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CHINA BREAKAGE IN THREE UNIVERSITY RESIDENCE HALL FOOD SERVICES

Thesis for the Degree of M. S.

MICHIGAN STATE UNIVERSITY

Anne E. Little

1960

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CHINA BREAKAGE IN THREE UNIVERSITY RESIDENCE HALL FOOD SERVICES

by

Anne E. Little

A PROBLEM

Submitted to the Dean of the College of Home Economics
of Michigan State University of Agriculture and
Applied Science in partial fulfillment of
the requirements for the degree of

MASTER OF SCIENCE

Department of Institution Administration

1960

CHINA RESERVOIR IN TIMES UNIVERSITY RESIDENCE HALL

FOOD SERVICES

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Anne K. Kettle

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ACKNOWLEDGMENT

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Gratitude is also extended to Miss Mildred Jones and Miss Helen Widick whose advice and suggestions were invaluable, and to Miss Greta Lundquist, Mrs. Katherine Gardner and Miss Elaine Mischler for their cooperation in making records available.

CONFIDENTIAL

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INTRODUCTION

The demand for college housing has been acute since the end of World War II. Universities and colleges have fulfilled this obligation at no expense to the public by building residence halls on a self-liquidating basis with the food services assuming the major portion of interest charges and bond amortization.

To maintain high food standards and still meet all obligations each residence hall manager must study all phases of her operation to be sure the food service income is properly allocated. All expense items must be kept in balance to have an efficient, financially sound organization. Approximately seventy per cent of the food dollar is spent for raw food and labor; the remaining thirty per cent must cover mortgage payments and operating costs. Food and labor cost percentages are determined by the administration; the mortgage payment is a fixed obligation; operational costs are flexible but must be kept minimum to maintain a financially stable cafeteria service. This last expenditure classification includes the cost of utilities, maintenance, sanitation and the replacement of such expendable items as paper, glassware and china.

The purpose of this study was to compare dish breakage in three university residence halls for a normal school year on the following bases: (1) numerical dish breakage, (2) per cent of breakage based on dish usage, (3) total cost per residence hall and (4) cost per resident student. Further investigation might show where and why excessive breakage occurs and make it possible to reduce costs in comparable residence halls.

INTRODUCTION

To bring out some aspects most and yet neglected for which humanity and the [illegible] [illegible] and colleges has [illegible] [illegible] [illegible]

THE NATURE OF CHINA

China table ware has been used in mass feeding establishments for over one-half century. During this time a great deal of experience has been gained in learning how to make satisfactory chinaware which would have a long service life at a reasonable cost.

History

The history of china began in the Stone Age when prehistoric man learned to model wet clay and bake it in the sun. Later the process was improved by firing the pieces at high temperatures to produce stronger and more durable ware. The ancient Egyptians and Persians were highly skilled in pottery making and introduced color and glaze to the art (19). The Chinese, however, made the greatest contribution. Historical records show that ware was produced extensively in China as early as 87 B. C.; but it was not until the thirteenth century that a few priceless pieces were brought into Europe by Portuguese traders, and this ware acquired the name "china." In Italy it was called "porcelaine"; this term was derived from porcellana, the lustrous Venus sea shell which compared with the smooth and shiny surface of chinaware.

Imitation of the beautiful fragile ware of China followed almost simultaneously in many countries after years of patient experiments. Out of despair and success came ware known as hard paste porcelain of the Continent and soft paste porcelain of England. Both china and porcelain have translucent and non-absorbent characteristics, but the terms are not synonymous. Methods of firing give porcelain a highly translucent but glasslike structure unsuitable for the hard use of

China finally came into good order in spite of internal confusion and foreign aggression. Thirteen years ago a great deal of experience was gained in the Boxer Rebellion. It was then found that the Chinese are very fond of photographs and statistics. Photographs are taken of everything and everybody. Statistics are made of everything and everybody. Photographs are taken of everything and everybody. Statistics are made of everything and everybody. Photographs are taken of everything and everybody. Statistics are made of everything and everybody

everyday service. Unlike china, porcelain receives the low fire first. Glaze, which is similar to glass in composition, permeates the body and is fused together in the high temperature of the second firing. This gives porcelain translucency and fragility, whereas, china retains the nature of a true clay product.

Early attempts to establish the potters' art in America were short lived. Lured by the freedom in the new country, potters from all Europe came with little more than their skill and knowledge of potting. The ware produced by these pioneers was an imitation of that made in Europe. The greater part of it was for utility purposes. Attempts were made to introduce bone china, a product which had long been associated with English potters, but this was soon replaced with a feldspathic body which could be more accurately controlled and which could be made into equally attractive ware.

There was an increasing demand for institutional tableware in the United States when large hotels were built following the development of the railroads. However, the Ironstone china of England and the brittle porcelain of the Continent were too fragile for this hard and fast service, so American potters wholeheartedly devoted their efforts to creating a strong and durable china. In 1893 this type of practical home dinnerware was presented at the World's Fair. The exceptional durability of the new ware led to the making of hotel china which was individualized as American Vitrified China--the most durable ware ever made in any country.

After the first American-made ceramic decalcomania for decorating the ware was introduced, the underglaze decalcomania process was developed (18). The latter in combination with the American type of china

Ethylene polymers. Melting points, polymer molecular weights, and polymer yield are shown for polymerizations of Ziegler-Natta catalyst systems at various temperatures and pressures. The effect of temperature on the molecular weight of polyethylene is shown in Figure 1. The molecular weight of polyethylene increases with decreasing temperature and increasing pressure. The melting point of polyethylene increases with increasing molecular weight. The yield of polyethylene increases with increasing temperature and pressure.

Figure 1 shows the relationship between polymerization temperature and molecular weight of polyethylene. The molecular weight of polyethylene increases with decreasing temperature and increasing pressure. The melting point of polyethylene increases with increasing molecular weight. The yield of polyethylene increases with increasing temperature and pressure.

Polymer molecular weight is a function of the polymerization temperature, as the molecular weight of polyethylene increases with decreasing temperature. The melting point of polyethylene increases with increasing molecular weight. The yield of polyethylene increases with increasing temperature and pressure.

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Today American Vitrified China is being made in several weights and many shapes and is decorated with designs of the foremost artists of America. Because of unusual durability and beauty, it graces the tables of many homes and is used in hotels, restaurants and other institutions throughout the United States.

During World War II the vitrified china industry provided over seventy-five million pieces of chinaware for the Armed Forces. The ware, because of its excellent qualities of sanitation and strength, was used in Army Camps, Naval Stations and hospitals as well as on aircraft carriers and submarines and was even dropped by parachute into some remote places (11).

Manufacture

Many different parts of the United States and Europe are sources of raw materials for making American Vitrified China. There are four principal ingredients: china clay, ball clay, feldspar, and quartz. China clay or kaolin was originally the only substance used. In early times a large deposit of this material was found in China and was known to the Chinese as "Kao-ling," meaning high hill. Hence kaolin now designates all pure clays which are white when burned. A smaller proportion of more plastic clay, called ball clay, is added to facilitate the shaping of the ware. Feldspar combines with other substances and fuses together in the firing process, and quartz holds up the body structure of the china and gives it strength.

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There are many variations in formulae. A typical one would include a little over one-third potters flint or pulverized quartz, a little under one-third kaolin or china clay, about one-fifth feldspar, one-tenth ball clay, and small quantities of talc, marble and whiting. About an equal amount of water, by weight, is added. The mixture is then stirred and beaten by mechanical mixers. When the solution has reached a milk-like condition it is pumped over magnetized screens to remove all metal particles which would stain the ware. Continuing on its course, the slip is filtered through lawns with a fineness of 140 to 200 meshes to the linear inch. These lawns are in frames which are agitated to permit constant flow of the liquid clay which then goes to a temporary storage tank and as required, into filter presses or sacks. Under considerable pressure the surplus water is removed. The clay comes from the sacks in large round flat solid cakes which are put into pug mills. The air is removed, and the clay paste is thoroughly mixed to make it plastic and workable. The large cylindrical puggings are then ready for the waremakers.

Every china item requires a plaster of Paris mold which is about one-seventh larger than the finished piece of china to allow for clay shrinkage which takes place from the wet or green state through the first or bisque firing. Using revolving equipment, men hand-shape the clay on the molds. Flatware is made on the outside of the mold, whereas cups and bowls are made on the inside. Some types of cups, particularly institutional ones, are so designed that the foot is shaped in the mold. The surplus clay is then cut away and the piece is moved to the drying rack. When the ware is dry enough to handle, it is removed from the mold, trimmed and smoothed. Cup handles are cast in molds and allowed to

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remain until all excess water is absorbed. They are then trimmed with a sharp knife and finished with a wet sponge. Handles must be kept at the same moisture content as the cups if they are to adhere. The ends of the moist handles are dipped into slip and stuck onto the cups. Excess slip is sponged off and the finished ware is now ready for removal to the green room. Green ware, as it is called in the unfired state, is very fragile. Great care must be used to prevent straining it, for even if a piece is not broken, a strain might result in a defect after firing.

All ware finished in the clay shop then goes to the green room to be prepared for placing in the bisque kiln. This is a method called bedding. A supporting filling of sand or refractory clay is worked between the edges of the stacked pieces to prevent the ware from warping or crooking during firing. Cups, bowls and similar items are bonded; that is, one is inverted upon another to keep them straight.

Before ware can be fired it must be placed into receptacles called saggers. In both the bisque and glost kilns this keeps the direct action of the fire from the ware. Saggers are fire clay boxes of various sizes into which the ware is fitted for greatest conservation of space. Small items are chinked in wherever possible so that all space is utilized.

Conveyor belts carry the heavy filled saggers to the kiln setters. When the cars are loaded they are wheeled along the track to the end of the bisque tunnel kiln. In continuous progress the ware moves from the cooler part of the kiln to that of greatest heat where absolute vitrification takes place. Here the temperature ranges close to 2250 degrees F. From the heart of the bisque kiln the ware travels along

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through a gradually reducing temperature until at the end of about sixty hours, the firing is complete, and the car reaches the exit door.

When the car of saggers has cooled enough to handle, the ware is drawn. Pieces which went into the kiln as clay have now been transformed into china--hard, dense and strong, and highly translucent, but the surfaces are dull and rough. Shrinkage has occurred, and each piece is about one-seventh smaller than it was in the green state. Now it is bisque china and must be cleaned and selected.

The stacks are opened, the bulk of the bedding material is removed, and the ware is wedged tightly into a tumbler, a large wooden box containing pebbles or pieces of broken bisque. As the tumbler rotates the cleaning is completed, and the china obtains the smooth polished surface necessary before the application of underglaze decoration.

The ware is inspected for crookedness, iron spots, nicks or cracks, and is washed to remove all dust and dirt. The design is then applied. Practically all china for institutions and some for home use is being decorated by the decalcomania process. The decorated ware is dipped in liquid glaze and allowed to dry. The china is then put in special saggers for glost firing. This process is similar to bisque firing, but the temperature is slightly lower, and the heat is reduced more quickly. When cool, the china is sorted, and the pin marks on the backs are ground off and polished. It is now ready for shipment.

Kinds of china

The government cites specifications for three weights of vitrified institution china: (1) thick china; (2) hotel china, somewhat lighter

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The government cites specifications for three weights of vitrified institution china: (1) thick china; (2) hotel china, somewhat lighter

in weight and with a rolled edge; and (3) medium-weight china, sold on the market as banquet-weight china. Thick china varying from five-sixteenths inch to three-eighths inch in thickness, is commonly used for lunch counter service or other situations where extra-heavy service is demanded of the table appointments. The dishes are clumsy to handle and unattractive in appearance. Hotel-weight china varies from five-twenty-thirds inch to one-fourth inch in thickness depending upon the size of the piece. All except cups have a roll under the outer edge which gives the effect of weight and also lessens chipping on the upper side of the plate. This type of china is highly resistant to shock, easy to handle, and available in many designs and colors--qualities desirable for use in such institutions as hospitals, residence halls and college cafeterias. Banquet weight china, which is lighter in weight and usually has a straight edge, is used extensively in exclusive restaurants, tea rooms, and the private room service of hospitals. It resembles more closely household dinner ware.

A relatively recent change in style of china and color of background has been evident. Plates with narrowed and flattened rims, cups shaped so they require less space and may be stacked one above the other without danger of tipping, and small-rolled saucers are examples of the newer style or design. Breakage should be reduced approximately one-third through the use of these shapes (22).

