method of handling bread, it does not matter how carefully the bread is made, for waste will result, and then, what is done with the stale bread? Of course, there is waste in bread even in a small family and, unless carefully managed, this waste will accumulate very rapidly, but if proper care is exercised, there should be no bread thrown away, for crumbs, even, if clean, can be utilized. We use our stale bread in the manufacture of a cereal drink; a food drink that can not be compared with any other cereal coffee or food drink on the market. I will explain to you later on how it is made.

The handling of dried fruits is an easy matter, if done right. When you receive a supply of fruit, examine it first, and if you are in doubt as to its quality, take a sample of each, put them in a vessel, pour cold soft water over it, and let it stand over night. The next morning you will be able to determine whether or not your fruit is up to the standard. If the fruit is moving, you will find all the worms floating. If the fruit is poor in itself, you will easily discover it. Always keep dried fruit in a cold, well ventilated room, to keep flies and millers from it.

Always open a can of a new supply of canned goods to see if it is what it should be. Never open canned goods of any kind and place its contents in a tin, or tin pail, or let it stand in the same tin can it was put up in, nor put your canned goods in a kettle without boiling at once. These are the most important rules to be observed in the handling of canned goods.

Cereals, such as oatmeal, cracked wheat, barley, hominy, rice, cornmeal, etc., should always be thoroughly looked over to see if they are right when received in the kitchen. If they are satisfactory place them in a cool, clean place. Cook your cereals slowly. If cooked over night it is best, with the exception of rice, and rice should never be cooked with a cover over it.

To achieve good results in the distribution of food in our institutions depends largely upon the facilities, and good management: It depends materially upon the distance the food has to be carried, and the number of dining rooms to be supplied. When I speak of facilities, I refer to proper cooking utensils and room, in fact everything pertaining to a first class culinary department. Substantial tables, large enough to hold all the trays necessary in which the food is to be distributed, should be provided, and so placed that the food trays put upon them may be conveniently handled, say within 8 feet of the kettles or range. Each assistant should have his post, as one for meat, one for vegetables, etc.; the work should go like clock work, and very quietly. The chef should be at the head of the table directing the placing of each tray in its proper place.

After the food has been distributed to the different food trays, they are placed upon the meal cars; carefully looked over in order to see that everything is placed in its proper place, and that nothing has been forgotten. I have found this very important. One mistake sometimes is apt to delay you 10 minutes at the elevator. Never let your meal car start from the kitchen without being sure that everything is in its proper place.

To successfully adjust the system of distributing food, I have found that alternating the assistants at least once a week, allowing each cook

to become proficient in all the details of the work, any one would be able to take any place called for in case of sickness or absence.

I wish to say just a few words in regard to distributing bread to the different dining rooms. In our institution, no bread is delivered except upon a written order, previously given to the house steward or baker by the waiter or nurse in charge of the dining room. The bread order states the amount of bread required, together with the number of the patients. Each waiter or nurse in charge of the dining room is held responsible for any waste of bread, or other foods. We have found this rule to be very practical. I want to explain to you now how we use our stale bread that is otherwise strictly clean and good: Keep your bread in the bread boxes. If there is any waste bread, have it sent to the kitchen in a separate tin. As soon as there is a sufficient amount of waste bread accumulated, put it in dripping pans placed on shelves on top of your range, and let stand over night. The next morning it is sufficiently dried to grind up in any shape you wish. With a Quaker City Bread Mill you can do the work. When ground, put in a clean barrel, cover well and your bread crumbs will keep for weeks and you can use them for a good many purposes. We use the most of ours in the manufacture of a cereal coffee, and you will save a good many dollars in cost of coffee, and, best of all, you are giving your inmates a healthful, nourishing food drink, a drink that no cereal company or coffee company can furnish you. Of course, to start in serving cereal coffee, to those who have been in the habit of getting the berry coffee, you must remember there is somewhat of a change in the flavor, but to overcome that on the start, and get your patients accustomed to the new drink, take half berry coffee and half cereal coffee, and in less than a month you will be able to serve cereal coffee straight, by gradually cutting down the berry coffee. Now then, you are saving your bread and giving your inmates a food drink that I believe is better for them than all the coffee you may buy.

