

The
Family's Food .
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FOOD FOR THOUGHT

This is the third pamphlet in the series on Food and People, published by the Bureau of Current Affairs in this country for the United Nations' Educational, Scientific and Cultural Organization. This UNESCO project is in progress in many other countries, in preparation for autumn programmes of meetings and discussions.

The author has deliberately written in a way that can get across to people in all countries. Throughout, she has treated the subject from an international point of view, and has carefully avoided any specific reference that might tie it down to one particular country, making it difficult for others to follow. Therefore readers in all countries must think up their own illustrations. We have suggested one or two phrases of specific British references, here and there, just to indicate the way in which it might be done. All such phrases are enclosed in these [square brackets], because they are not the author's.

Discussion groups will soon get to grips with the general problems raised here. Just as it is necessary to translate them into particular examples, so the practical problem is to translate the science of nutrition into our own daily experience, to see how food values discovered in the laboratory can really mean more nourishing food on the table. That is the point of this pamphlet.

Mrs. Margaret Mead is Associate Curator in the American Museum of Natural History, New York, and Director of Columbia University Research in Contemporary Cultures. She is the author of a series of books and monographs on the cultures of the South-west Pacific, and from 1942-45 was Executive Secretary of the Committee on Food Habits, an advisory body to the US Government.

Throughout this series the views are the authors' own, freely expressed, and neither UNESCO nor BCA take any responsibility for them. Like all BCA publications, they are put forward as a basis for discussion, aiming to create an informed public opinion. They are not intended for specialists alone; the idea is to stimulate discussion at all levels, so that an informed world opinion may lead to international action.

FOR THE TEACHER

The Family's Food

The last pamphlet in this series explained the importance of soil conservation in a world which grows hungrier every day. Mrs. Mead's pamphlet, describing man's feeding habits in social terms, carries the story a stage further. As it stands, the theme is a difficult one for children, but school meals and milk, and Food Offices, have given everyone a more intimate knowledge and experience of the routine of daily feeding. And Food is a popular theme of conversation among all ages and classes, so there should be plenty of spontaneity in the classroom when it is the subject for study. The section headings provide three questions, each of which might constitute a lesson in itself.

1. How do we get our food?

The ubiquitous tin opener has a strong hold on young urban minds and has given rise to strange notions of how and where man gets his food. This illusion can be dispelled by a broad survey of the food-producing areas of the world which can be indicated on an outline map together with the main categories of food—fish, meat, vegetables, fruits, grains. The class can now answer the questions—How is the job of providing food shared out between countries? Which areas produce a variety of foods? Which have a lot of one or two kinds of food? Which have too little food? Could anything be done to improve their diet if other nations helped more? Could we persuade their peoples to eat new kinds of food?

2. What do we mean by feeding habits?

Examples from home are the obvious ones to start with. How many meals do we have a day? At what time? Why do we eat particular foods at certain meals, for instance, marmalade for breakfast and roast beef for Sunday dinner? Most pupils can compile a list of festivals commemorated by the eating of special meals, e.g., Christmas Day or Shrove Tuesday, and can be brought to realize that much of what we eat is explained by tradition: it is not because we can't get alternative foods. Do they know the feeding habits of people outside our own country—the French, Italians, Chinese, etc.? Do they know that some foods—the olive, the potato, the date, or rice—are the staple diet of some peoples? Yet so strong is the social significance of feeding habits that even these peoples celebrate the special occasion with food—the Arabs and their whole roasted lamb being an example.

3. Margarine or Butter?

Divide the class into groups and ask each to choose a day's menus for breakfast, dinner and tea. Are their choices actually obtainable? Why not? Shortages in quantity and variety of food have forced new feeding habits on Britain. We have to make the most of what we have, and Food Facts have taught us countless ways of cooking potatoes and herrings. Changed cooking habits have led to a study of the value of food in terms of protein and vitamins where previously variety was sufficient. Can the class draw up a comparison of present-day and pre-war foods? What are the main differences and what do they think about them—margarine or butter? Soya or rice?

ONE MAN'S MEAT . . .



*Is there any point in talking about the look and pattern of things?
Or is it too much a matter of individual opinion?*

DISCUSSION No. 11

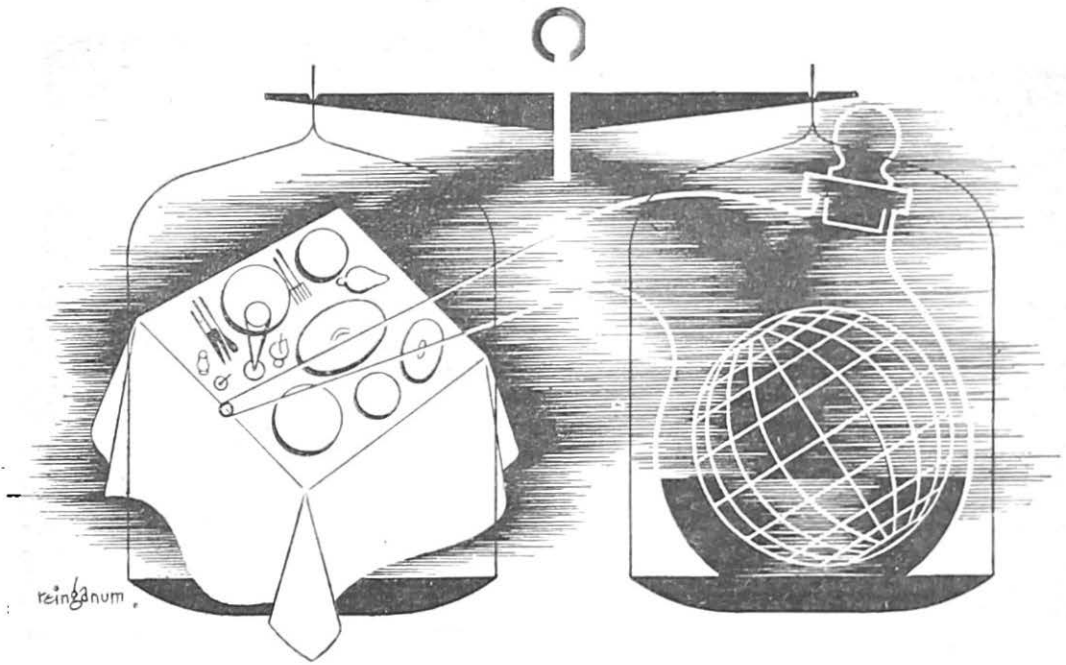


Writers in the current issue of DISCUSSION talk from practical experience about various ways of training people to be design-conscious.

