melongena
Cabbage	Muttakose	Brassica oleracea
Cauliflower	Kalifloer	"
Cho cho	Seemaikahtirikai	Sechium edule
Cluster beans	Kothavarangai	Cyamopsis spp.
Country beans	Avaraikai	Vicia faba
Cucumber	Kakkarikkai	Cucumis sativun
"	Vellarikakai	"
Egg plant	Katrikai	Solanum melongena
Double beans	Bins	Faba vulgaria
Drumstick	Murungaikai	Moringa oleifera
French beans	Bins	Phaseolus vulgaris
Green peppers	Kodamilagai	Capsicum annum
"	Periamilagai	"
Lady finger (okra)	Vendakai	Abelmoschus esculentus
Mango	Manga	Mangifera indica
Okra	Vendakai	Abelmoschus esculentus
Pea	Pattani	Pisum sativum
Plantain stem	Valhathandu	Musa sapientum
Plantain	Valhakai	"
Plantain flower	Valhappu	"
Pumpkin	Parangikai	Cucurbita maxima
Sabra beans	Avakakai	Vicia faba
Snake gourd	Pudalangai	Trichosanthes anguina
-	Sundakai	Solanum torvum
Tomato	Takali	Lycopersicon esculentum

Fruits

Apple	Apel	Malus sylvestris
Banana	Valhapalham	Musa paradisuaca

Bread fruit	Kodimunthiripalham	<i>Artocarpus altilis</i>
Cashew fruit	Mundiripalham	<i>Anacardium occidentale</i>
Custard apple	Seethapalham	<i>Annona squamosa</i>
Date	Perichampalham	<i>Phoenix dactylifera</i>
Guava, country	Koiyapalham	<i>Psidium guajava</i>
Guava, hill	"	<i>Psidium littorale</i>
Gooseberry	Nellikai	<i>Phyllanthus emblica</i>
Grape	Thirachapalham	<i>Vitis vinifera</i>
Jambu fruit	Nagapalham	<i>Syzgium cumni</i>
Jack fruit	Palapalham	<i>Artocarpus heterophyllus</i>
Lime, sour	Elumichaipalham	<i>Citrus aurantifolia</i>
Lime, sweet	Sathukudi	<i>Citrus limetta</i>
Mango	Mampalham	<i>Mangifera indica</i>
Melon	Mulampalham	<i>Cucumis melo</i>
Neem	Veppampalham	<i>Melia azadirachta</i>
Orange	Kichilipalham	<i>Citrus aurantium</i>
Palmyra	Nongu	<i>Borassus flabellifer</i>
"	Panampalham	"
Papaya	Pappalikai	<i>Carica papaya</i>
Pears, country	Berikkai	<i>Prunus persica</i>
Pears, English	Valberikhai	<i>Pyrus acharas</i>
Pineapple	Annasipalham	<i>Ananas comosus</i>
Plum	Alubukhara	<i>Prunus domestica</i>
"	Alpagodapalham	"
"	Plam	"
Pomegranate	Mathulampalham	<i>Punica granatum</i>
Pomelo	Bamblimass	<i>Citrus maxima</i>
"	Sapota	<i>Achras sapota</i>
Wood apple	Vilampalham	<i>Limonia acidissimal</i>

Fishes

Boal	Valhai	Wallango attu
Ghol	Vellanatteelee	<i>Scioena miles</i>
Mackerel	Kanankeluthi	<i>Rastrelliger kanagurta</i>
Lobster	Nandu	<i>Paloemon</i> spp.
Prawn	Eral	<i>Paloemon lamarrei</i>
Sardine	Kendai	<i>Sardinella fimbriata</i>
Shark	Sra	<i>Carcharis</i> spp.

Meats

Beef	Mattueraichi	Bos taurus
Chicken	Kolhi	Gallus bankivamurghi
Duck	Vathu	Anas platyrhyncha
Goat	Vellattirachi	Capra hyrchusb
Mutton (sheep)	Attueraichi	-
Pork		Sus cristatus

Spices and Flavorers

Asafoetida	Perungayam	Ferula foetida
Cardamom	Yelakkai	Elettaria cardamomum
Chili	Milakai	Capsicum frutescens
Cinnamon	Pattai	Cinnamomum zelaynicum
Cloves	Krambu	Syzigum aromaticum
"	Lavangam	"
Coriander leaves	Kothamallikeerai	Coriandum cyminum
"	Kothamallithalhai	"
Cumin seed	Jeeragam	Cuminum cyminum
Curry leaves	Karuveppilai	Murraya koenigii
Fenugreek seeds	Venthayam	Trigonella spp.
Garlic	Vellapundu	Allium sativum
"	Pundu	"
Ginger	Inji	Zingiber officinale
Kus kus	Kasakasa	Papaver somniferum
Mace	Jathipattai	Myristica fragrans
Mint	Pothinakeerai	Mentha spicata
Nutmeg	Jathikai	Mystica fragrans
Nutmeg rind	Jathikaithol	"
-	Omum	Trachys permum
Pepper	Milagu	Piper nigrum
"	Arisithippilli	Piper clusii
"	Kandanthippilli	Piper roxburghii
"	Kurumilagu	Piper spp.
Tamarind	Puli	Tamarindus indica
-	Kodukka puli	Pithecellobium dulce
-	Konapuliangai	"
Turmeric	Manjal	Curcuma domestica

Miscellaneous

Arecanut	Paakku	Areca catechu
Betal leaves	Vethilai	Piper betel
Cane sugar	Sarkarai	Saccharum officinarum
"	Karumbu	"
Jaggery	Vellum	"
Coconut water	Ellaneer	Cocos nucifera
Malted palmyra root	Panangilhangu	Borassus flabellifer
Palmyra water	Padaneer	"
Palm sugar	Perandai	Vitis quadrangularis
Sago	Javvarisi	Metroxylon spp.
Toddy, coconut	Thennaipadaneer	Cocos nucifera
"	Thennangallu	"