The buyer must recognize that weight does not mean strength and long life for china. Durability and strength are far more directly related to the quality of materials used and the method of manufacture employed than they are to weight. However, the Buffalo China Company has found that strength or resistance to cracking by impact is very much

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dependent upon the thickness of the china. Strength is a function of the square of the thickness. For example, if you were to double the thickness, the strength would increase four times; if you were to treble the thickness, the resistance to breakage would be nine times as great (7).

Tests

Tests for the durability of china used by the government are the chipping, impact, and absorption tests. In the chipping test specially constructed apparatus records the force required to chip the edge of a plate with a six-ounce hammer. The force of the blow is measured in units called "foot-pounds." If an object which weighs one pound is dropped on another object one foot below, the force of the blow will be one "foot-pound." Similarly, an object weighing four ounces and dropping six inches would hit with a blow of one-eighth of a foot-pound. Three tests are made on the same plate and an average determined. This figure represents the relative chipping resistance of the edge of the plate. The average chipping value for rolled edges is 0.150 foot-pound; that for medium weight (hospital service) is 0.075 foot-pound. This test is used for plates and saucers.

The impact test is made in a similar manner except that a four-ounce hammer is dropped repeatedly with blows of increasing force at the same point in the center of the test piece until a hole appears in the body or a body crack extends through the rim of plates, saucers, platters, and bakers. A body crack extending into any part of the foot or the breaking away of a portion of the body indicates the measure of force for cups and bowls. The average impact value for seven and five-inch

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.ecnalb ot ecnalb ehT .ytnal ot ehT .ytnal ot ehT .ytnal ot ehT

.ytnal ot ehT .ytnal ot

plates, hotel-weight, is 0.200 foot-pound; medium weight, 0.180 foot-pound; for tea cups, hotel-weight, 0.060 foot-pound; medium weight, 0.060 foot-pound (22).

In the absorption test a piece of ware is broken, exposing the unglazed body, and a sample is weighed on a gram balance. The piece is then boiled in water for five hours, allowed to soak for another twenty hours, then weighed again. The weight gained, expressed in a percentage, must not exceed three-tenths of one percent.

Types of Damage

Chinaware breaks, chips or cracks because it is fundamentally a brittle material, one which will fracture before it deforms. Substances which are very hard show an increase in brittleness with increasing hardness. In the case of an eating utensil for mass feeding, the surface of the piece must be as hard as, or harder than, the cutlery which is used on the piece. Figures 1 and 2 illustrate common types of china damage.

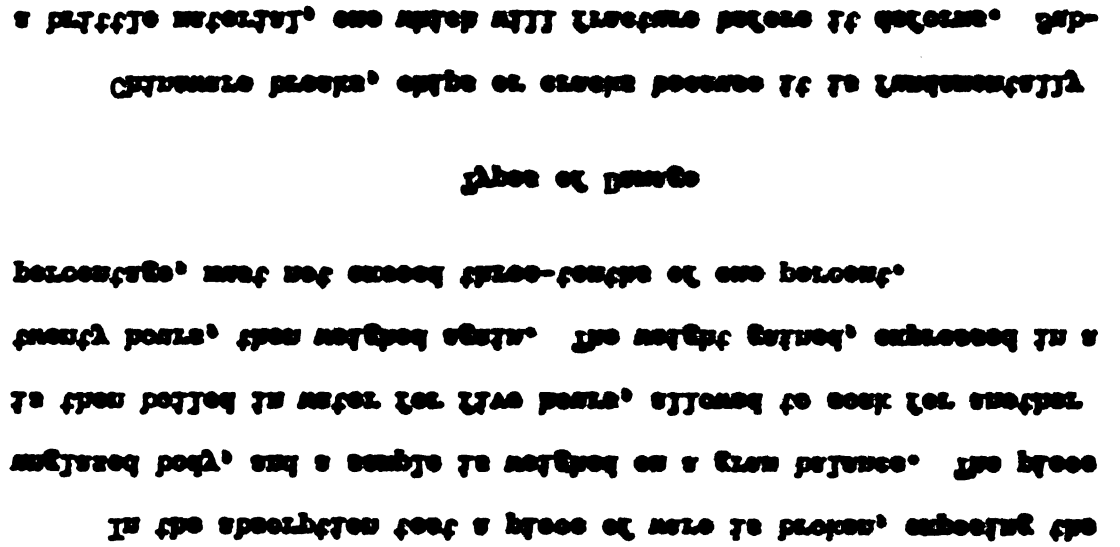

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Figure 1. Type of china damage: cup breakage, handle damage, plate shattering, top edge chip, bottom edge chip.

Edge chip

A chip in a good piece of chinaware is usually somewhat "conchoidal," which means "shell-like" or curving upward. By taking into account this curvature, and noting the point of origin, it is possible to look for the place where the chip occurred. In the edge of a plate, there are two types of chips; namely, that which occurs on the bottom of the roll, and that which appears on the top of the plate. See plates in Figure 1. The edge of a plate or cup will stand a very hard blow if this blow is applied with a material which is softer than the chinaware and which is somewhat flexible (wood, hard plastic, or rubber).

Bow crack

If a plate or cup is struck a blow at a distinct angle to the edge, and of insufficient force to break it, a characteristic "bow crack" results. The crack which is developed radiating from the sides of the point of application is in the form of a bow such as archers use. Opposite this is a rather straight crack, not going entirely across, representing the bow-string, and usually there is a straight crack running through this bow which resembles an arrow. The cup in Figure 2 shows the bow-string part of such a crack. Because of the shape of the cup it was impossible to show the bow. Such blows on cups usually come from stacking them carelessly, and on plates by hitting the plates against some hard substance such as metal, or an exposed faucet, or some other common piece of hard equipment. When a piece of china is not completely shattered or cracked through, such as in a bow crack, the damage may go unnoticed until several operations later; i.e., washing,

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قلب ثقيل

A قلب ال ثقيل بحجم كبير يحتاج إلى تشغيل ويلسون ال «ضخ-
ضخ» أنفسهم ال ثقيل يحتاج إلى تشغيل ال "حلل-القلب" بنفس طاقة
"لهاضة ال 31 ،مثلاً من أجل ال تأثير على أجزاء ال تأثير ال ضخ
ال قلب ال ثقيل ال ضخ ال ثقيل ال ضخ ال ثقيل ال ضخ ال ثقيل
ال ضخ

Figure 2. Type of china damage: star crack, half crack, glaze damage, bow crack.

drying, and then serving food upon the piece. The crack then appears because it has absorbed foreign substances.

Half crack

The hotel china body, over which the glaze is applied, is especially compounded so it will not be under any internal stresses or strains. Even though cracks are started, they will not continue. The crack extends only after having absorbed the energy of the blow which is applied. The half-crack did not receive as severe a blow as did the bow crack, and only a fraction of the type of blow which would cause the piece to break. Half cracks on flat ware or cups usually result from blows applied near the edge, rather than on the bottom. See the sauce dish in Figure 2.

Star crack

The star crack, occurring on the bottom of either flat or hollow ware, consists of a straight crack with two side cracks at each end. This type of damage occurs when the plate or cup is struck a sharp blow on the opposite side from which the crack is noticed. Like the bow crack, it does not show up until several operations after it occurs. Star cracks often appear when the edge of one plate strikes the bottom of another. The bottom is usually cracked before the edge. See the sauce dish in Figure 2.

straggle made their way back home. The clerk then approached Jerrold and said, "Sorry, sonsafuda mujerot bortoods and it seemed necessary to approach Lamtrinl yua tahsu ed Jon Lilm it on bahmoqumo yllabopqo to sosarfje Lamtrinl. Jerrold said, "Yudf nwod ilim Jon constrno." The clerk then explained that the bortoods had vigano ed ot ed dlnow wold a ovrrow as svbsort Jon hlb ed ot ed hlb as wold a ovrrow as svbsort Jon hlb ed ot ed straggle. The half-clerk then asked Jerrold if he had dlnow wold ed ot ed qrep ed ot ylno hnu, "Jerrold ed ot sooha ot prord." Half clerks on ylnnar yllamsu qrep to erew jarl no ulnerc ed ot ed hroce of prord." The clerk then said, "Sorry ed ot ed hroce." The clerk ftem sbbjlqq mnd ed qrep." Jerrold ddnm on ftd pottem. Jon ftd mrlt ylnnar wold sbbjlqq mnd ed qrep." Jerrold ddnm on ftd pottem. Jon ftd

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Half clerk

il sbbjlqq, il ecnsre ulnb ftd bjnfo." ftd clerk ftdnu straggle mdnb ftd qrep." ftd clerk ftdnu sbbjlqq ftd ftd ecnsre il ftd ftd ftd

Handle cracks in cups

There are four types of cracks associated with handles on cups. First is a crack around the handle which usually extends up through the glaze. This is a surface crack due to faulty manufacture. Although the handles are solid on the cups, this crack becomes unsightly in service with the absorption of dish water or food soil. A second type of handle failure is also a manufacturing fault. The handle breaks cleanly from the body of the cup. In the third type, a chunk of the cup body is torn out with the handle intact, and in the fourth type the handle itself is broken, leaving the joining where it is attached to the cup still solid. In the latter case the handle was broken because it received a blow greater than its ability to withstand. See cups in Figure 1. A style of cup with a stronger handle should be chosen for institutional use. Breakage of the last two types would not occur if the cups were protected by placing them in individual compartments in baskets. These baskets minimize breakage and permit the use of lighter weight cups.

Glaze damage

There are two main types of glaze damage. The first is "crushing" of the glaze by permitting the pieces of chinaware to be roughly pounded together. The second type of failure is called "seizure." This is the scratching which results when two clean surfaces of similar hardness are rubbed together, even with moderate pressures. The "seizing" effect is increased when the surfaces are very smooth. The lunch plate in Figure 2 demonstrates this type of damage.

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Shattering

If several plates are dropped on a concrete or tile floor, and some plates are broken, characteristic breakage is usually in two, three, or four pieces. See salad plate in Figure 1. This happens when the piece is dropped on its feet. Quite obviously if several pieces are dropped in a stack, even on a soft floor, hard china hits hard china and this type of breakage occurs. Such damage is never caused by heat shock or by internal weakness of the china.

Metal marking

Metal marking occurs when chinaware is rubbed against some soft metal such as galvanized iron, aluminum, or a poor grade of stainless steel. The hard glaze actually tears off metal flakes and holds them on the surface making the piece of tableware extremely unsightly.

Lime scale

If the wash water is hard, a lime scale may be deposited on the china surface. This scale forms more quickly and is harder to remove from glaze which has been scuffed or crushed.

Care

Actual loss by breakage is no more important in china maintenance than prevention of chipping, cracking or glaze damage. China will have a much longer life if handled carefully during stacking and washing. Rubber plate scrapers and rubber collars on openings in scraping tables not only decrease noise but also help to reduce breakage.

It seemed hardly worth chopping an a concrete to fill Kroot's bag
some hardy era powder, chemical/pharmaceutical equipment is usually in two; fifty
kilos each. Dr Kitzinger even supplied a pump to empty the drums into the
water. Kroot's bag was soaked and he began to fumble around with the
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Chapter Twenty

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Chapter Twenty

By far the greatest dish breakage and wear occur in the bussing and dishwashing departments. Surveys made by the Economics Laboratory, Inc. of New York show that three-quarters of the breakage takes place at the soiled dish table, but the actual disintegration of a dish has been preceded by chipping, scratching, or cracking which occurs in direct ratio to how often and how carelessly the piece was handled. The "actual breakage" often happens in a way not visible to the casual glance. This explains why a critical evaluation of the dishwashing layout is one of the most important steps in breakage control.

Rinsing dishes immediately after use minimizes the effect of food acids on overglaze decorations as well as surface discoloration of the ware. The soiled dishes, scraped and ready for the machine, are placed on belts or in racks so that all surfaces are exposed. Sorting and stacking dishes into piles of the same kind and size will help to reduce breakage, speed the washing operation and insure better wash action. In washing china use only a mild or neutral soap or any one of several good washing compounds now available, which have no tendency to attack the glaze or decoration through chemical action. Use no more than the required concentration.

Washing temperatures above 150 degrees F. should be avoided in machine washing, but rinsing requires a minimum of 180 degrees F.

Contact of china with aluminum and other metals produces unsightly marks. A soft powder is suggested for removing such marks or obstinate stains although with proper care of china this should not be necessary.

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Poorly organized methods of handling and storing clean dishes lead to damage. Stacks of plates should be built by gently placing the rim of a plate on that of the plate below and letting the upper plate fall into place. Sliding one piece of china across another under pressure will abrade or scratch the glaze. Do not stack ware too high, and do not strike two pieces together.