DISCUSSING DESIGN

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THE FAMILY'S FOOD

by Margaret Mead

INTRODUCTION

Throughout this series we have been made more and more aware of the need for international action to meet the world problem of food and population. The scientists have told us how new sources of supply can be opened up, new kinds of food developed; the economists have shown us how the pattern of trade should be altered, how supplies can be directed from one country to another in case of need. Now the new science of nutrition tells us how we can make the most of the food available. To the old question,—*what shall we have to eat?*—the old answer used to depend on what was available—in the larder, in the market, in the shop—and on what they could afford to buy. The mother would balance the picture of what a family like hers should have for dinner with what she was able to give them, even if she could only

try to keep them from being hungry, or from eating a miserable flavourless meal, or feeling poverty-stricken because they had no meat such as was suitable for a feast day, or no proper food to entertain a visitor. She thought of what would stave off hunger, please the appetite, and be fitting for the time, the day, the occasion, the age and class and sex of the members of her family. That was all.

But now there is a new answer, to “what shall I give them to eat?”, given by science. Science tells us how protein and carbohydrates and fats should be balanced in a meal, in a day, over a week; it tells us which foods will provide essential vitamins, which bulk foods are only filling and satisfying without nourishing the body, what minerals are necessary and from what foods they can be obtained. Of course people always knew

which foods were filling, and the old folks told them what was good for infants, for growing children, for pregnant women, for working men, for the old; some of these precepts were useless, while some embodied priceless truths about the relationships between the constitution of foods and physiology of the human body. Now we have the ability to judge whether food is nutritional or not.

The scientific approach

What is true for the housewife is also true for those who plan meals for large groups of people, in restaurants, camps, schools, hospitals, institutions of all sorts, armies and work camps, on ships, in timber-cutting camps in the forests, in factories, in mines. To the old questions: "What will keep the men contented?" "What will they eat, and think themselves well fed?" "How much do we have to feed them to keep them from getting sick?" is added "What foods will give them specific nutrition, suitable for their age and condition, and for the work which they have to do?"

But how is this new knowledge going to be applied? More important still, what will it mean in the home? How can mothers be taught to accept new foods and new ways of preparing them? It is more than a mere problem of likes and dislikes, of good cooking and bad cooking. In our attitude to our food is bound up a whole complex of attitudes derived from our family and our society and

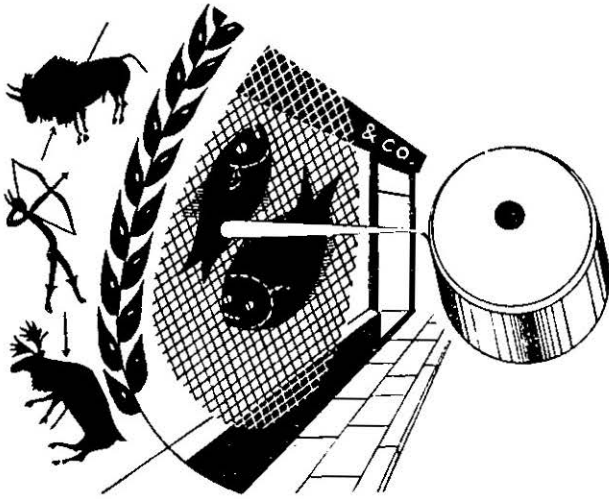
reacting upon them. Each society has its own rigidly determined food habits, its taboos and conventions, its ideas on what is good or bad to eat—these latter may or may not be nutritionally sound, but they have enormous social and psychological importance, and they cannot lightly be disturbed.

Needs today vary all over the world. Some nations have to make do with what they have got, or else starve. In others, diets are changing so fast that there is no fixed tradition of sensible feeding, and individual choices may lead people hopelessly astray; here, it is essential to build up some kind of accepted code. And in others again, it is individual responsibility for sensible feeding that must be developed, through education.

How can needs be studied?

First of all, we need to understand what we might call the "food pattern" of society, the way in which each generation learns it, the natural resources, technical skills and forms of social organization on which it is based. Then, it may be possible to introduce orderly changes, to know where and in what ways the change may be most easily introduced, and how the people can be protected against malnutrition in the transition period. In this way they will become able to take advantage of new foods, new methods of food production, and new ways of preserving it and preparing it for the table. Let us look at these problems a little more closely.





I. HOW DO WE GET OUR FOOD?

The way in which food is gathered, hunted for, fished for, or bought in a shop by one or both parents, and then prepared for the whole family to eat, lies at the very basis of our human civilization. Nowhere in the world are there any people, however simple and primitive, in which each individual simply gathers and prepares his own food. Everywhere there are elaborate provisions by which men and women hunt, fish, gather herbs, garden, farm, or work in other ways for something which can be exchanged for food, to feed the family group as a unit. The protectiveness of the human father, the home making of the human mother are both centred about this food getting and food preparing activity.

This shared and organized food getting which all civilizations have in common has exceedingly important implications for the way in which human beings, in contrast to the wild creatures of the wood, are nourished. Instead of each person eating some food which had become the habitual—and perhaps instinctive—food of his species, whenever hunger gnawed at his vitals, time patterns were introduced into eating. There are meal-times at which the whole family gather, days on which extensive cooking is done, habits of eating once or five times a day, on rising or not until noon. These are different in

different societies. [Even in Britain, whether we eat three or four main meals a day depends broadly on whether we come from the north or the south.]

This "time-patterning" of eating, so that hunger is transformed into appetite which appears at predictable hours for predictable kinds of food, gives human beings much more leisure for other activities—a leisure which is essential for the development of complicated forms of social behaviour. And just as the times at which human beings would be hungry came to be determined by custom, so also which foods would be gathered and stored, which seeds would be planted and harvested, which game and fish hunted and preserved became more and more elaborately determined by social tradition. The more complicated the arrangements became about choice of foods and methods of preservation and preparation, the more each individual's physical welfare came to depend upon the continuance of the pattern in all its details.