THE HANDLING AND DISTRIBUTION OF FOOD FROM THE STANDPOINT OF THE DINING ROOM.

(E. Childs, School for Feeble Minded.)

Some one has said "Show me the kind of food a people eat, and I will tell you their character." Another has added with equal truth, "Show me the way a people dine, and I will tell you their rank among civilized beings." With us all this is an unconscious method of judging the refinement of our neighbor, and it is not without foundation, ethical, physiological and psychical.

Obviously the question of serving of food has developed as naturally as other phases of living in the growth of civilization from the time when the whole family ate from one large receptacle, probably the one in which the food was cooked—to the complexity and high standards of the present day rquirements of food service.

Looking at it from the ethical standpoint, which is of oldest consideration, we are reminded of the ancient custom of serving food in connection with religious rites; the demands of hospitality; and finally the intricate

rules of etiquette applying to the dining room of the modern day, including the methods of setting the table, serving of food, and the actions of the people themselves.

The physiological and psychical questions are closely interlinked; the effect of surroundings on the psychical and the effect of the psychical on the physiological.

It is a well established fact that strong mental emotions or any excessive excitement inhibits digestive functions, thus, quarrelling or worrying at the table is out of place, not only from the ethical standpoint, but from the physiological as well. On the other hand, pleasurable emotions effect digestion favorably, whence the physiological foundation for the expression "To laugh and grow fat." The happy influence of cheerful conversation and congenial company at meals is well known.

Consideration of the psychic effects of attractiveness of surroundings and food on the digestive processes is of vast importance.

"Most of us have experienced the delightfully comforting little thrill of anticipation that one is sure to feel on entering a first-class cafe, tired and hungry. In winter the place is so suggestive of warmth, a little world of physical restoration, shut off securely from the chili gales. If it is summer the wide room looks so cool and inviting with its electric fans, its white tables and shining glass and silver and its ferns and palms. The waiter, too, so readily at hand is promise of a care-free hour to follow. One sinks into one seat and takes up the menu card with a satisfied sense of being utterly at peace with existence." But how few realize all the work and planning required behind this order and comfort?

First to be considered is neatness, which takes for granted perfect cleanliness, the dining room, furniture, china and table linen as well as the food itself. When a large number are served a dishwasher should be installed, as this is the only sanitary method of caring for the dishes, especially where efficient help are unobtainable. Racks, which hold the crockery and yet keep the pieces separate, are placed for a few moments in a tank of boiling soap suds, the water being forced around and gradually draining off at the top with the grease and dirt. The dishes are then plunged into another tank of clean boiling water from which they emerge clean and sterilized, and so hot that they soon dry themselves. The fact that the dishes are sterilized is of particular importance to institutions where so many diseases are at all times present. The dish cloth, a breeding place of germs and a necessary evil in washing dishes by hand, is dispensed with in the mechanical dishwashing.

While spotless white linen is the ideal table covering, in dining rooms for helpless and irresponsible patients, white oil cloth is practicable, as it is easily kept clean—even this is sometimes ruined by destructive patients.

A thorough system of ventilation is necessary to ideal conditions. If it is not adequate to secure this condition, the windows should be thrown open previous to or during each meal, when there are many in a dining room. We all know how the fresh outdoor air whets our appetite, so it should be brought into the diningroom as much as possible. To go into a close, ill-ventilated dining room for breakfast would destroy what appetite one

had at that time. The temperature of the dining room should be about 68 degrees at the beginning of the meal.

Simplicity should be a guiding note. Furniture should be of good design—necessarily plain and substantial for institutions.