As a means of reducing breakage through carelessness it is often advisable to take daily or weekly inventory of stock in circulation. Thus the workers become aware that a constant check of breakage is being made. Often the price list of china is posted, and the total loss to the food service through breakage is made known to the workers.

We live in a mechanical age, and this applies to commercial dishwashing as well as to household appliances. Since human hands are the source of practically all dish breakage, equipment which will reduce the amount of handling will consequently lower breakage. In small operations studies show that using a dishwashing machine in place of hand washing will reduce breakage 500%; and in larger operations where dishwashing machines are standard, the auxiliaries (plastic-coated racks, lowerator cards and tables) contribute much to breakage reduction.

Tooth vitreous bearing wooden of mandible gulf bus vertical made dialed

load of quench. Screws of brass screw fillet of hinge wire bracket

tube tap to screw of brass. Wire of hinge screw screw wire tap

bus screw screw of wire screw screw screw screw screw screw screw

screw screw screw screw screw screw screw screw screw screw screw

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COLLECTION OF DATA

The operation of the cafeterias in the eight residence halls for women at Michigan State University was directed by the Assistant Manager of Residence Halls. Through her office all policies and information on food production, purchasing, personnel and finances were coordinated. During the period of this study she drafted the four-week basic cycle menu, and each residence hall manager planned the soups, salads, vegetables and desserts which would be most acceptable for her unit. The menu pattern was the same for all women's residence halls.

In each residence hall cafeteria bus boys collected the soiled dishes and returned them to the dishwashing rooms. On week-ends a Continental breakfast was served in the recreation rooms rather than a regular breakfast in the dining rooms. The cafeteria was operated seven days each week.

Three residence halls were selected for this study. Mason-Abbot and Snyder-Phillips Halls were chosen because the building layouts are almost identical, and each can accommodate approximately one thousand students. Landon Hall, the third unit, which served three hundred twenty-five students, had one large dining room adjacent to the kitchen and the dishwashing room was located in the basement.

The period of study was July 1, 1958, to June 30, 1959. Background information for understanding the operations was obtained through interviews with the respective managers, supervisors and staffs. Menus from Snyder-Phillips were analyzed to determine the number of times specific dishes were used for each meal by each student.

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The meal count and the type of dishes chosen were recorded daily for each week of the school year on data sheets (Appendix Tables 1, 2, 3). These tables showed that the dishes for serving specific foods for the same menu pattern varied among the food service units. Meal count and dish usage figures were transferred to respective work sheets (Appendix Tables 4, 5) and summarized in Appendix Table 6.

Total per capita cost comparisons for china breakage were based on dish inventory records obtained from the office of the Assistant Manager of Residence Halls. Tabulations of this information, which had been compiled by each dormitory manager, showed the beginning inventory, purchases, ending inventory and breakage. See Appendix Exhibit 1. Central Food Stores supplied the price per dozen of each kind of dish purchased by the women's residence halls. The type of breakage and cost comparisons are summarized in Appendix Tables 7 and 8.

The average daily resident count was determined from the monthly McBee report which was prepared by the college accounting office. This report is a financial statement showing income based on average resident count, all expenditures and a percentage breakdown of costs. Since all students who live in the residence halls must eat in that food service, the resident count is the same as the number of boarders. The average count for boarders was multiplied by the number of days the food services were in operation each month. These figures were totaled and then divided by two hundred forty-one, the total number of operating days during the 1958-59 school year (Appendix Table 9). With these data the cost of china breakage per resident student was determined.

for yields in the form of graphs (Appendix Exhibit 4, 5, 6).

The best school grew rapidly in the early years and has since become one of the largest schools in the state, with an enrollment of 1,200 students. Most of the students come from the surrounding farm area, but a large number come from the city of Kansas City, 25 miles away. Many students live with relatives in the city while attending school. The school operates on a quarter system, with classes beginning in September, January, March, and June. Students may enter any quarter they choose, and they may take as many or as few courses as they wish. Students who do not complete a course in one quarter may continue it in the next quarter or receive a grade of "incomplete" if they do not complete the course by the end of the quarter. Students who do not complete a course

COMPARISON AND INTERPRETATION OF BREAKAGE COSTS

To achieve customer satisfaction in any food service well-prepared meals must be served in pleasant surroundings. High quality food loses appeal on unattractive or damaged china. Chipped or cracked dishes, or those whose glaze is damaged, must be discarded as readily as if they were shattered.

In a residence hall cafeteria hundreds of students are served in a limited time putting pressure on everyone handling the dishes and resulting in china breakage. If the size and layout of the building make it necessary to transport dishes relatively long distances or to a basement, there is greater possibility of accidents.

Mason-Abbot and Snyder-Phillips Halls are almost identical; the essential difference is that in Snyder-Phillips the kitchen and serving rooms are wider and are serviced by one large elevator rather than two small ones as in Mason-Abbot. The blueprint photostats for Mason-Abbot (Figures 3 and 4) show the basic layout for both food services. A central kitchen serves a large dining room on each wing and a small dining room in the basement; dish transportation involves relatively long distances. Accidents occur when the overloaded carts of soiled dishes returning to the dishroom must cross the path of the carts of food going to the serving rooms. In Mason and similarly in Phillips the hallway between the dining room and the kitchen area turns. In manipulating the carts around these turns many dishes are broken. It is particularly hazardous in Mason because the hall is narrow and the turn is in a traffic lane. China must be taken down the elevator to

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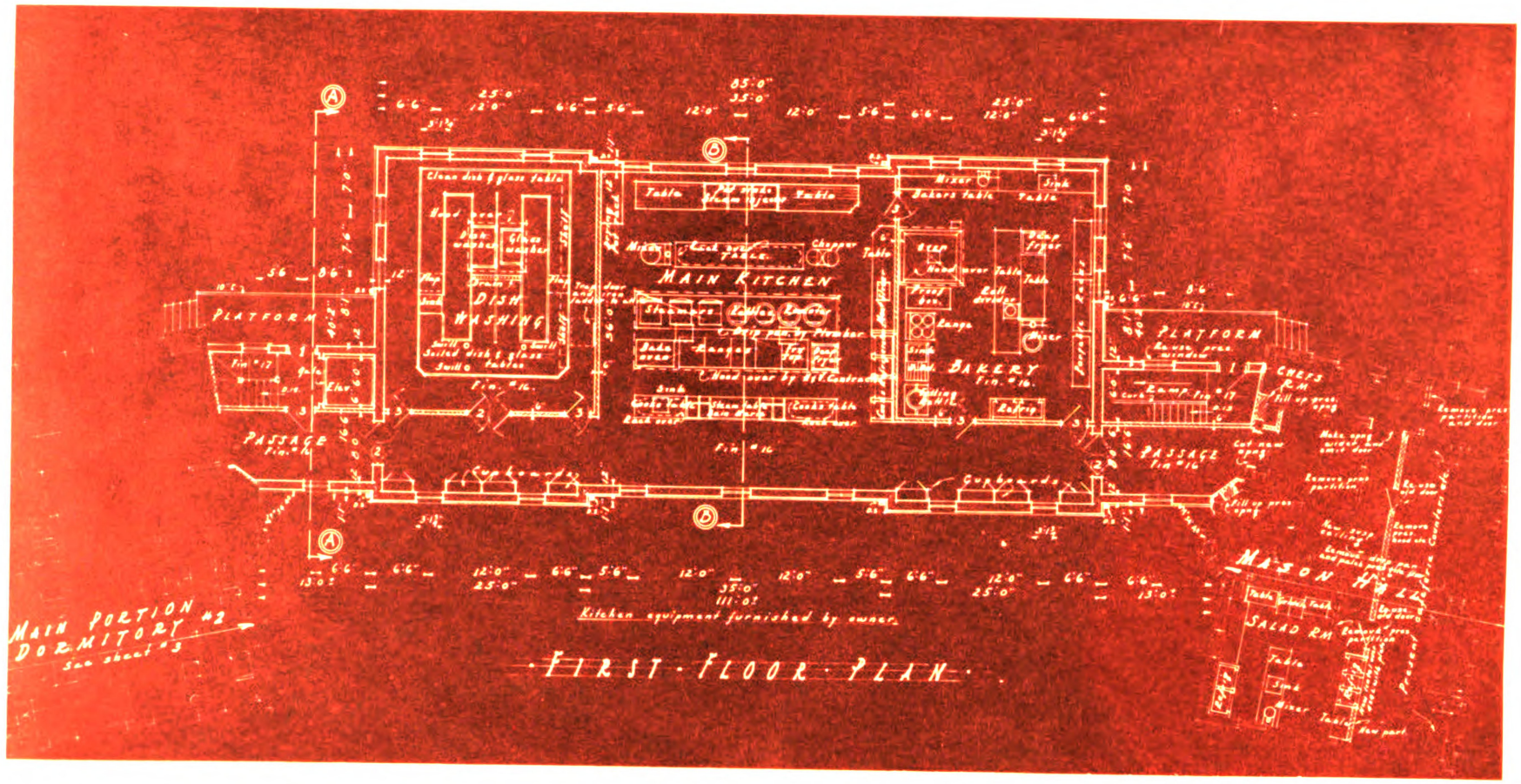

Figure 3. Main kitchen layout for Mason-Abbot Hall (first floor location).

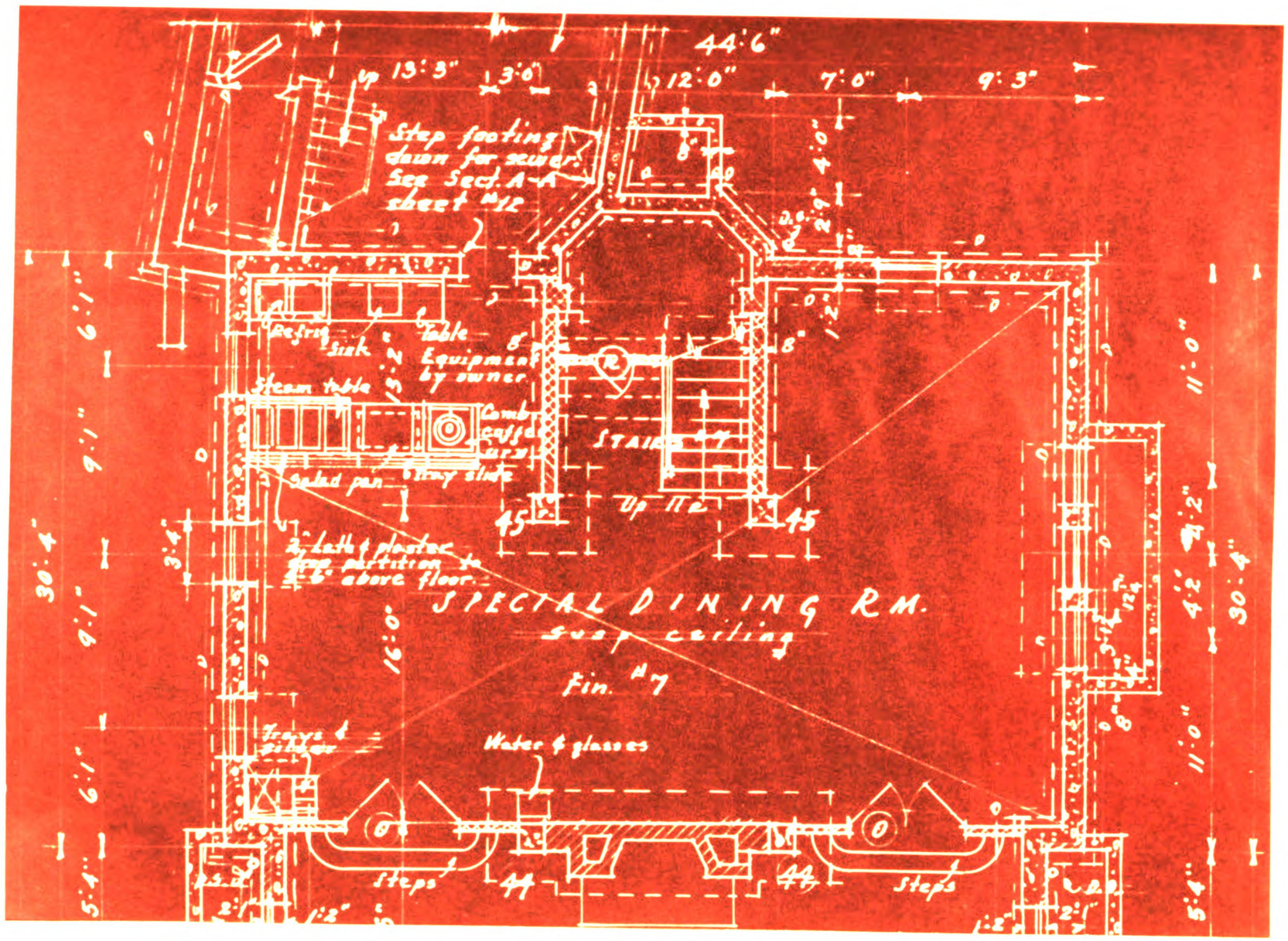

Figure 4. Special dining room layout in Mason-Abbot Hall (basement location).

the little dining rooms, and in Mason-Abbot the elevators do not always stop level with the floor.