A single essential nutrient may come almost entirely from one type of food-getting—for example, fishing—or from one method of preparing one food, as when the calcium supply is provided by a method of preparing maize in lime water, or from a single kind of green vegetable. If social traditions are

broken, these important habits may go too. Hunting or fishing may itself be tied up with some ceremony or calendrical event, so that a change in religious or social habits may mean the giving up of an annual hunting effort, or the neglect of a garden plot which contained some essential food element. [We no longer see the herb-gardens or walled kitchen-gardens of our leisurely ancestors; losses are more serious in other countries where social upheavals have been more violent.]

So each people has developed a different pattern, using only certain of the edible plants and animals, fish and birds in their environment, using them in different ways, and in different proportions. Each of these patterns, which was essential for the continued well-being of the people who practised it, had to be learned by each generation. Whatever natural abilities human beings may have once had to select foods and regulate their own food choices of wild fruits, nuts and game, has been completely replaced by capacities of another sort, the habits learned as children.

Learning within the family

Within the home, and sometimes also in public feasts and ceremonies, children learn what are the appropriate and expected foods which they, as members of their society, will eat. They learn in what proportions these foods would be eaten, whether the usual meal is a large amount of starchy food—rice or taro or tapioca or macaroni—garnished with a little meat, fish, cheese or vegetable—or a piece of meat, accompanied by vegetables, or combinations or alterations in this or other patterns. Children learn not only what they are expected to want to eat but also what foods they will in turn prepare for their children when they are grown-up, what game they will hunt, what crops they will plant, or if they are town or city dwellers, what foods they will buy in the markets, and in the butchers' shops, or, in even more complicated societies [such as ours], in restaurants.

Upon this learning within the family depends the fidelity with which each generation can reproduce the food-getting and food-utilizing behaviour of the previous generation and so in turn guarantee a living diet to the succeeding generation.

We can think then of the family as the nucleus in each society for transmitting these

habits from one generation to another. By methods of trial and error it has thus been possible to evolve a sufficiently well-balanced diet so that those who live on it grow and work to provide food through which others can grow also. In each society children learn in families, and of each it may be said that the family transmits the pattern; but the particular methods by which children learn, as well as the particular foods which they learn to regard as appropriate, vary from one society to another.

Changing food habits

If the food-getting and food-consuming habits of each society were completely unchanging it would be enough to say that the pattern is learned in the family, and leave it at that. But food patterns do not remain the same. Crop failures, pests, epidemics among wild life or cattle, floods, earthquakes and hurricanes, the devastation wrought by invading armies, all alter, either temporarily or permanently, the nature of the natural food resources upon which each food pattern is based.

Peoples migrate as individuals, as families, as large groups, and in the new environment find different food conditions, different natural supplies, different soils and climates from those to which they are used. Social customs which involve changes in food behaviour are learned by the members of one group from their neighbours or from missionaries or traders; people whose main source of meat has been pork may adopt a religion which forbids eating pork, or people who depended upon cattle may adopt a religion which forbids the use of beef, or a new social habit in regard to the use of the horse or the dog for food or towards the use of milk. Such changes in culture may alter the whole food pattern of a people and endanger their nutritional adjustment. When we think of the number of displaced persons in Europe, we may begin to imagine the social adjustments involved today.

Changes in food patterns such as these have been going on throughout history as human societies borrowed from each other, conquered each other, traded and migrated, and attempted to convert each other. In modern times, with the rise of world trade in foodstuffs, the development of the science

of nutrition and the growth of national and international agencies concerned with the agricultural and other food-getting habits of large bodies of people, change has become a matter of conscious planning. Sometimes this has merely been for trading purposes, with the desire to find a new market for some foodstuff, or to import a cheaper food on which to feed labourers; sometimes there has been an attempt to improve the general conditions

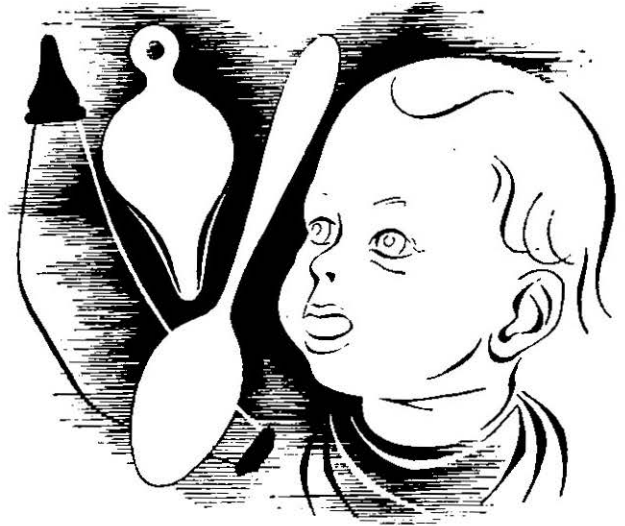
of a population as a whole.

In order to understand the effects which these changes may have on society we need to know in detail how the basic pattern was inculcated in the young, so as to be able to predict the way in which old patterns will change and new patterns be accepted, and what mishaps and failures may occur during the change. This means going right back to the first days of infancy.

2.

HOW

DO WE



LEARN OUR FOOD HABITS ?

An individual's basic attitudes towards food begin with early feeding experience, at the breast, with pre-chewed or mashed food given it in infancy, or with the milk of animals. Food may be regarded by the baby as something delightful which is plentiful and always there, something very hard to get for which it is necessary to fight, something which is uncertain and undependable and about which one must always be anxious, something to which one can respond for itself, or only as a part of the mother-child relationship; and all this depends on the ways in which the child is fed—generously, frequently, grudgingly, sparingly, capriciously, aggressively, etc. Each society has definite patterns concerning

the way the baby is fed, by whom, at what hours, with what foods, in what sequence; and patterns of weaning and of teaching the child to control its desire for food and to reject certain foods altogether.