Decorations must be artistic as well as simple. A few well-chosen pictures on the wall or flowers, which must always be fresh, on the tables add to the attractiveness and are greatly appreciated.

The whole atmosphere of the dining room should be restful. The jarring and confusing sounds and odors of cooking from the kitchen can be kept out by having the serving room between the two. Noiseless, swinging doors should connect them. Chairs should have rubber pads on the bottom of legs to avoid noise. The serving should be done as quietly as possible.

Precision in arrangement of furniture, silver and china add to the general tone of restfulness and should always be observed. The lines formed by arrangement of tables should all tend to provide a harmonious effect.

The complexity of setting of the tables depends on the class being served. For the helpless or irresponsible class only the simplest service can be used. A large plate for the dinner, bowls for soup, cereal or puddings, a cup for milk, tea or coffee, a spoon and a napkin are all that are necessary. Forks and knives can not always be used by these patients. For the normal, the "cover" is more complex and should approach as near as possible what would be used in ordinary families. The conventional arrangement of the cover for normal people should be as follows: The plate should occupy the center of the cover (the place reserved for each person) about one inch from edge of table; knives with the blades turned toward the plate, at the right, forks at the left, spoons at the top (meaning toward the center of the table). The glass at the top of the knife, the butter plate at the top of the fork and the napkin at the left with the corner side opening toward the plate. Salt and pepper above the spoons.

The china used in institutions needs always to be substantial, there being so much unavoidable breakage. In army stations where strict military discipline is exacted of the attendants at the table all breakage is charged to the person at fault, but this could hardly be practicable in an institution.

The Stransky ware has many advantages over the coarse, heavy china, ordinarily used. It is so much lighter in weight, easier to clean and does not stain as does china. The cups, especially, are so much more convenient than the china which have no handles and are so awkward to drink from. The only disadvantage of this ware is that it will chip to some extent and there is a possibility of the chips getting into the food.

Of great importance to all dining rooms is complete screening in summer. Not only are flies a nuisance and most unattractive but they are dangerous as germ carriers.

In charge of every dining room should be an efficient housekeeper or nurse, preferably one who has training in food values as well as actual experience in food service, for half of the success of a meal is dependent on good service. Taking for granted that the food reaches the dining room well cooked, hot and in good condition, of right quantity and all, it

may turn out to be a poor meal. Some patients may not get enough and others too much. The person in charge must carefully guide the dishing out of the food for separate tables, know the quantities needed for different ages and classes and must give careful surveillance to the serving of the whole meal, studying the individual needs as much as possible. The containers of food must be kept hot and carefully covered. The steam tables are most excellent for this. For employes' dining rooms, the meat can be carved while right over the steam and the individual plates can be served directly from this. There should be a warming oven for the dishes. A common error to be guarded against is putting hot food upon cold dishes, thus making it luke warm and unpalatable. If steam tables are not available, the dishes can be put into hot water and wiped dry.

Serving of the food onto the tables should be done as shortly before the meal as possible. There is often a tendency to allow the food to stand on the tables so long that it is apt to become cold before being eaten. The Greenwood ice tub is excellent ware for retaining heat where much food needs to stand on table before being served.

Great care should be taken that food is not spilled on the edges of dishes or coffee spilled on saucers.

Such articles as milk and butter should be kept cool and covered. Although it is considerable work to make butter into individual pats it should always be done as it invariably occasions a saving without depriving those who require more than others, as extra pats can be used. It is also much more attractive served this way. Machines can be used to advantage in cutting the pats. Webster's for example. For the helpless the butter has to be spread on the bread beforehand.

The use of ice in serving demands careful consideration. How many people use ice in water and various other articles without giving a thought to the origin of the supply. One cannot be too careful in this, as it is so often a medium for the typhoid germ. A water-cooler in which the water does not come in direct contact with the ice is a wise investment for a large dining room.

It goes without saying that not only the waitresses, but also every person who enters the dining room for a meal, should have freshly washed the face and hands, combed the hair and dressed themselves neatly.