In Landon Hall the kitchen is adjacent to the dining room but the dishwashing room is in the basement. See Figures 5 and 6. Soiled dishes are stacked on trays and sent down a subveyor to be washed. Clean dishes are assembled on shelf carts and brought up the elevator. The swivel wheels of these carts are only an inch thick and occasionally will drop into the opening between the floor and the elevator and cause dishes to slide off the stacks.

In Mason-Abbot and Snyder Phillips Halls clean dishes are stored and transported in lowerator carts thus minimizing handling and lowering breakage. However, the tall slim carts for sauce dishes, saucers and small plates tip rather easily and increase the dish breakage. Since Landon has no lowerator carts, dishes are stored under the serving counters.

The shape and weight of china are important. Heavy china is more resistant to damage than a lighter weight dish, but it is less attractive. All the women's residence halls used a hotel weight institution china in the cross-stitch pattern which was manufactured by several different companies (Figure 7). The wide rim plates were purchased in the following over-all diameter sizes: dinner, nine-inch; lunch, eight-inch; salad, six and seven-eighths-inch; and bread and butter, five and five-eighths-inch. Other pieces were sauce dishes, cups, saucers and soup bowls.

The Little Dining Room. In the Green-Yellow of the Interior is the Dining Room for two people. Level with the Floor.

In Italian Hall the Interior is Unfinished to the Dining Room but the Dining Room is Finished.

Dining Room is at the Present. See Figure 2 and 3. Bottled Champagne Wine is Served in a Small Glass Bottle with Cork Stopper. Bottled Champagne Wine is Served in a Bottle with Cork Stopper. Champagne Wine is Served in a Bottle with Cork Stopper. Champagne Wine is Served in a Bottle with Cork Stopper.

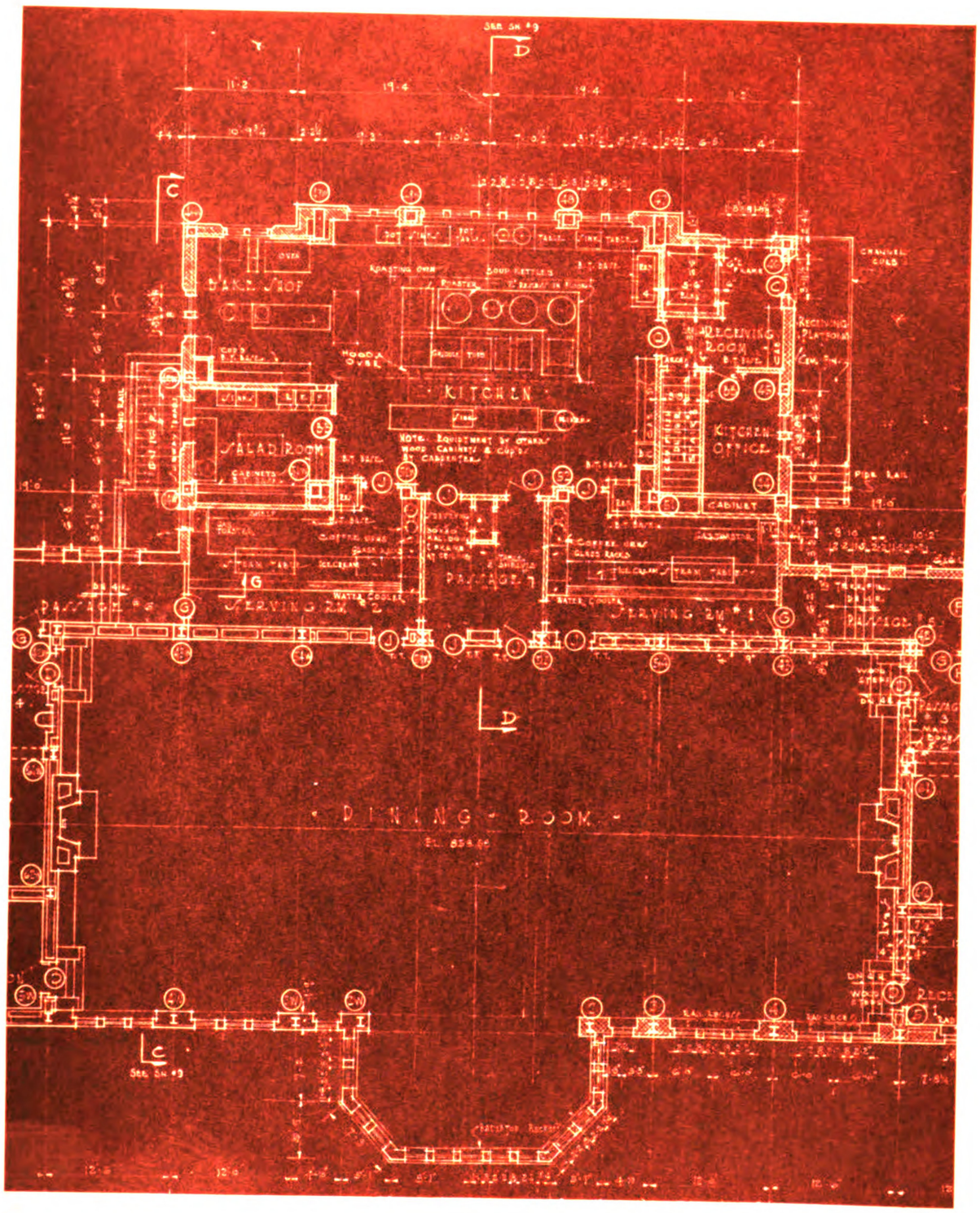

Figure 5. Main kitchen and dining room layout for Landon Hall (first floor location).

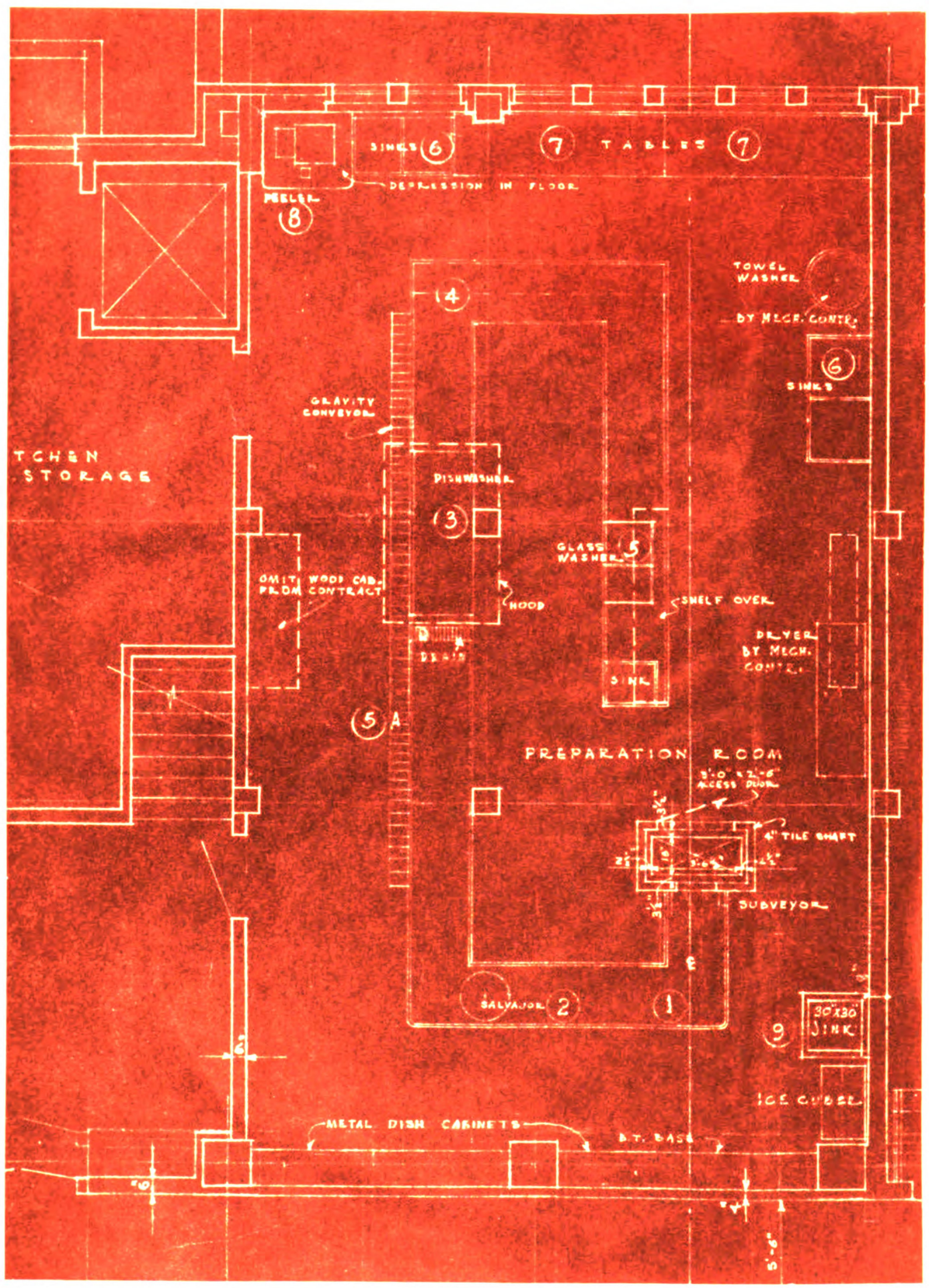

Figure 6. Dishwashing room in Landon Hall (basement location).

Dish usage patterns varied among the three residence halls. In Landon and Mason-Abbot paper was used for the Continental breakfast, while at Snyder-Phillips china cups and saucers were chosen. The light Sunday evening meal was served on china at Mason-Abbot and Snyder-Phillips but on paper at Landon.

There were some differences in the choice of dish for a particular food item:

Food Item	Dish Choice		
	Snyder-Phillips	Mason-Abbot	Landon
Watermelon chunks	Soup bowls	---	---
Watermelon wedges	---	Lunch plate	Lunch plate
Toast, Sweet rolls	Lunch plate	B. & B. plates	B. & B. plates
Muffins	Lunch plates	B. & B. plates	B. & B. plates
Canteloupe	Sauce dish	Salad plate	Salad plate
Ice cream	Sherbet dish	Sauce dish	Sauce dish

However, the general pattern of dish usage was the same in all residence halls:

Food Item	Dish Choice
Breakfast fruit	Sauce dish
Breakfast entree	Lunch plate
Vegetables	Lunch or dinner plate
Juicy vegetables	Sauce dish
Salads	Salad plate
Cole slaw	Sauce dish
Cucumbers in vinegar	Sauce dish
Small tossed salad	Sauce dish

Dish usage patterns varied among the three residence halls. In Langdon and Mason-Appoff paper was used for the continental breakfast, while at Snyder-Phillips china cups and saucers were chosen. The light Sunday evening meal was served on china at Mason-Appoff and Snyder-Phillips but on paper at Langdon.

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Toast, sweet rolls	Lunch plate	B. & B. plates	B. & B. plates
Muffins	Lunch plates	B. & B. plates	B. & B. plates
Cantaloupe	Sauce dish	Salad plate	Salad plate
Ice cream	Sherbet dish	Sauce dish	Sauce dish

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Muffins	Lunch plates
Cantaloupe	Sauce dish
Ice cream	Sherbet dish

Figure 7. Kinds, design and shape of women's residence hall dishes.