The kind of strength in adults which makes it possible for them to go for a long time without food may be the result of very generous, ungrudging child feeding; or it might result, by a different process, from an experience of rigid austerity or great meagreness of diet throughout infancy, or be imposed after a very generously indulged infancy. It is not possible to say that any single way of feeding children will result inevitably in certain kinds of habits in adults; but it is possible to say

that the particular way in which children of any society are fed and weaned will have particular importance for the food behaviour of that society.

Thus we find that there is a great difference in the willingness of different peoples to accept public feeding, in armies, in labour groups, on ships, in restaurants. If eating has been tied up very closely with the expression of the mother's love, if she has exclaimed and worried if her children did not eat enough or if they did not enjoy their food, then later in life individuals so reared may feel that food that they do not like is unbearable, giving them a feeling of being neglected and lost.

In those societies where children are expected to eat food that is different from the food of adults, which is more bland, or less appetizing, or less rich, or simply better for them, certain foods will become labelled as appropriate only for children, or something also for invalids. Sometimes nourishing foods will be given up entirely by adult men, to show that they are neither children nor nursing mothers. Some societies take such a moral view of food that they divide foods into those which are good for one, but not good, and those which are good but not good for one. Under these circumstances the whole idea of nutrition comes to be associated with the idea of the performance of an unpleasant moral duty, rather than being a simple, pleasant part of life. In other societies almost the entire sense of security and well-being may depend upon having a sense of continual repletion; children are fed so frequently and often that they feel uncomfortable and miserable without a feeling of a well-filled stomach.

The mother's attitude

Mothers feed their children in a thousand different ways: by accompanying food-giving with activity expressing loving concern, by stern discipline, by capricious use of food for reward and punishment, by rigid scheduling and forbidding all eating between meals, or by popping a titbit into the baby's mouth every time it opens it. But whatever their attitude, those habits will become an integral part of those children's expectations and attitudes towards food. They underlie the way in which they will react to shortage or plenty, to new foods, to absence of particularly familiar foods, to no roast beef on Sunday, no cakes at

Christmas, no yuan hsiao for New Year, no kulich and paskha for Easter. So all attempts to understand the food habits of a people must begin with the way in which a child is fed, by whom, at what times, in what tone of voice.

In addition to the way in which food habits are learned, which establishes the child's basic feeling about food, the child learns to divide the world of available foods into what is food and what is not food. What is "not food" may actually be completely edible and contain important nutrients, but it may be regarded as dangerous, or poisonous, or sacred to the Gods, and therefore not food. People living in a hot climate may avoid fresh fish as too likely to spoil, and carry this habit of regarding fresh fish as not edible over into the modern world where refrigeration is now available.

Conventions and taboos

On this basic division of what is "food" and what is "not food" finer and finer distinctions are made. Some foods are "food for animals" but not food for human beings, and food for animals may be divided into foods for animals regarded as clean or unclean. People who have learned that yellow maize or soya beans are cattle food, or potato peel is only fit for pigs, will not eat these foods, and attempts to persuade them will meet with strong resistance. Offering an unpeeled potato to someone who has been told "Don't eat that, that's for the pigs", with an admonition to eat the skin because it contains vitamins, may be interpreted as saying: "I think of you as if you were a pig."

Then within the food which is seen as "food for human beings" there are usually many other sub-divisions, between food for other people—other tribes, other races—but not for my group. It is extremely common for people to characterize their neighbours by food habits which they find disgusting, as eaters of snakes, dogs, snails, etc. Thus the sense of belonging to one group rather than another, of being Chinese or French or Bulgarian or Argentinian is built up by the knowledge which the child gets that he—as a member of his own nationality or tribe—does not sink to the depths of the other people's food tastes.

In the same way, "food for me" will include what is eaten by the members of my own group, especially on feasts or holidays, or foods on which a sense of great strength or

intelligence may be based.

When the food of which a people are proud the same food which another group despises them for eating, then barriers of shame can be built up across which it is hard for new knowledge to go. Immigrant children will lie about the food that they eat at home ; village children will conceal from the visiting nurse or health educator food habits which they know are regarded with disapproval by the group from which these educators come. Looking down on someone's food habits with disgust or contempt, or failing to share their pride and enthusiasm for some nationally cherished dish, is one of the surest ways of alienating them. Children learn in the family to feel that the food they eat is, in fact, part of themselves, so that other people's attitudes towards their food become acceptances or criticisms of them themselves.

Finer distinctions

In addition to the distinctions between "food" and "not food", food for animals but not for human beings, food for other human beings but not for my own group, there are usually even finer distinctions : food for other castes, but not for mine, food for the poor, food for the rich, food for children, for invalids, for pregnant women and nursing mothers, food for women, food for men. These distinctions begin with the early warnings to the child which has picked something off the floor, or out of the dog's plate or the pig's trough, "Don't eat that, it's dirty", and go on to such explanations as "Tomorrow is a holiday and you will have your first holiday cake, the cake that is only made once a year for the very fortunate and rich." Each of these distinctions is reinforced in many ways, by the disgust in the mother's voice, or the outright note of fear, by the jeers of other children at the child who does not know what he should eat, or who displays in front of his comrades food which they think of as only the food of animals, or lower castes, or the very poor.

By the fury in a mother's voice who complains that her husband brings home such small wages that they have only the food of beggars to eat, by the anger in the father's voice as he asks his wife how she expects him to have any strength on this milksop diet, children learn this whole elaborate pattern ;

they learn which foods define them as the age, sex, caste, class, religion which they are proud or ashamed of being, and so build up strong emotions about them. And not only the food itself, but also the way in which it is prepared and served, the time of the meal, the atmosphere and conversation at meals—all these build up the background for the individual in which he can be himself—a grown-up, not a child ; a real man, not a woman ; a member of his own occupation and class, an orthodox religious devotee, or a rebel against some dietary law or fasting provision.

National differences

The number of such sub-divisions varies between different peoples. There are societies where each caste eats different foods, and the food of one cannot be exchanged for another. There are other societies where the rich and aristocratic simply have more abundance of exactly the same foods as those eaten by the very poor. There are societies, particularly rural communities, in which men, women and children all eat the same food, and infants are given a little of everything on the table. There are groups of people, such as those who have been dependent for their food on plantation work of some sort where their employers fed them, who have learned to subsist on exceedingly narrow, poor diets, but who cling stubbornly to this food as theirs, often more stubbornly than peoples whose diet has greater variety.