Punctuality in serving meals should be carefully observed, for an appetite ready at the accustomed hour may fail if the meal is delayed. There is much unconscious habit in regard to eating. Plenty of time should be given to meals—at least 30 minutes for dinner and 20 minutes for breakfast and supper.

We might speak a little further of service in sick room. Food for invalids cannot be too daintily served. The surroundings and circumstances under which food is taken have a great deal to do with the comfort of the patient. The fitful, fastidious appetite of the invalid is whetted by the appearance of a little meal daintily served, while the presentation of a large quantity turns him for the time against all food. So also is a sick patient's appetite destroyed by carelessness of the nurse who tastes food in patients' presence or with his spoon, or serves food with unclean hands. Untasted food, dishes or glasses which have been used should never be left in room. As attractive china and linen as available should be used for the invalid's tray, and food served in courses if possible. Twice cooked food should never be served.

One phase of the dining room service which should receive more careful attention is the waste. For bright patients who can discriminate In foods, side dishes should be used for meats and vegetables. Several articles of diet heaped together on one plate is unappetizing as well as wasteful for the articles not used might be returned to kitchen with any quantities left in the serving dishes. So many such articles are carelessly thrown away, when they might help out considerably as extra dishes that are often needed for the working patients. By doing this a little more variety is given to the diet, which point should always be emphasized as it is the unexpected that tempts the appetite. Waste is more unavoidable in institutions than in small families, for the employes usually lack training in the subject of proper utilization of food or are careless and irresponsible and here too there is not the incitement to economy as found in the home.

Frequently, too, there are no conveniences or facilities for economizing. Sufficient small dishes are seldom convenient for receiving these leftovers. Often cooks are too rushed to be able to give attention to these small details. Refrigerators are sometimes not handy or large enough.

There is often much bread wasted; for helpless patients who have poor teeth, crusts of bread can be steamed, and the pieces left cut up and toasted for soup.

Plenty of space in the serving room and everything in its place are requisites for good serving. Proper understanding of placing of articles in ice box is necessary, as, having milk and butter where they may receive the first current of air coming from the ice, since they absorb odors so readily.

There are many large institutions aside from state institutions from which we might draw many suggestions. For quick and effective service and model serving room equipment, Memorial Hall at Harvard University, where 1,500 students are served daily, furnishes a good example of the room and partially partitioned off by this is another section of the.department—tables loaded with piles of dishes. Beyond this the dish room where the dishwashing is done by the "twentieth century" methods.

An interesting and ideal method of serving is presented in the Battle Creek sanitarium. Bills of fare are used giving the figures for the amount of fat, protein, and carbohydrates, and heat calories furnished by each 'portion" of food, by which is meant the usual quantity served each person. These have been analyzed and weighed once and accurate measures made for dishing out these articles so that each portion thereafter served is approximately the same. Each person, having had his diet prescribed for him by the physician as to kind and quantity, chooses his own menu for each meal from the bill of fare offered, by figuring out the prescribed amount of calories, etc.

Such a process would of course be impossible in state institutions, but it offers a valuable suggestion—of having more accurate measures for dishing out the individual portions than are often used. It is described as follows:

"Shining whiteness and cleanliness exist everywhere. Ingenious modern contrivances meet all sanitary and speed demands. Dumb waiters bring the food up from the kitchen and bakeshop. A series of big tanks in graduated sizes for coffee, cereal coffee, tea, and cocoa, stand in a row near the entrance to the dining room, and at right angles to them is the long booth with six compartments for different kinds of ice-cream and sherbets. All the appointments are so arranged that more than a hundred men can move about in the spaces between the tables and racks without hindering each other and serving the food with the utmost speed." The room may be said to be divided across the middle into two rooms, for the opposite ends are exact duplicates of each other, a feature which is of greatest advantage in dealing with a dining-hall so long as Memorial Hall. The dishes are kept in iron racks with sliding iron doors, each kind of dish in its own especial compartment, so that no confusion can take place during the moments of greatest rush.