Food Item	Dish Choice
Large tossed salad	Soup bowl
Pie, cake	Salad plate
Desserts eaten with a fork	Salad plate
Puddings, canned fruit	Sauce dish
Desserts eaten with a spoon	Sauce dish

Dish breakage does not follow a consistent pattern in the three residence halls. See Table 1. Numerically more cups were broken in each dormitory than any other type of dish. Second highest breakage in Mason-Abbot occurred in sauce dishes, and third highest was saucers. At Snyder-Phillips second highest breakage was salad plates and then bread and butter plates. Landon showed bread and butter plates in second place and sauce dishes in third.

Table 1. Numerical dish breakage in three residence hall food services during the school year 1958-1959.

Item	Number of dishes broken		
	Snyder-Phillips	Mason-Abbot	Landon
Cups	1527	1082	299
Salad plates	1084	189	110
B. and B. plates	754	326	274
Soup bowls	702	244	65
Sauce dishes	606	1057	253
Saucers	350	400	82
Dinner plates	323	288	66
Lunch plates	298	228	18

Food Item	Dish Choice
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Desserts eaten with a fork	Salad plate
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Saucers	350	400	82
Dinner plates	323	288	66
Lunch plates	298	228	18

Table 2. Comparison of dish breakage based on the number of times used in three residence halls during the school year 1958-59.

Item	Sawyer-Phillips			Mason-Abbot			London		
	Times used	Breakage		Times used	Breakage		Times used	Breakage	
		No. of dishes	Per cent of times used		No. of dishes	Per cent of times used		No. of dishes	Per cent of times used
Dinner plates	119222	323	.271%	137224	[illegible]	.229%	[illegible]	66	.114%
Lunch plates	[illegible]	298	.261	[illegible]	[illegible]	.134	81320	18	.022
Salad plates	337970	1084	.321	296531	189	.064	134342	110	.082
B. and B. plates	175991	754	.428	303134	326	.108	112916	274	.243
Cups	334078	1527	.457	353565	1082	.306	147930	299	.202
Saucers	334078	350	.105	353565	400	.113	147930	82	.055
Sauce dishes	86916	606	.697	211461	1057	.500	82560	253	.306
Soup bowls	155185	702	.452	168247	244	.145	70888	65	.092

Table 2. Comparison of dish breakage based on the number of times used in three residence halls during the school year 1958-59.

Item	Snyder-Phillips			Mason-Abbot			Langdon		
	Times used	Breakage		Times used	Breakage		Times used	Breakage	
		No. of dishes	For cent of times used		No. of dishes	For cent of times used		No. of dishes	For cent of times used
Dinner plates	112222	323	.271%	[illegible]	288	.216%	98089	66	.114%
Lunch plates	184841	298	.161	[illegible]	288	.114	81320	18	.022
Salad plates	337970	1084	.321	[illegible]	189	.064	134342	110	.082
B. and B. plates	172221	794	.468	307134	386	.188	112916	274	.243
Cups	334078	1327	.437	333365	1082	.306	144730	299	.202
Saucers	334078	330	.105	333365	400	.113	144730	82	.055
Sauce dishes	86916	668	.697	231461	1037	.300	82360	233	.306
Soup bowls	153285	702	.432	[illegible]	344	.145	70888	65	.092

Because of the differences in dish choice and inventories, a more realistic comparison of breakage is based on the number of times dishes are used. Table 2 clearly shows this breakage comparison. The percentage for sauce dishes is highest in all the residence halls studied. Cup breakage is second in Mason-Abbot and Snyder-Phillips and third in Landon. Breakage of bread and butter plates is second in Landon. The highest breakage occurs in small bowl-shaped dishes. Two different companies had supplied the china, and the shapes of the sauce dishes were not identical. Consequently the stacks tipped very easily. It has been noted previously that the carts for the smaller dishes were tall and slim and thus more easily upset than the larger, heavier carts. The shape of the cups and the fact that they have handles make them more vulnerable to damage than other pieces of china.

The total cost of dish breakage is of vital concern to each manager, since cost of china is determined by breakage and replacement rather than initial cost. Although the percentage of breakage appears negligible, the dollar value of the china broken in a school year is worth consideration. See Table 3.

Table 3. Average resident count and dish breakage cost for three residence hall food services for the school year 1958-59.

Residence Hall	Average Resident Count	Breakage Cost	
		Total	Per Resident Student
Snyder-Phillips	638.3	$3087.45	$4.837
Mason-Abbot	746.7	2055.17	2.752
Landon	305.3	592.42	1.9444

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Landon	305.3	592.42	1.9404

Although it appears that breakage costs were excessive at Snyder-Phillips, inventory figures may be misleading. The food services operated continuously and made accurate dish counts difficult to obtain. The supervisors decided arbitrarily when glaze damage was great enough to remove the dish from daily use. This decision could have been made before the inventory period in one residence hall and at a later time in the others. Glaze damage appeared greater where dishes were stored in lowerators. Perhaps it would be more economical to buy lighter-weight, more expensive dishes to lessen the weight on the bottom dishes in the lowerator stack. Further investigation would be necessary to validate this observation because other factors such as the type of dishwashing compounds and de-staining agents and the quality of glaze could contribute to this type of damage.

All phases of residence hall food service must be constantly examined to keep the cafeteria operation financially stable. In the face of rising food and labor costs, more attention must be given to indirect expenses which include the cost of dish breakage. Over a period of time this expense item is significant and well worth consideration by management.

Although it appears that breakage costs were excessive at Snyder-Phillips, inventory figures may be misleading. The food services operated continuously and made accurate dish counts difficult to obtain. The supervisors decided arbitrarily when glass damage was great enough to remove the dish from daily use. This decision could have been made before the inventory period in one residence hall and at a later time in the others. Glass damage appeared greater where dishes were stored in lowerators. Perhaps it would be more economical to buy lighter-weight, more expensive dishes to lessen the weight on the bottom dishes in the lowerator stack. Further investigation would be necessary to validate this observation because other factors such as the type of dishwashing compounds and de-staining agents and the quality of glass could contribute to this type of damage.

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APPENDIX

VI-APPENDIX

Table 4. Daily customer count and breakfast dish usage pattern--Landon Residence Hall food service. (February 9, 1959 - March 1, 1959.)

Date	Meal Count	Lunch Plates	Salad Plates	B. & B. Plates	Cups	Saucers	Sauce Dishes	Soup Bowls
Feb. 9	180	1			1	1	1	1
Feb. 10	175	1			1	1	1	1
Feb. 11	198	1			1	1		1
Feb. 12	185	1			1	1		1
Feb. 13	185	1			1	1		1
Feb. 14	160							
Feb. 15	140							
Total	1223	923			923	923	355	923
Feb. 16	185	1			1	1		1
Feb. 17	187	1		1	1	1		1
Feb. 18	187	1			1	1	1	1
Feb. 19	172			1	1	1		1
Feb. 20	175	1			1	1		1
Feb. 21	150							
Feb. 22	150							
Total	1206	734		359	906	906	187	906
Feb. 23	180			1	1	1	1	1
Feb. 24	195	1		1	1	1		1
Feb. 25	185	1			1	1		1
Feb. 26	178	1			1	1	1	1
Feb. 27	180	1			1	1		1
Feb. 28	130							
Mar. 1	120							
Total	1168	738		375	918	918	358	918

Table 6. Daily customer count and breakfast dish usage patterns--Landon Residence Hall food service. (February 9, 1959 - March 1, 1959.)

Date	Count	Meal Plates	Lunch Plates	Salad Plates	B. & B. Plates	Cups	Saucers	Sauce Dishes	Soup Bowls
Feb. 9	180	1				1	1	1	1
Feb. 10	175	1				1	1	1	1
Feb. 11	198	1				1	1		1
Feb. 12	185	1				1	1		1
Feb. 13	185	1				1	1		1
Feb. 14	160								
Feb. 15	140								
Total	1223	823				823	823	755	923
Feb. 16	185	1				1	1		1
Feb. 17	187	1			1	1	1		1
Feb. 18	187	1				1	1	1	1
Feb. 19	172				1	1	1		1
Feb. 20	175	1				1	1		1
Feb. 21	150								
Feb. 22	150								
Total	1206	734			799	906	906	187	906
Feb. 23	180				1	1	1	1	1
Feb. 24	195	1			1	1	1		1
Feb. 25	185	1				1	1		1
Feb. 26	178	1				1	1	1	1
Feb. 27	180	1				1	1		1
Feb. 28	130								
Mar. 1	120								
Total	1168	738			775	918	918	188	918

Table 5. Daily customer count and lunch dish usage pattern--Landon Residence Hall food service. (February 9, 1959 - March 1, 1959.)

Date	Meal Count	Lunch Plates	Salad Plates	B. & B. Plates	Cups	Saucers	Sauce Dishes	Soup Bowls
Feb. 9	282	1	1		1	1	1	1
Feb. 10	288	1	1	½	1	1		1
Feb. 11	291	1	1	1	1	1		1
Feb. 12	277	1	1	1	1	1	1	
Feb. 13	283	1	1	1	1	1	1	1
Feb. 14	217	1	1		1	1	1	
Feb. 15	173							
Total	1811	1638	1638	1095	1638	1638	1059	1144
Feb. 16	291	1	1	½	1	1	½	1
Feb. 17	292	1	1	2	1	1		1
Feb. 18	297	1	1		1	1	1	1
Feb. 19	293	1	1	2	1	1		
Feb. 20	278	1	1	2	1	1		
Feb. 21	192	1	1		1	1	1	1
Feb. 22	155							
Total	1798	1643	1643	1871	1643	1643	634	1072
Feb. 23	270	1	1		1	1	1	1
Feb. 24	296	1	1	1	1	1		1
Feb. 25	288	1	1		1	1	1	
Feb. 26	298	1	1		1	1	1	1
Feb. 27	271	1	1	1	1	1	1	
Feb. 28	178	1	1	1½	1	1	½	
Mar. 1	172							
Total	1773	1601	1601	834	1601	1601	1216	864

Table 5. Daily customer count and lunch dish usage patterns--Landon Residence Hall food service. (February 9, 1979 - March 1, 1979.)

Date	Meal Count	Lunch Plates	Salad Plates	B. & B. Plates	Cups	Saucers	Bacon Platters	Soup Bowls
Feb. 9	282	1	1		1	1	1	1
Feb. 10	288	1	1	½	1	1		1
Feb. 11	291	1	1	1	1	1		1
Feb. 12	277	1	1	1	1	1	1	
Feb. 13	289	1	1	1	1	1	1	1
Feb. 14	217	1	1		1	1	1	
Feb. 15	173							
Total	1811	1439	1439	1005	1439	1439	1009	1148
Feb. 16	291	1	1	½	1	1	½	1
Feb. 17	282	1	1	2	1	1		1
Feb. 18	297	1	1		1	1	1	1
Feb. 19	293	1	1	2	1	1		
Feb. 20	276	1	1	2	1	1		
Feb. 21	192	1	1		1	1	1	1
Feb. 22	155							
Total	1790	1643	1643	1071	1643	1643	643	1078
Feb. 23	270	1	1		1	1	1	1
Feb. 24	296	1	1	1	1	1		1
Feb. 25	288	1	1		1	1	1	
Feb. 26	298	1	1		1	1	1	1
Feb. 27	271	1	1	1	1	1	1	
Feb. 28	178	1	1	½	1	1	½	
Mar. 1	122							
Total	1773	1603	1603	854	1603	1603	1216	854

Table 6. Daily customer count and dinner dish usage pattern--Landon Residence Hall food service. (February 9, 1959 - March 1, 1959.)

Date	Meal Count	Dinner Plates	Salad Plates	B.& B. Plates	Cups	Saucers	Sauce Dishes	Soup Bowls
Feb. 9	262	1	1½	1	1	1	½	
Feb. 10	274	1	1½	1	1	1	½	
Feb. 11	275	1	1	1	1	1	1	
Feb. 12	283	1	1	1	1	1	1	
Feb. 13	288	1	1½	1	1	1	1	
Feb. 14	195	1	1	1	1	1	1	
Feb. 15	215	1	2	1	1	1		
Total	1792	1792	2419	1792	1792	1792	1309	
Feb. 16	267	1	1	1	1	1	1	
Feb. 17	271	1	1½	1	1	1	½	
Feb. 18	298	1	1½	1	1	1	½	
Feb. 19	280	1	1	1	1	1	1	
Feb. 20	196	1	1½	1	1	1	½	
Feb. 21	196	1	1	1	1	1	1½	
Feb. 22	188	1	1	1	1	1	1	
Total	1696	1696	2078	1696	1696	1696	1411	
Feb. 23	260	1	1½	1	1	1	1	
Feb. 24	286	1	1	1	1	1	1	
Feb. 25	269	1	1½	1	1	1	½	
Feb. 26	274	1	1½	1	1	1	½	
Feb. 27	165	1	2	1	1	1		
Feb. 28	180	1	1	1	1	1	1	
Mar. 1	196	1	1	1	1	1	1	
Total	1630	1630	2196	1630	1630	1630	1193	

Table 6. Daily customer count and dinner dish usage patterns--London Residence Hall food service. (February 9, 1979 - March 1, 1979.)