The pattern may be so complicated that two sets of cooking utensils are needed to prepare meals of different degrees of sacredness or to keep separate two sets of foods ; it may be so simple that a whole group of people regard fat pork as the only real meat. But everywhere fidelity to the pattern has been, and continues to be, a safeguard for the people who use it. That fidelity depends upon learning the pattern during childhood, within the family, as the child experiences the strong feeling with which parents and brothers and sisters regard their food and other people's food.

Times and seasons

Each society also has a very complex pattern of which foods are to be eaten together, and at what times. Foods which are acceptable in one season may be forbidden in another, regarded as dangerous to health or simply as

unpalatable ; foods for every day are usually distinguished from holiday and feast foods, foods appropriate for one meal may be regarded with virtual abhorrence if presented at a different time of the day. The sequence within the meal is also very highly stylized. Children may learn to eat their soup before their meat, and their meat before their sweet, to drink or not to drink with their meals.

This type of habit fixes a pattern for such things as meat, vegetables, cereal, soup, dessert, appetizer, main dish and garnishes, barbecued meat, etc. ; but underlying this there are subtler patterns of taste, texture, consistency and temperature which are learned in childhood, and are very difficult to alter. Rice or oatmeal may be welcomed as a main dish for one meal and totally rejected at another ; welcomed when cooked to a thick, glutinous substance and served hot, totally

rejected when served in a thin gruel, or cold. If, however, the thin gruel—which will be rejected when substituted for a breakfast cereal or a main dish to be eaten with garnishes—appears instead under the label soup and at the place for soup in a menu it may be again accepted.

While most people learn to be articulate about the main categories of food which they eat and can state quite clearly the appropriate dishes for given meals and occasions, these subtler categories remain for the most part inarticulate. People are unable to tell you why they will reject a given food if it is prepared in a certain way for a given meal. Yet these subtle distinctions determine in early childhood what we are going to expect of our food. Each child builds up these expectations within the family and takes them out into the wider world.

FOOD AND PEOPLE

This pamphlet is the third of the UNESCO series, published in this country by the Bureau of Current Affairs. Two more titles will appear as Current Affairs pamphlets, and three longer articles will be available from BCA in September or October as Background Handbooks. Here is the full list for reference :

CURRENT AFFAIRS (20-24 pages, price 9d.)

Food and People, by Aldous Huxley and Sir John Russell (*published April 2nd*)

Alphabet of the Soil, by Dr. Guillermo Nannetti (*published June 11th*)

The Family's Food, by Mrs. Margaret Mead

UN Tackles the Problems, by J. L. Cramer, based on a draft by Peter Kihss
(*to appear August 6th*)

The World's Larder, by Dr. S. Krolkowski (*to appear in September*)

BACKGROUND HANDBOOKS (48-64 pages, price 2/-)

Too Many People? by Mrs. A. Myrdal and Dr. P. Vincent

Need We Go Hungry? by Dr. C. E. Kellogg

People on the Move, by Dr. Kingsley Davis and Dr. J. Isaac

3.

WHAT CHANGES ARE NEEDED?



If we looked only at the old traditional habits of eating and cooking, which existed for many centuries before modern industrial processing of food, we could say that each distinctive food pattern had proved its survival value. Great civilizations were built, millions of people have lived and married, children have been born and brought up, on diets which show very great differences in the proportions of carbohydrates and proteins, in the type of protein, in the use of animal products such as milk, cheese and butter, and in the variety of foodstuffs on which they depended. The basic food may have been rice or potatoes, wheat or maize. It is possible to show that many of these diets did not permit the populations who ate them to grow as tall as they are able to grow on a better diet, or resist disease as successfully; but they survived.

However, there are different problems where the national diet is changing rapidly, especially through the introduction of commercially processed foods. Here the pattern handed on so faithfully through the generations—the new wife cooking what her mother cooked, pickling and drying, salting and bottling according to the recipes of a long line of female forebears—can no longer hold the children safe as it did in the past. The mother may still make a pancake for the children,

and feed them in the same proportions, at the same meal, with the same expression on her face and the same loving gesture of her hands. The child may be taught to roll the pancake and dip it into its sauce with the same time-honoured gesture. But the pancake may be no longer made of maize which has been soaked all night in lime water, thus guaranteeing a full supply of calcium; instead it is now made of highly milled white wheat flour. The new pancake tastes soft and smooth; but it no longer carries the nutrient which has protected the calcium supply for generations. Unless some new calcium-bearing element is introduced into that diet in which the traditional maize pancake was the carrier of calcium there will be real malnutrition.

And what is true of the introduction of white flour into pancake making is true also of the change from locally pounded rice to industrially polished rice, from the "black bread" of the European peasant to the white bread made from highly milled flour. Or again a people who formerly depended upon some other grain may substitute maize; and here the danger comes not from the method of processing, but because maize, if the mainstay of the diet, brings with it the danger of pellegra; it is a much less reliable diet. Changes in diet may come about as people move from the country

to the city, and have no space for their old methods of preserving food ; they come to depend instead on more quickly prepared or more expensive packaged foods. Thus we find peoples in the Caribbean rejecting plentiful native fruits and eating instead very expensive canned pineapples.

Learning new ways

In the past history of the human race these shifts and alterations in diet have occurred without any purposeful intervention. Men planted and reaped and sowed, women prepared and preserved and cooked foods as they had been taught to do, adapting as best they could to new fashions, new religions, which brought new food prohibitions. In parts of eastern Europe it was notable at Easter that those who followed the Orthodox faith were weak from fasting, from giving up eggs, milk, cheese, meat and fish. In the newly industrialized cities of China, little boys were imported from the country and fed on rice prepared several days before ; after a few months they died and were replaced by others. On the sailing ships of the eighteenth century men died of scurvy until it was discovered that the juice of fresh limes protected them.