A great many people are guided by their taste in the selection and quantity of the food they eat. Many inmates of institutions can not be expected to exercise any such judgment. In fact, many of them would keep on eating as long as anything was set before them, while on the other hand there are a few who would take scarcely any food at times if not encouraged, and too much food is as harmful as too little. Thus a great deal rests with the attendant or nurse who serves them to see that they are properly nourished, so it is most important that these attendants are thoroughly acquainted with the patients, and have some knowledge of the quantities of food needed.

Patients should be classified by table or ward, and a physiological standard of diet made for each, so that each class can have the nourishment best suited for his particular requirement. This is often a difficult matter, hut we should keep this as a goal—the specialization of the dietary.

Of course, the question of expense is always to be considered in an institution; but many attractive and nourishing dishes can be made of the cheaper foods, if more care is given to improvements in cooking and serving.

For all of our patients, the institution is, at least for the time being, their home, and making the table more attractive will be an efficient means of making their life more homelike and enjoyable.

We should strive to conform the dietary to the habits to which they have been accustomed, in a large measure, except when previous errors in their diet require corrections for therapeutic purposes, and the food should be suited to individual taste as far as possible—the things which please the palate, stimulate the flow of the digestive juices. An attractive diet pleases the aesthetic sense; hence refinement in food habits is as desirable as in other phases of our daily life. Thus the problem of what will satisfy the aesthetic nature is closely connected with the physiological! The relation of sentiment to diet has been too much ignored by those who write on the subject of food values, etc. We must learn to regard the human being as a living personality rather than as a mere machine for whose sustenance so many calories of heat are necessary. Food should not only be of the right proportion dietetically, but it should agree with the user. A classic statement is,—"The girl whose artistic nature makes

her revolt at the idea of putting a fat piece of a dead animal between her lips when her physician prescribes fat for her, might more easily be persuaded to use butter." The influence of sentiment on diet is increasing with the evolution of higher art and higher ethics. We are coming more and more to realize not only the importance of individualizing the dietary, but that "the development of humaneness and aesthetics necessarily makes for an increasing bias toward a humane and aesthetic dietary."

*Dr. Josiah Oldfield.

THE PREPARATION AND SERVING OF FOOD FROM THE STANDPOINT OF THE INMATE.

G. H. Freeman, M. D., Assistant Superintendent St. Peter State Hospital, St. Peter, Minn.

The problem of supplying suitable food for those who are committed to our care is one of the greatest with which we have to deal; one that demands considerable thought from those who have the oversight of a number of people who have been deprived of their liberty; more especially, when, as in a hospital for the insane, the greater part of that number is below par physically, and, also, on account of their mental condition, unable to care for themselves.

The people who must be provided for are of different classes, and each class demands special provision, that their wants may be the most properly supplied. Considering these classes in the order of their importance, one of the smallest, yet the first to demand our attention, is that of the recent cases, including in the members of that class, not only those for whom there are reasonable prospects of restoration to their lives of usefulness in the community from which they came; but also those, who, not recovering, must be prevented from swelling the number of disturbed people among the population of the hospital. The second class is that of the sick, varying greatly in number, who, on account of their physical condition especially, demand a great deal of consideration. The third class is composed of workers, those engaged in some form of manual labor, require different food than the idle, the fourth class. The disturbed patients compose the fifth class, and then, finally, we have the infirm. We must consider "food bolters" as a separate class, also.

When providing food for these people we must bear in mind certain principles. Food taken into the body serves two general purposes; It supplies energy for the maintenance of bodily activity, and it repairs waste. Each is best served by a different class of food material. Fat and carbohydrate, somewhat related in that the same elements enter into their composition, supply energy; while proteid, best and most easily obtained as animal food, renews the waste. Food is best furnished as a ration which contains these substances, not only in proper proportion, but also in a form