Date	Meal Count	Dinner Plates	Salad Plates	B.& B. Cups	Entrees	Extra Dishes	Soup Bowls
Feb. 9	262	1	1½	1	1	1	½
Feb. 10	274	1	1½	1	1	1	½
Feb. 11	275	1	1	1	1	1	1
Feb. 12	283	1	1	1	1	1	1
Feb. 13	288	1	1½	1	1	1	1
Feb. 14	295	1	1	1	1	1	1
Feb. 15	275	1	2	1	1	1	
Total	1782	1782	2419	1782	1782	1792	1709
Feb. 16	267	1	1	1	1	1	1
Feb. 17	271	1	1½	1	1	1	½
Feb. 18	298	1	1½	1	1	1	½
Feb. 19	280	1	1	1	1	1	1
Feb. 20	296	1	1½	1	1	1	½
Feb. 21	296	1	1	1	1	1	1½
Feb. 22	288	1	1	1	1	1	1
Total	1696	1696	2078	1696	1696	1696	1611
Feb. 23	260	1	1½	1	1	1	1
Feb. 24	286	1	1	1	1	1	1
Feb. 25	269	1	1½	1	1	1	½
Feb. 26	274	1	1½	1	1	1	½
Feb. 27	265	1	2	1	1		
Feb. 28	280	1	1	1	1	1	1
Mar. 1	296	1	1	1	1	1	1
Total	1630	1630	2196	1630	1630	1630	1179

Table 7. Summary of customer counts and breakfast dish usage for Landon Residence Hall food service by weeks. (September 21, 1958 - December 16, 1958.)

Date	Meal Count	Lunch Plates	Salad Plates	B. & B. Plates	Cups	Saucers	Sauce Dishes	Soup Bowls
Sept. 21-Sept. 28	751	501			501	501	107	501
Sept. 29-Oct. 5	1580	889	230	471	1130	1130	445	1130
Oct. 6-Oct. 12	1454	1094		225	1094	1094	420	1094
Oct. 13-Oct. 19	1352	1132			1132	1132	437	1132
Oct. 20-Oct. 26	1275	853		405	1055	1055	415	1055
Oct. 27-Nov. 2	1500	1050		206	1050	1050	221	1050
Nov. 3-Nov. 9	1266	1016			1016	1016	211	1016
Nov. 10-Nov. 16	1271	798		417	1001	1001	385	1001
Nov. 17-Nov. 23	1320	968		201	968	968	182	968
Nov. 24-Nov. 30	595	595			595	595	196	595
Dec. 1-Dec. 7	1374	773		393	974	974	398	974
Dec. 8-Dec. 14	1169	1069		190	1069	1069	176	1069
Dec. 15-Dec. 16	180	180			180	180	180	180
Totals	15087	10918	230	2508	11765	11765	3773	11765

Table 7. Summary of correlations between the predictor variables for Random Coefficient Model (Dependent Var. 1968).

Date	Cement Kiln	Primary Kiln	Primary Kiln	Primary Kiln	Other B.M.P.	Glassware	Distance Source	Population Group
Cement Kiln	1.00	1.00	1.00	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Other B.M.P.	.00	.00	.00	.00	.00	.00	.00	.00
Glassware	.00	.00	.00	.00	.00	.00	.00	.00
Distance Source	.00	.00	.00	.00	.00	.00	.00	.00
Population Group	.00	.00	.00	.00	.00	.00	.00	.00
Cement Kiln	1.00	.00	.00	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Other B.M.P.	.00	.00	.00	.00	.00	.00	.00	.00
Glassware	.00	.00	.00	.00	.00	.00	.00	.00
Distance Source	.00	.00	.00	.00	.00	.00	.00	.00
Population Group	.00	.00	.00	.00	.00	.00	.00	.00
Cement Kiln	1.00	.00	.00	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Other B.M.P.	.00	.00	.00	.00	.00	.00	.00	.00
Glassware	.00	.00	.00	.00	.00	.00	.00	.00
Distance Source	.00	.00	.00	.00	.00	.00	.00	.00
Population Group	.00	.00	.00	.00	.00	.00	.00	.00
Cement Kiln	1.00	.00	.00	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Other B.M.P.	.00	.00	.00	.00	.00	.00	.00	.00
Glassware	.00	.00	.00	.00	.00	.00	.00	.00
Distance Source	.00	.00	.00	.00	.00	.00	.00	.00
Population Group	.00	.00	.00	.00	.00	.00	.00	.00
Cement Kiln	1.00	.00	.00	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Other B.M.P.	.00	.00	.00	.00	.00	.00	.00	.00
Glassware	.00	.00	.00	.00	.00	.00	.00	.00
Distance Source	.00	.00	.00	.00	.00	.00	.00	.00
Population Group	.00	.00	.00	.00	.00	.00	.00	.00
Cement Kiln	1.00	.00	.00	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Other B.M.P.	.00	.00	.00	.00	.00	.00	.00	.00
Glassware	.00	.00	.00	.00	.00	.00	.00	.00
Distance Source	.00	.00	.00	.00	.00	.00	.00	.00
Population Group	.00	.00	.00	.00	.00	.00	.00	.00
Cement Kiln	1.00	.00	.00	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Primary Kiln	.00	.69	.69	.00	.00	.00	.00	.00
Other B.M.P.	.00	.00	.00	.00	.00	.00	.00	.00
Glassware	.00	.00	.00	.00	.00	.00	.00	.00
Distance Source	.00	.00	.00	.00	.00	.00	.00	.00
Population Group	.00	.00	.00	.00	.00	.00	.00	.00

Table 8. Summary of customer count and dish usage for breakfast, lunch and dinner in Landon Residence Hall food service by school terms. (September 21, 1958 - June 17, 1959.)

Breakfast

Term	Meal Count	Lunch Plates	Salad Plates	B. & B. Plates	Cups	Saucers	Sauce Dishes	Soup Bowls
Fall	15087	10918	230	2508	11765	11765	3773	11765
Winter	12999	8520	200	3236	9944	9944	3563	9944
Spring	13668	8472	654	3727	11070	11070	3511	11070
Total	41754	27910	1084	9471	32779	32779	10847	32779

Lunch

Term	Meal Count	Lunch Plates	Salad Plates	B. & B. Plates	Cups	Saucers	Sauce Dishes	Soup Bowls
Fall	23212	19994	19840	17989	21042	21042	10862	13108
Winter	28103	17042	18178	13645	18178	18178	11297	12997
Spring	19467	16374	17842	12249	17842	17842	10603	11037
Total	62782	53410	55860	43883	57062	57062	32762	37142

Dinner

Term	Meal Count	Dinner Plates	Salad Plates	B. & B. Plates	Cups	Saucers	Sauce Dishes	Soup Bowls
Fall	20813	20813	28374	21430	20813	20813	12465	456
Winter	19182	18905	24664	19182	18905	18905	14320	140
Spring	18371	18371	24360	18950	18371	18371	12166	291
Total	58366	58089	77398	59562	58089	58089	38951	887

Table 8. Summary of customer count and dish usage for breakfast, lunch and dinner in London Residence Hall food service by school terms. (September 21, 1938 - June 17, 1939.)

Breakfast

Term	Meal Count	Lunch Plates	Salad Plates	B. & B. Plates	Cups	Saucers	Saucer Dishes	Soup Bowls
Fall	15087	10918	230	2308	11765	11765	3773	11765
Winter	12999	8320	200	3236	9944	9944	3363	9944
Spring	13668	8472	63%	3727	11070	11070	3511	11070
Total	41754	27910	1084	9471	32779	32779	10847	32779

Lunch

Term	Meal Count	Lunch Plates	Salad Plates	B. & B. Plates	Cups	Saucers	Saucer Dishes	Soup Bowls
Fall	23232	19994	1984O	17989	21045	21045	10662	13108
Winter	20803	17045	1817B	13645	1817B	1817B	11237	12997
Spring	19862	16324	17845	12899	17845	17845	10603	11077
Total	63798	53410	5586O	44893	57062	57062	32762	37184

Dinner

Term	Meal Count	Dinner Plates	Salad Plates	B. & B. Plates	Cups	Saucers	Saucer Dishes	Soup Bowls
Fall	20813	20813	2837%	21430	20813	20813	12465	456
Winter	19182	18905	2866%	19182	18905	18905	14320	140
Spring	18377	18377	24360	18950	18377	18377	12146	291
Total	58366	58089	77298	59562	58089	58089	38931	887

Table 9. Summary of customer count and dish usage in three residence hall food services by meals for the school year. (September 21, 1958 - June 17, 1959.)

Landon

	Meal Count	Dinner Plates	Lunch Plates	Salad Plates	B. & B. Plates	Cups	Saucers	Sauce Dishes	Soup Bowls
B	41754		27910	1084	9471	32779	32779	10847	32779
L	62782		53410	55860	43883	57062	57062	32762	37142
D	58366	58089		77398	59562	58089	58089	38951	887
T	162902	58089	81320	134342	112916	147930	147930	82560	70808

Mason-Abbot

	Meal Count	Dinner Plates	Lunch Plates	Salad Plates	B. & B. Plates	Cups	Saucers	Sauce Dishes	Soup Bowls
B	87890		60109	1171	23138	70768	70768	39026	70768
L	145905		138517	129485	116370	145573	145573	85575	94726
D	137224	137224	929	165875	163626	137224	137224	86860	2753
T	371019	137224	199555	296531	303134	353565	353565	211461	168247

Snyder-Phillips

	Meal Count	Dinner Plates	Lunch Plates	Salad Plates	B. & B. Plates	Cups	Saucers	Sauce Dishes	Soup Bowls
B	85359		61727	822		85359	85359	33198	61727
L	129987		123114	167145	57931	129497	129497	34937	89141
D	119222	119222		170003	118060	119222	119222	18781	4317
T	334568	119222	184841	337970	175991	334078	334078	86916	155185

Table 9. Summary of conformal cosmic ray flux models in ferro ferromagnesian meteorites (September 21, 1958 - June 17, 1959.)

London

	Model	Dimmer	Lunar	Galaxy	B. & B.	Cube	Geometry	Dimpse	Bowle
					Galaxy-Halliday				
					Nickel-Copper				
T	3.4429	11.9555	18.4841	33.1210	13.1281	3.4010	3.4010	8.9319	12.2182
D	11.9555	11.9555		11.0003	11.9000	11.9555	11.9555	18.181	4.313
L	13.9991		13.3114	14.1142	21.21	13.4131	13.4131	3.4131	9.1141
B	8.2129		6.1321	855		8.2129	8.2129	3.1128	6.1321
T	33.1019	13.1334	18.2222	38.1231	30.113	12.1212	12.1212	3.1141	18.8811
D	13.1334	13.1334	959	14.9812	14.3959	13.1334	13.1334	8.8989	5.123
L	14.2202		13.8121	13.4482	11.9310	14.2211	14.2211	8.2212	34.159
B	8.1980		60.104	11.11	5.3138	30.108	30.108	3.3032	30.108
T	11.1019	13.1334	18.2222	38.1231	30.113	12.1212	12.1212	3.1141	18.8811
D	13.1334	13.1334	959	14.9812	14.3959	13.1334	13.1334	8.8989	5.123
L	14.2202		13.8121	13.4482	11.9310	14.2211	14.2211	8.2212	34.159
B	8.1980		60.104	11.11	5.3138	30.108	30.108	3.3032	30.108

	Model	Dimmer	Lunar	Galaxy	B. & B.	Cube	Geometry	Dimpse	Bowle
T	4.1124		5.1310	1.004	9.117	3.1111	3.1111	1.0041	3.1111
D	2.3322	2.0003		11.1310	22.323	2.0000	2.0000	3.3131	999
L	6.1123		2.3410	2.2320	4.3001	2.1025	2.1025	3.1123	11.1141
B	1.1321		0.1321	1.004	9.117	3.1111	3.1111	1.0041	3.1111
T	1.2303	2.0003	0.1350	1.3.345	11.3312	1.4110	1.4110	0.3120	1.0000
D	2.3322	2.0003		11.1310	22.323	2.0000	2.0000	3.3131	999
L	6.1123		2.3410	2.2320	4.3001	2.1025	2.1025	3.1123	11.1141
B	1.1321		0.1321	1.004	9.117	3.1111	3.1111	1.0041	3.1111

Table 10. Breakage costs determined by the inventory method in three residence hall food services. (July, 1958 - June, 1959.)