Sometimes people learnt new ways of protecting themselves from the dangers of changed foods, loss of old foods or old ways of preparing them ; sometimes the discoveries were not made, or, if made, were not put into practice, and so many people died. The families continued to teach the children the old ways, and in time learned the new ways and taught them, too. But this took time, for mothers of the new generation could only follow the customs of their mothers and grandmothers, adding perhaps the new ways brought by women from other countries, or learning from strangers in the new countries into which they moved. On the faithfulness with which they taught their children what was food and what was not food depended their children's survival ; but they were only links in a chain. Sometimes what they could practise and teach was sufficient. At other periods in history, at other places on the earth, it was insufficient, and so the children died, and the people who lived lacked the strength to do heavy work or to resist disease.

With the development of the modern science

of nutrition the whole situation has changed. Food is still prepared in the home, or at least it is the housewife who must go to the store and make the final choice of what she will give the children to eat. In the home, children still learn what is food and what is not food, what is food for others but not " food for me", what is food for a morning meal but not food for an evening meal, what is food for a feast day and food for the day when the meal must cost as little as possible. Later, when they go out into the world, to eat in restaurants and cafeterias, at roadside vendors' stalls, from lunch baskets packed by wives, from communal soup kettles or food wagons brought to plantation workers or road gangs, they will carry with them their earlier habits.

Can science help ?

But they may come across completely different kinds of food and new food patterns. The mother in the home and the restaurant owner, the school caterer and the canteen manager, now find a new kind of knowledge available. For this new knowledge to be put in practice the scientists must be able to appraise the nutritional value of any diet, of any meal, or any single food in a diet ; they have to know many things about the methods of food growing, food preservation, food preparation and food serving of any group of people, and about the way in which children are taught to eat in the home. They do not depend on laboratory work alone. Social facts matter, too. It is not enough to have a list, with weights and species, of what foods are eaten—so many pounds of rice, so many pounds of meat or fish, such and such bulk of salad leaves or root vegetables, so much animal fat, so much vegetable fat. Such a list will only give a very rough idea of whether any given group of people are being properly nourished.

To give the housewife or caterer the help she needs, the nutritionist needs to know first where the food is grown, the nature of the soil, and the feedingstuffs given to cattle or to fowls. Next, it is necessary to know how the food is prepared for storage ; highly-milled rice and wheat keep far better than those which are milled less highly, but valuable nutrients are lost in the process of preparation. There is all the difference in the world between rice pounded each day in a wooden mortar

in a mountain village in south-east Asia, and rice milled and shipped in bags. Nuts, fruits, vegetables may be dried, or pickled, or preserved in ways which destroy every vitamin in them, or in ways which preserve their vitamin content in different proportions.

The mere accident of the destruction of great pickling jars in remote Chinese villages may alter drastically the diet of the people who once threw vegetable scraps into such jars. Two walnut pickles may taste very much alike, yet one be made by a seventeenth century recipe, one by a nineteenth, one preserve valuable vitamins, one destroy them. Only a knowledge of the actual way in which foods are preserved for winter use, over short periods, or in bulk storage from which the housewife buys in the market, will make an estimate really accurate.

Then comes the actual way in which the food is cooked in the home. Here all the dearest traditions come into play; women attempt to reproduce the way in which their mothers cook, and men find one of the elements which bind them to their wives to be the repetition, by their wives, of their own memories of the food served to them by their mothers in childhood. In practically every country in the world, women's self-respect and men's respect for women depend largely upon the way in which they select, prepare and serve food. Yet many of the national methods of boiling, baking, frying, toasting, roasting, stewing, while preserving the bulk of the food, and often producing dishes which are delicious and palatable, actually destroy some or all of the most valuable nutrients in the foods which are prepared in these ways.

To be sure of just what nutritional elements are really being provided by the given meal it is necessary to know in detail how it was cooked, at what temperature, for how long, how long the food stood before it was eaten, at what temperature and under what sort of conditions. Some families will cook once a day and let the food stand, perhaps uncovered; in other societies a stew of greens is put on to cook for four or five hours, while the mother is in the fields; others may roast over an open fire so that all the fat is lost. Each of these well-worn domestic habits carries with it, potentially, better or worse nourishment for the family which will eat that food.

But even if we know the soil and the animal

food, the conditions of storage and processing, the methods of preserving and preparation and the habits of serving, there is still more that it is essential to know about the habits of the family. How is food apportioned among members of the family? Some peoples save special foods for pregnant and nursing women, but other peoples have prohibitions like the refusal to let a mother eat any protein—meat—for weeks after she has borne a child.

Among most peoples where infants depend on their mothers' breast milk, infants are also fed pre-chewed or mashed foods to supplement their mother's milk. But when the idea of bottle-feeding by timetable is first introduced, sometimes this in turn affects the habits of breast-feeding, and infants who are breast-fed may then be reared entirely on breast milk. Where the mother's diet or milk supply is inadequate, this may mean severe malnutrition. It is not enough to know that infants are breast-fed, but it is necessary to know the diet of the nursing mother, and the extent to which the breast milk diet is supplemented and with what. Are the best foods given to growing children, or are the foods with most essential nourishment kept for adults? The average *per capita* consumption of meat or milk or cheese tells us very little about how a population is nourished, unless we know the age and sex and status of those who eat or drink these foods, in what proportions.

Family food habits

Nutritional surveys made during periods of severe unemployment [including several among British miners] have shown that miners' families could not be purchasing an adequate diet with the pittances on which they were living. Yet surprisingly enough examination of the miners revealed them to be adequately fed. What was the explanation? No one had yet realized that the family habits of sharing out the food, with the lion's share going to the working father, meant that poverty and insufficient food would be reflected, not in the immediate condition of the father, but in the condition of the children and most of all of the wife. The opposite may happen when the whole family eat the same diet, just enough to maintain life if no heavy work is done, and one member of the family is called upon to do very heavy work. The diet which has enabled

the rest, to survive may not be enough to protect him from going into a severe coma from lack of an essential nutrient. It is also necessary to know how the old are fed, with the best bits or the worst, in order to estimate what nourishment each individual will receive from the known food supply of a family. The high death rate among adolescent girls which tends to disappear in countries with better balanced diets, may be associated with ideas that young girls should cultivate dainty, capricious appetites.

In order to judge the actual nourishment the members of a family receive, it is also important to know how the children are persuaded to eat; if they are permitted to refuse foods, to develop a great number of likes and dislikes, to concentrate only on certain dishes, this may throw an already precariously balanced diet completely out of line. In some societies small children are severely disciplined and forced to eat everything set before them, or to eat and drink food disliked or looked down upon by adults. This home discipline may then be relaxed when the children go to school, or it may continue until they leave home as adolescents

and show their independence by refusing to eat the foods enjoined on them in childhood. If those childhood injunctions were nutritionally sound, this may mean that adolescents, who need special nourishment, may be one of the worst nourished groups in the population. Just such deficiencies have been revealed by studies made among university students who come from homes into which nutritional knowledge has penetrated.

It has also been found that in some areas where food is very scarce mothers make up for the poor quality of the food by catering to each child's taste, cooking the same food in two or three different ways, and making each child feel there is a personal relationship between himself and the food he likes or dislikes. One child in such a family may eat well, another very poorly, while an account of the general dietary pattern would give no clue to this. So in any planning for change or improvement in a diet, all these differences must be taken into account. Adding extra food to the family's diet may not mean that it reaches the age or sex who need it most, unless old habits of favouring the father, or the favourite child, are changed.

4.

HOW CAN THESE CHANGES BE BROUGHT ABOUT?

While all basic changes in food patterns must depend on the attitude to food developed in the family, there are a variety of short cuts for making changes in the diet of a whole segment of a population, or a whole age group, without necessarily tackling the "family" end of the problem first. Thus within the family the children continue to learn that bread should

be white, though this teaching is inherited from a period when white bread was the food of the castle and black bread of the cottage. Meanwhile State action sees to it that the important nutrients which have to be milled away, in order to make the white flour, are artificially restored again; the resulting "national" bread is again somewhat more like the old whole

grain bread. Similar experiments have been tried with rice, and with maize, where a people were suffering desperately from lack of the nutrients which might easily be added to grain, and attempts to change their food preferences had proved unavailing.

Another "short-cut" method of making nutritional changes where these are needed quickly is by introducing some new food into a place already prepared for it in the diet [whalemeat may be provided when the meat ration runs short]; a new vegetable may be introduced to take the place of a similar one in the meal pattern [or "Food Facts" may put out recipes which use more nourishing ingredients without materially altering the taste and texture of a given customary dish]. These are the first, ready-made expedients, for urgent needs.

A second method of changing food patterns can only take effect in the next generation. School children can be introduced to new foods, in carefully planned school meals, combined with teaching the girls about the new meal patterns in their lessons. The school meals are a way of teaching both boys and girls what to eat, what kind of meals to expect and accept, while the teaching of the girls is a way of teaching new patterns to the housewives of tomorrow.

Two ways of doing it

It is clear that there are two lines of approach to permanent changes in attitudes towards food. We can change habits of eating, and we can change the habits of those who plan and prepare the food.

Those who plan and prepare the food are in a key position. They control the channels through which food reaches the table. To convert the dietary pattern of any people from a traditional pattern, inflexible, rigid and difficult to change, into a new and flexible pattern in which new or unfamiliar foods can be substituted for accustomed ones in the case of food shortage or famine, it is necessary to identify those who control the pattern, those who set the styles. In a simple agricultural community the most respected farmer, if he comes to realize his responsibility, may be able to introduce a new crop, begin keeping goats for milk, or stock his pond with edible fish.

It may only be necessary for those whose task it is to try to introduce a better diet to under-

stand who the local agricultural leaders are, and work through them. The pattern of food preparation inside each farm home may then be such, that whatever is grown in the garden comes automatically to the table. Or it may be necessary to bring in the housewives too, to introduce some new recipe for preparing the new food.

Where foods are imported and processed [as in many Western European countries] quite different methods of change may be necessary. Here the best start may be with situations like school meals and devices through which new foods, or old foods prepared in new ways, reach the schools first. Only later, after the children who first ate them are grown, do these become part of the family diet.

Again, the problem may be one of distribution in market or shop. In many remote and rural regions, the crucial factor in the use of some nutritionally valuable food is whether or not it can be obtained at all. Sometimes the shift can be made even farther from the home, as when the importing pattern of a country is changed, and a new cereal [or even a commodity like "Spam"] can be introduced on a large scale.

But all of these changes, important as they are, can have little final reflection in the lives of a whole people, unless the housewife who chooses, buys and prepares the food, accepts the new food, or the new method of preparation, and puts it into practice. She may use food as an expression of her maternal love, or wifely devotion, or withhold it as punishment, or arrange it in such a way that she shows that all sensible children will inevitably enjoy it, or present it as a disagreeable duty, something which has to be eaten; and in these ways she lays the groundwork within which individuals accept and reject, enjoy or merely tolerate each food in the dietary pattern.

Into the home

In each society in which those concerned with the health of the people wish to make changes in the dietary pattern, a way must be found to reach the millions of women, cooking supper over gas stoves and wood stoves, over charcoal braziers and open fires, over kerosene flames and glowing coals, in iron and aluminium and enamel and clay pots,

by electric light, or gas light, or candles, or rush light, or no light at all except that of the fire over which the food simmers. The problem varies throughout the world.

We must recognize that there will be a great difference in what we ask of these mothers, depending upon the state of the food supply of the country in which they rear their children. In those countries where food is scarce, and some essential nutrients come from only one or two foods, the mother must, whether she uses love or punishment or indifference, bring up her children to follow the dietary pattern faithfully. She cannot, without great risk, let her children grow up with fads and fancies, for the penalty will be real malnutrition.

The need for adaptability

But in those countries where there is both plenty and variety, the mother has a different task. Here a rigid pattern is out of place, and instead her children's safeguard will be a lively, flexible response to food, in vivid enjoyment of some foods, and repudiation of others, in a willingness to experiment, to try new foods, to shift and to change. Her children will eat in cafeterias and restaurants, in all sorts of strange situations in which they will have choice, and their choice must be more flexible than in societies with a traditional diet close to the margin of survival. While some mothers, therefore, must watch anxiously, and persuade their children to eat up every scrap, others—where food problems are different—must be alert to see that a child learns to know his own capacities, knows when he has had enough, knows when he can, safely, eat three helpings.