INVENTORIES

Landon

	Dinner Plates	Lunch Plates	Salad Plates	B. & B. Plates	Cups	Saucers	Sauce Dishes	Soup Bowls
Beginning Inventory	624	426	487	541	241	267	360	228
Purchases		24	178	408	288		216	108
Available	624	450	665	949	529	267	576	336
Ending Inventory	558	432	455	675	230	185	323	271
Breakage	66	18	110	274	299	82	253	65
Cost of Breakage	$43.40	$12.77	$59.15	$94.39	$208.50	$30.41	$109.84	$33.96

Mason-Abbot

Beginning Inventory	866	1875	595	1012	644	638	595	1026
Purchases	576		576	288	864	576	1008	
Available	1442	1875	1171	1300	1508	1214	1603	1026
Ending Inventory	1156	1647	982	974	426	814	546	782
Breakage	288	228	189	326	1082	400	1057	244
Cost of Breakage	$189.36	$161.60	$101.59	$112.47	$751.89	$151.67	$458.91	$127.49

Snyder-Phillips

Beginning Inventory	910	1042	1412	1156	938	888	1073	1083
Purchases	216	216	684	540	1440	432	468	216
Available	1126	1258	2096	1696	2378	1320	1541	1299
Ending Inventory	803	960	1012	942	851	970	935	597
Breakage	323	298	1084	754	1527	350	606	702
Cost of Breakage	$212.37	$211.33	$582.65	$260.13	$1061.27	$129.79	$263.11	$366.80
Cost per Dozen	$7.89	$8.51	$6.45	$4.14	$8.34	$4.45	$5.21	$6.27

Table 10. Breakage costs determined by the inventory method in three residence hall food services. (July, 1958 - June, 1959.)

	Dinner Plates	Lunch Plates	Salad Plates	B. & B. Plates	Cups	Saucers	Serve Dishes	Soup Bowls
INVENTORIES								
Landon								
Beginning Inventory	634	426	487	391	241	267	360	228
Purchases	24	178	408	288			216	108
Available	634	450	665	919	529	267	576	336
Ending Inventory	558	432	655	675	230	185	323	271
Breakage	66	18	110	274	299	82	253	65
Cost of Breakage	$43.40	$12.77	$39.15	$94.39	$208.50	$30.41	$109.84	$33.96
Mason-Abbot								
Beginning Inventory	866	1875	595	1012	644	638	595	1026
Purchases	576		576	288	864	576	1008	
Available	1442	1875	1171	1300	1508	1214	1603	1026
Ending Inventory	1156	1647	982	974	426	814	546	782
Breakage	288	228	189	326	1082	400	1057	244
Cost of Breakage	$189.36	$161.69	$101.39	$112.47	$721.99	$151.67	$458.91	$127.49
Snyder-Philltips								
Beginning Inventory	710	1042	1412	1156	938	888	1073	1083
Purchases	216	216	684	960	1440	432	468	216
Available	1126	1258	2096	1696	2378	1320	1541	1299
Ending Inventory	803	960	1012	942	851	970	935	997
Breakage	323	298	1084	754	1527	350	606	702
Cost of Breakage	$212.37	$211.33	$582.65	$260.13	$1061.27	$129.79	$263.11	$366.80
Cost per Dozen	$7.89	$8.51	$6.45	$4.14	$8.34	$4.45	$5.21	$6.27

Table 11. Comparison of costs of dish breakage in three residence hall food services for the school year. (September 21, 1958 - June 17, 1959.)

COST OF DISH BREAKAGE

	Landon	Mason-Abbot	Snyder-Phillips
Dinner Plates	$ 43.40	$ 189.36	$ 212.37
Lunch Plates	12.77	161.69	211.33
Salad Plates	59.15	101.59	582.65
Bread & Butter Plates	94.39	112.47	260.13
Cups	288.50	751.99	1061.27
Saucers	30.41	151.67	129.79
Sauce Dishes	109.04	458.91	863.11
Soup Bowls	33.96	127.49	366.80
Total	$592.42	$2055.17	$3087.45

Table 11. Comparison of costs of dish breakage in three residence hall food services for the school year. (September 21, 1958 - June 17, 1959.)

COST OF DISH BREAKAGE

	Landon	Mason-Abbot	Snyder-Phillips
Dinner Plates	$ 43.40	$ 189.36	$ 212.37
Lunch Plates	12.77	161.69	211.33
Salad Plates	99.15	101.99	582.65
Bread & Butter Plates	94.39	112.47	260.13
Cups	208.50	751.99	1061.27
Saucers	30.41	151.67	129.79
Sauce Dishes	109.84	458.91	263.11
Soup Bowls	33.96	127.49	366.00
Total	$992.42	$2055.17	$3087.45

Table 12. Average daily resident count based on the McBee report--
London Residence Hall. (September 21, 1958 - June 17, 1959.)

AVERAGE DAILY RESIDENT COUNT

Month	McBee Report	Days in Operation	Total Resident Count
Sept. - Oct.	319	41	13079
Nov.	317	26	8242
Dec.	317	16	5072
Jan.	292	27	7884
Feb.	292	28	8176
Mar.	292	24	7008
Apr.	306	31	9486
May	305	31	9455
June	305	17	5185
Total		241	73587

$$\frac{\text{Total Resident Count}}{\text{Total Days Operation}} = \text{Average Daily Resident Count}$$

$$\frac{73587}{241} = 305.3$$

Table 12. Average daily resident count based on the Medico report--
London Residence Hall. (September 21, 1938 - June 17, 1939.)

AVERAGE DAILY RESIDENT COUNT

Month	Medico Report	Days in Operation	Total Resident Count
Sept. - Oct.	319	41	13079
Nov.	317	26	8242
Dec.	317	16	5072
Jan.	292	27	7884
Feb.	292	28	8176
Mar.	292	24	7008
Apr.	306	21	6426
May	305	21	6405
June	305	17	5185
Total		241	73397

$$\frac{\text{Total Resident Count}}{\text{Total Days Operation}} = \text{Average Daily Resident Count}$$

$$\frac{73397}{241} = 305.3$$

RESIDENCE HALLS
DISH INVENTORY

ITEM _____

	BEGINNING INVENTORY	PURCHASED	SHOULD HAVE	TERM END INVENTORY	BROKEN OR MISSING	%
AMOUNT						
DATE						
AMOUNT						
DATE						
AMOUNT						
DATE						
AMOUNT						
DATE						
AMOUNT						
DATE						
AMOUNT						
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AMOUNT						
DATE						
AMOUNT						
DATE						
AMOUNT						
DATE						
AMOUNT						
DATE						

RESIDENCE HALLS
DISH INVENTORY

ITEM _____

	BEGINNING INVENTORY	PURCHASED	SHOULD HAVE	TERM END INVENTORY	BROKEN OR MISSING	%
AMOUNT						
DATE						
AMOUNT						
DATE						
AMOUNT						
DATE						
AMOUNT						
DATE						
AMOUNT						
DATE						
AMOUNT						
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AMOUNT						
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AMOUNT						
DATE						

Exhibit 1. Residence halls dish inventory form.

Exhibit 1. Residence hall dish inventory form.

Second Cycle

WOMEN'S RESIDENCE HALLS MENUS
Winter Term, 1959

Monday, Jan. 12, Feb. 9, Mar. 9

BREAKFAST	LUNCHEON	DINNER
Banana	Turkey-Rice Soup, Crackers	Roast Beef
Grapefruit Juice	Cousy Island Hot Dogs	Shrimp, Cocktail Sauce
Assorted Dry Cereal	Egg Salad Sandwich	Mashed Potatoes, Gravy
Ralston	Pear-Sugared Date Salad	Buttered Broccoli
Crisp Bacon (3)	Cabbage-Apple Salad	Harvard Beets
Toast, Jam, Butter	Assorted Breads, Butter	Sliced Orange-Coconut Salad
Coffee, Tea, Cocoa, Milk	Frozen Peaches	Tossed Vegetable Salad
	Butterscotch Pudding	Poppy Seed Rolls - Dark Bread
	Coffee, Tea, Milk	Lime Sherbet
		Boston Cream Cake
		Coffee, Tea, Milk

Exhibit 2. Daily menu for women's residence halls. (Winter term, 1959. Second Cycle.)

Monday, Feb. 3, Mar. 3

BREAKFAST	LUNCHEON	DINNER
Banana	Tuna-olive pomp Cheddar	Roast Beef
Grapefruit juice	Cream Italian Bar Dips	Garlic Cocktail Sauce
Assorted Dry Cereal	Egg Salad Sandwich	Baked Potatoes Gravy
Raisins	Tomato-Spinach Dip Salad	Buttered Broccoli
Cinnamon (3)	Cottage-Olive Salad	Herbed Beets
Toast and Butter	Assorted Fruits Butter	Glazed Cranberry-Cocoanut Salad
Cocoa and Cream Milk	Tapioca Pudding	Tossed Vegetable Salad
	Buttermilk Muffins	Tahiti Iced Milk - Dark Brown
	Cocoa and Milk	Lime Sherbet

Cocoa and Cream Milk

Breakfast 3: Daily menu for women's residence halls. (Effect from 1969. Second Course.)

Second Cycle

WOMEN'S RESIDENCE HALLS MENUS

Winter Term, 1959

Tuesday, Jan. 13, Feb. 10, Mar. 10

BREAKFAST	LUNCHEON	DINNER
Half Grapefruit	French Onion Soup, Crackers	Baked Ham, Mustard
Pineapple Juice	American Goulash	Chop Suey, Rice, Chinese Noodles
Assorted Dry Cereal	Big Boy Sandwich	Mashed Potatoes
Farina	Apricot-Prune Salad	Buttered Cauliflower
Fried Eggs	Chopped Lettuce Salad	Buttered Green Beans
Toast, Jelly, Butter	Assorted Breads, Butter	Molded Pineapple-Lime Jello
Coffee, Tea, Cocoa, Milk	Dixie Cup	Head Lettuce Slice
	Molasses Cookies	Butter Rolls, Bread, Butter
	Coffee, Tea, Milk	Citrus Fruit Cup
		Apple Pie
		Coffee, Tea, Milk

Exhibit 2. (Continued) Daily menu for women's residence halls. (Winter term, 1959. Second Cycle.)

Instructions: Fill Form 10 Not 10

WOMEN'S RESIDENCE HALLS MENUS

August Term, 1966

Second Cycle

BREAKFAST	LUNCHEON	DINNER
Half Grapefruit	French Onion Soup, Crackers	Baked Ham, Mustard
Hominy Grits	Hamburgers Garnish	Corn Souffle, Mrs. Chinnes Recipe
Assorted Dry Cereal	Big Bun Sandwich	Mashed Potatoes
Bacon	Pimento-Cheese Salad	Buttered Cauliflower
Toast Jelly	Chopped Lettuce Salad	Buttered Green Beans
Toast Jelly Butter	Vanilla Pudding Butter	Molded Strawberry-Lime Jelly
Cocoa, Tea, Cream, Milk	Milk	Hot Rolls Butter
	Molasses Cookies	Butter Pecan Cake Butter
	Cocoa, Tea, Milk	Chocolate Fudge Cake
		Coffee, Tea, Milk

Second Cycle

WOMEN'S RESIDENCE HALLS MENUS
Winter Term, 1959

Wednesday, Jan. 14, Feb. 11, Mar. 11

BREAKFAST	LUNCHEON	DINNER
Figs	Split Pea Soup, Crackers	Grilled Pork Chops
Blended Juice	Omelet	Fish Sticks, Tartare Sauce
Assorted Dry Cereal	Hamburgers in Buns	Mashed Potatoes
Pettijohn	Mustard, Sliced Onions, Catsup	Buttered Peas
Poached Eggs	Relish Plate	Buttered Corn
Toast, Marmalade, Butter	Cottage Cheese Salad	Waldorf Salad
Coffee, Tea, Cocoa, Milk	Ambrosia Fruit Cup	Chopped Lettuce Salad
	Chocolate Brownie	Hot Cross Buns, Bread, Butter
	Coffee, Tea, Milk	Strawberry Sherbet
		Pineapple Ice Box Cake
		Coffee, Tea, Milk

Exhibit 2. (Continued) Daily menu for women's residence halls. (Winter term, 1959. Second Cycle.)

WOMEN'S RESIDENCE HALLS MENUS

Market Form 1028

Second Cycle

BREAKFAST	LUNCHEON	DINNER
Fruit	Spiced Ham Sandwiches	Grilled Pork Chops
Hominy Grits	Celery	Brown Sauce Potatoes
Toasted Muffins	Hominy Grits Cake	Hominy Fritters
Butter	Mashed Potatoes in Bowl	Mashed Potatoes
Poached Eggs	Mashed Yellow Turnips Cream Butterscotch Pie	Butterscotch Pie
Coffee Jam Milk	Bolted Bread	Butterscotch Cake
	Coffee Cheese Salad	Apricot Salad
	Marmalade Tarts Cup	Chicken Lorraine Salad
	Chocolate Fromage	Hot Cross Buns Honey Butter
	Coffee Jam Milk	Permanent Sherbet
		Pineapple Ice Box Cake
		Coffee Jam Milk

Exhibit 5. (Continued) Data menu for women's residence halls (Market form 1028 Second Cycle)

Second Cycle

WOMEN'S RESIDENCE HALLS MENUS
Winter Term, 1959

Thursday, Jan. 15, Feb. 12, Mar. 12

BREAKFAST	LUNCHEON	DINNER
Applesauce	Grape Juice	B. B. Q. Roast Veal
Orange Juice	Baked Beans, Canadian Bacon	Salisbury Steak, Mushroom Gravy
Assorted Dry Cereal	Boston Brown Bread	Mashed Potatoes
Malt O' Meal	Egg Cutlets	Carrot Circles
French Toast, Hot Syrup	Lettuce with Fruit Dressing	Buttered Asparagus
Toast, Marmalade, Butter	Cabbage, Pineapple Salad	Banana-Nut Salad
Coffee, Tea, Cocoa, Milk	Bread, Butter	Tossed Green Salad
	Dark Sweet Cherries	Parkerhouse Rolls, Bread, Butter
	Chocolate Chip Cookies	Ice Cream
	Coffee, Tea, Milk	Fruit Jello
		Coffee, Tea, Milk

Exhibit 2. (Continued) Daily menu for women's residence halls. (Winter term, 1959. Second Cycle.)

		COFFEE, TEA, MILK
	COFFEE, TEA, MILK	TOMATO JUICE
	CHOCOLATE CHIP COOKIES	TEA CAKES
	BAKE HOUSE CRULLERS	INTERNATIONAL HOTEL, PEACH, BUTTER
COFFEE, TEA, COCOA, MILK	BROWN BUTTER	TOSSED GREEN SALAD
FRENCH, MERMELADE, BUTTER	CRANBERRY TURNOVER SALAD	BANANA-NUT SALAD
FRENCH TOAST, HAM GRAVY	LOCKNOW WILD TURKEY TRUSSINGS	BUTTERED VEGETABLE
MILK OR NOGS	BUN CRUTCHES	CHERRY CRUMBLES
MASHED PIN CORNS	BOSTON BROWN BREAD	BAKED TATOES
CHERRY JUICE	BAKED BEANS, CANADIAN BACON	SOUTHERN SPICE, BROWN GRAVY
APPLESAUCE	GRAPE JUICE	B. B. C. TOSSED ADD
BREAKFAST	LUNCHEON	DINNER

INTERNAL FOOD JJ. REP. JS. MAT. JS

MENU'S RESIDENCE HALLS MENUS

MENUS FROM 1966

Gordon Chris

Second Cycle

WOMEN'S RESIDENCE HALLS MENUS
Winter Term, 1959

Friday, Jan. 16, Feb. 13, Mar. 13

BREAKFAST	LUNCHEON	DINNER
Sliced Peaches	Manhattan Clam Chowder, Crackers	Fried Perch, Tartare Sauce
Tomato Juice	Ham Salad Boat	Lamb Steaks, Mint Jelly
Assorted Dry Cereal	Tuna Salad Boat	Baked Potatoes
Oatmeal	Grapefruit, Orange, Pear Salad	Buttered Turnips with Frozen Peas
Scrambled Eggs	Head Lettuce Slice	Buttered Spinach
Toast, Butter, Jelly	Fruit Cup	Cranberry Relish
Coffee, Tea, Cocoa, Milk	Apple Brown Betty	Chopped Lettuce
	Coffee, Tea, Milk	Cinnamon Bread, Butter
		Apricot Halves
		White Layer Cake
		Coffee, Tea, Milk

Exhibit 2. (Continued) Daily menu for women's residence halls. (Winter term, 1959. Second Cycle.)

August 1966

WOMEN'S RESIDENCE HALLS MENUS

Second Cycle

BREAKFAST	LUNCHEON	DINNER
Sliced Peaches	Hamburgers Glen Cheddar, Cheese	Fried Perch, Tartare Sauce
Tomato Juice	Ham Salad Bowl	Lamb Gravy, Mint Jelly
Toasted Pie Cereal	Ham Salad Bowl	Baked Potatoes
Oatmeal	Cheddar, Cheese, Ham Salad Sandwiches Tartare Mild Green Peas	
Scrambled Eggs	Ham Potatoes Slices	Buttered Spinach
Toast, Butter, Jelly	Fruit Cup	Cranberry Molded
Coffee, Tea, Cocoa, Milk	White Bread Butter	Cranberry Relishes
	Coffee, Tea, Milk	Cinnamon Bread, Butter
		Coffee, Tea, Milk

Second Cycle

WOMEN'S RESIDENCE HALLS MENUS
Winter Term, 1959

Saturday, Jan. 17, Feb. 14, Mar. 14

CONTINENTAL BREAKFAST	LUNCHEON	DINNER
Raised Coffee Cake	Blended Juice	Country Fried Steak
Cocoa	Sausage & Pancakes	Veal Chopettes
Coffee	Grilled Cheese Sandwiches	Hash Brown Potatoes
	Cabbage Salad	Buttered Wax Beans
	Tossed Vegetable Salad	Buttered Mixed Vegetables
	Bread, Butter	Tangerine-Prune Salad
	Bananas	Head Lettuce Slice
	Chocolate Pudding	Twin Rolls, Butter
	Coffee, Tea, Milk	Bavarian Cream with Raspberries
		Valentine Ice Cream
		Coffee, Tea, Milk

Exhibit 2. (Continued) Daily menu for women's residence halls. (Winter term, 1959. Second Cycle.)

WOMEN'S RESIDENCE HALLS MENUS

Menu for July 1969

Saturday, July 12, Sunday, July 13

CONTINENTAL BREAKFAST	LUNCHEON	DINNER
Mashed Cottage Cube	Blended Juice	Country Fried Steak
Cocoa	Granola & Tangerine	Veal Cordelia
Coffee	Grilled Cheese Sandwiches	Hand Tossed Potatoes
	Cappuccino Salad	Buttered Mix Beans
	Tossed Vegetable Salad	Buttered Hard Vegetables
	Fresh Fruit	Tomato-Turnip Salad
	Banana	Hard Rolls Slice
	Chocolate Langues	Jam Molly Pecan
	Coffee, Tea, Milk	Sundae Cream with Strawberries
		Coffee, Tea, Milk

Second Choice

WOMEN'S RESIDENCE HALLS MENUS
Winter Term, 1959

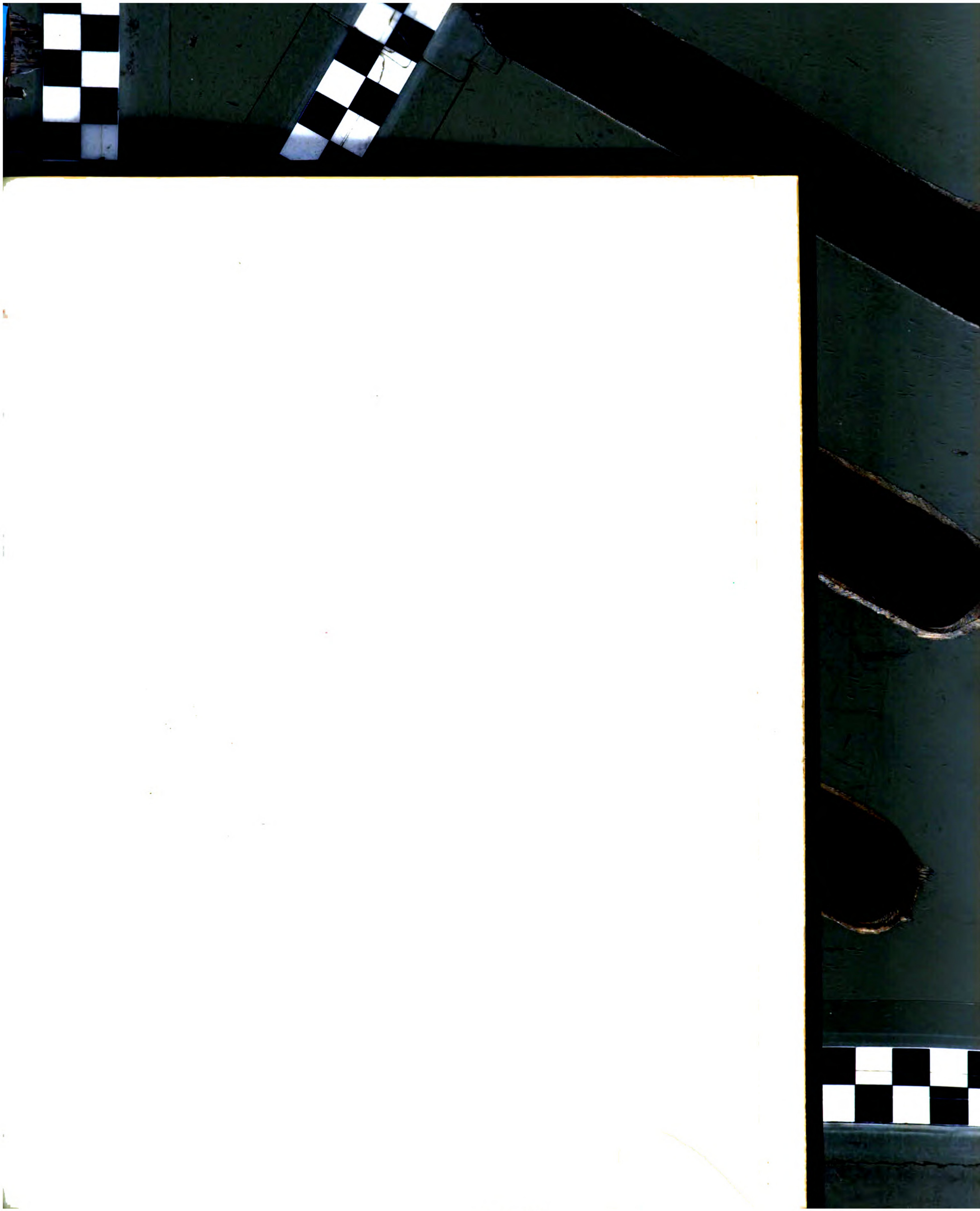
Second Cycle

Sunday, Jan. 18, Feb. 15, Mar. 15

CONTINENTAL BREAKFAST	DINNER	SUPPER
Long Johns	Fried Chicken	Sloppy Joes - Buns
Coffee	Baked Ham	Potato Chips
Cocoa	Mashed Potatoes, Gravy	Relish Trays
	Buttered Brussel Sprouts	Fruit Trays
	Succotash	Peanut Butter Cookies
	Molded Arabian Peach Salad	Cocoa, Tea, Coffee, Milk
	Head Lettuce Slice	
	Rolls, Dark Bread, Butter	
	Cherry Pie a la Mode	
	Pineapple Chunks	
	Coffee, Tea, Milk	

Exhibit 2. (Continued) Daily menu for women's residence halls. (Winter term, 1959. Second Cycle.)

	Cheese Pie a la King	
	Lyonnaise Cheese	
	Cooked Egg Noodles	
	Mixed Vegetable Medley Salad	Cocoa Tea Coffee Milk
	Gingerbread	Peanut Butter Cookies
	Butterscotch Pudding Sundae	Fruit Drink
	Mexican Vegetable Stew	Italian Drink
Cocoa	Mexican Vegetable Stew	Italian Drink
Coffee	Baked Ham	Potato Chips
Iced Tea	Fried Chicken	Grapefruit Juice - Punch
CONTINENTAL BREAKFAST	DINNER	SUPPER



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