Training according to needs

We can sum up the different types of food training which are needed in different parts of the world, according to the different ways in which infants are fed. In primitive and very simple societies, infants are breast-fed, and without their mother's milk, or that of a neighbour or a wet nurse, they will die; they must learn to nurse; mothers must have milk, mothers must get their milk back after a bout of fever. And they do. They survive because there is no choice.

In societies in early stages of modernization and change the problem is very different. Whether they be modern industrial cities, or immigrant groups newly come from some

peasant society into a modern setting, bottle feeding according to recipe replaces the less certain breast; this can supplement the milk of the mother who has too little, or take over when the mother is ill. And with the recipes and the bottles come new rules, feeding timetables for the baby, measurement, sterilization, pasteurization. Bottle-feeding, unless meticulous attention is paid to time and amount and cleanliness, is not only not safer than breast-feeding but actually less safe. It gives more control of the diet, but tends to be rigid.

Finally, in modernized countries, where the food supply is also generous and varied, and the child must be prepared to find his own way in an extremely varied and changing world, "self-demand feeding", or feeding in which the infant himself sets the time and amount—as he often did in simple societies—may again be introduced, to bring up a child who will know his own way around an unpredictable world.

In the world today, all of these needs exist at once—the need for absolute acceptance of whatever food is available; the need for building up new traditions where diets are changing fast; and the need for developing individuals who are so attuned to their own bodies that they themselves can safely choose what they will eat.

The economic factor

Although needs are so varied, there is one common factor. In the great majority of families, the mother must make too little money—or too little food—go as far as possible. This simple fact is the great point of leverage through which dietary changes can be introduced. For once the mother has harvested, stored, preserved, pickled, bottled, dried, salted the food, or walked five weary miles to the market and traded there all that she has to trade, or taken the few shillings or dollars or talens or pesos to the shop and bought a meagre supply of food, then she is committed by the inexorable nature of her task to getting that food eaten.

The housewife's task

She will welcome every help, every suggestion which ensures that the food so laboriously, so expensively provided, is consumed by her hungry brood. It is here, when the food is in her kitchen, that she can take and welcome help, from nutritionists, educators, radio

broadcasters, recipes on boxes, talks at the village school. Getting the food into her larder depends upon agricultural patterns, import patterns, distribution patterns which can be

affected in many ways, at other levels. Getting it prepared and eaten depends upon the very nature of her task, to feed her children well—on the little that she has.



FOR FURTHER READING

Introductory Reading on Nutrition :

Callow, A. B. *Food and Health* (Oxford University Press, 1938, 7/6).

le Gros Clark, F. *Feeding the Human Family* (Sigma Books, 1947, 7/6).

Details of author and publisher were unfortunately omitted when a map from this book was used on page 7 of Current Affairs No. 84, *Alphabet of the Soil*.

Mottram, V. H. *Food and the Family** (Nisbet, 1938).

Plimmer, R. H. A., and Plimmer, V. G. *Food, Health and Vitamins* (Longmans, 1940, 5/6).

Food in Britain :

Bourne, G. *Nutrition and the War* (Cambridge University Press, 1940, 5/-).

Cons, G. J. *Britain's Food* (Univ. of London Press, for Cadbury's, Ltd., 1946, 1/3).

Designed for schoolchildren.

Drummond, J. C., and Wilbraham, Anne. *The Englishman's Food ** (Cape, 1939).

A historical survey.

Marrack, J. R. *Food and Planning* (Gollancz, 1946, 15/-).

Orr, Sir John Boyd. *Food and the People* (Pilot Press, 1943, 4/6).

Out of print, but should be obtainable through libraries.

Four useful film strips on nutrition :

Food and Health; *Carbohydrates and the Calorie*; *Fats and Proteins*; *Vitamins and Mineral Salts*. All these are approved by the L.C.C. for use with senior forms, and are available on loan (for London schools only) from the School Equipment Division at Stockwell. Any school can, of course, buy them direct from the makers, Common Ground, Ltd., or through E.S.A. Price 15/- each, complete with teaching notes.

NOTES FOR DISCUSSION

Through a man's stomach . . .

One would think that food, its preservation, preparation and consumption, would be a subject not calculated to rouse any venom in an average discussion group. But this pamphlet quickly shows that, on the contrary, Taboo and Tradition are deeply ingrained in our attitude towards food. Many people, however, will not be convinced that their own behaviour is anything but proper, and the initial task of the group leader might be to establish the fact that we are irrational in this respect. Here are three headings for discussion :

(a) *How have we acquired our food habits?*

A way of beginning would be to prepare a very carefully considered menu, containing a number of apparently outrageous dishes served in a highly unusual order which are, in fact, satisfactory from a nutritional point of view. Each member of the group is now handed a copy and his reactions invited. Some of their observations are more than likely to reflect the deep-rooted prejudices inculcated from early childhood. These could now be examined and would enable the leader to develop the theme of how the food-patterns of a family, village, country or class are built up. How many meals a day do we have or ought to have? (pages 5 and 10). How many of our dishes are traditional as distinct from rational? (pages 6 and 8). What dishes do we consider as suitable for special occasions and why are they not part of our normal meals? (pages 6 and 9). Can we give examples of food we have grown to like or dislike because of the attitude of our parents to it? (pages 6 and 8).

Here the group leader might well elaborate, giving information of past societies, the effects of migration and travel, and of religious customs, etc. (pages 6-7).

Humbled, possibly, by their own emotionalism, the group might be prepared now to consider the question more scientifically.

(b) *Are we making the best use of our food?*

Do we lose valuable nutritional substances by cooking? (pages 11 and 13). Do we buy expensive and not very nutritional foods in preference to local, but more sustaining, commodities? (page 12). How do we preserve our food?

(c) *How can we improve our habits?*

Can the farmer help? The nutritionist? (pages 14-15). Do we approve of Government intervention—protection of bread, introduction of whale meat, etc.? (page 15). Should more be done in this direction? How can we change attitudes in the schools, canteens or homes? (pages 15-17).

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