

Chapter 3

The Invention of Housework: The Early Stages of Industrialization

DURING the nineteenth century the United States became an industrialized country—indeed, probably the most industrialized of all countries in the world. The process took a long time and, for the country as a whole, had many facets. For international merchants it meant a shift from dealing in raw materials to dealing in manufactured goods. For landless laborers it meant a shift from the farm to the factory as the locus for their work. For politicians it meant having to cope with complex questions of finance and corporate structure for which there were few legal precedents. For bankers it meant modifications of routine practices so as to satisfy the needs of capitalists who wished to invest—not in land but in machinery. For poor young men who had big

The Invention of Housework: Industrialization

plans for themselves, it meant casting those plans in terms of new businesses, new inventions, and technical training rather than in terms of one of the professions or progressive farming. For local merchants, proprietors of general stores, and rural peddlers, it meant learning to insist on payments in cash rather than in kind. For farmers it also meant learning to deal in cash and to acquire cash, for the new implements that could increase yields and replace farm laborers—the harvesters and combines, the nurserymen's seeds and chemists' fertilizers—could be paid for only in cash. Industrialization brought with it new forms of transport (the canal and the railroad), new forms of communication (the telegraph, the telephone, the typewriter, the daily newspaper), and new kinds of goods that would alter social relations of all kinds: ready-made cloth, which might eliminate home spinning and weaving; ready-made clothing, which might eliminate home sewing or jobs for seamstresses; canned milk to substitute for the fresh and perishable kind; iceboxes, which required the invention of a new social role, the iceman; and so on.

The household was affected by and implicated in this process, just as much as were the law courts, the countinghouses, the workplaces, and the general stores. For it was from the households of the countryside and the cities that young people and adults went out to work in the factories, and it was to those households that their wages were returned, providing the cash that was traded for goods. Furthermore, it was the demand for those goods that continued to fuel the economy being formed by those who were organizing the manufacture of the goods. During the nineteenth century, households ceased to manufacture cloth and began to buy it; they similarly ceased to manufacture candles and, instead, purchased kerosene; they ceased to chop wood and, instead, began to purchase coal; they ceased to butcher their own meat and, instead, began to purchase the products of the meat packers in Chicago. There were a variety of reasons for these changes. Some once-rural, now-urban households found that many of these activities were not possible in an urban setting. Other households ceased carrying them on out of economic considerations, since the wages of the young or of parents were able to buy more goods or a higher standard of goods than any of these

individuals could have produced by themselves. Other people were forced to give up these activities, having lost whatever stake they had had in the land and its products upon voyaging from the Old World to the New. For whatever reasons, and there were many more reasons than those I have alluded to, the relationship between the household and the economy in which it was placed was profoundly—and irreversibly—altered by the process of industrialization. Whatever disadvantages some of us may now see in the alteration of this relationship, the fact remains that some of the people who made decisions about the conduct of life in their own households in the nineteenth century wanted those changes to occur and acted on that impulse: buying manufactured goods, willingly selling their labor in return for cash, bringing up their children so as to be socialized appropriately for the role of employee rather than of owner, or, alternatively, by bringing up their children to expect the perquisites of being owners. Some people were dragged unwillingly into the industrialized world; but others, for their own good reasons, greeted it with open arms. The latter group appear to have been in the majority or, at the very least, in the places of power.

It has proved difficult, however, to assess the relationship between the work that women did in their homes—"housework," as it came to be called in this century—and the process of industrialization. Many historians have concluded that the substitution of manufactured goods for homemade goods eased the burden of women's work: for example, it is surely easier to buy kerosene than to make candles; to purchase cotton cloth than to comb, card, spin, and weave it; to buy milk from a vendor than to tend to the milking and management of a cow. Furthermore, since the process of industrialization involved a growth in the size both of the urban population and of the middle classes, it is easy to argue, on structural grounds alone, that in the nineteenth century fewer women had to work their fingers to the bone in order to maintain the health and security of their families than in any previous century. Surely it must be easier to do housework under urban conditions and with the assistance of servants (the possession of which was, in that century, virtually the only sure way of defining who was a member of the middle classes). This argu-

ment becomes even more persuasive when we remember that it was during the nineteenth century that, by whatever mechanism, white American families succeeded in limiting their fertility; the total fertility rate (the average number of children borne by a woman) fell from 7.04 in 1800 to 3.56 in 1900; fewer children, almost by necessity, must have meant fewer women with broken health (and broken backs!). It seems easy to conclude that, during the nineteenth century, the many facets of industrialization conspired together to make life easier for the average American woman.¹

Unfortunately contemporary documents tell a different tale: from the beginning of the century until its end, from one coast to the other, American women seem to have been exhausted a lot of the time. "A woman's work is never done, and happy she whose strength holds out to the end of the [sun's] rays," wrote Martha Moore Ballard in her diary in 1795, after she had spent a full day preparing wool for spinning.² Her sentiments were echoed almost a century later in a letter written by Mary Hallock Foote: "I am daily dropped in little pieces and passed around and devoured and expected to be whole again next day and all days and I am never *alone* for a single minute."³ Famous women, even when they had several servants, were not immune to pressure either. "The arranging of the whole house . . . the cleaning . . . the children's clothes and the baby have seemed to press on my mind all at once. Sometimes it seems as if anxious thought has become a disease with me from which I could not be free," wrote Harriet Beecher Stowe to her husband, Calvin, in 1844.⁴ Observers of the American scene frequently commented on the ill health of American married women. In 1832, Frances Trollope attributed their waxen complexions, stooped shoulders, and care-worn faces to the burdens of their domestic work.⁵ Twenty years later Gro Svendsen, a young Norwegian immigrant, made a similar observation in a letter to her parents:

We are told that the women of America have much leisure time but I haven't yet met any woman who thought so! Here the mistress of the house must do all the work that the cook, the maid and the housekeeper would do in an upper class family at home. Moreover

MORE WORK FOR MOTHER

she must do her work as well as these three together do it in Norway.⁶

Catherine Beecher, an early disciple of what later came to be called "home economics," waged many a long campaign against what she regarded as the widespread ill health of American married women, and also laid a good part of the blame on the nature of the work that they did:

There is nothing which so demands system and regularity as the affairs of a housekeeper . . . and yet the perpetually fluctuating state of society seems forever to bar any such system and regularity. The anxieties, vexations, perplexities and even hard labor that come upon American women . . . are endless; and many a woman has, in consequence, been disheartened, discouraged and ruined in health.⁷

Census statistics, articles in women's magazines, economic histories, genre paintings, patent records, and the extant artifacts themselves all converge to tell us that hundreds of household conveniences were invented and diffused during the nineteenth century. There were hand-driven washing machines and taps for indoor cisterns, eggbeaters and pulley-driven butter churns, tinned milk and store-bought flour, porcelainized cookware, airtight heating stoves, and a multitude of additional small gadgets and large utilities, from apple parers to piped coal gas, that were intended to make housework easier.⁸ Yet, when discussed by the people who actually did housework, or by the people who watched the people who were actually doing it, it seems not to have become one whit more convenient—or less tiring—during the whole of the century. What a strange paradox that in the face of so many labor-saving devices, little labor appears to have been saved!

One is tempted to resolve the paradox by assuming that the commentators were, in some ways, biased: that, as housewives, Mary Hallock Foote and Harriet Beecher Stowe were either a bit paranoid, or a bit spoiled, or particularly poor organizers, or perhaps that they were trying, as some housewives always have, to "do too much." Similarly, we might want to argue that, as observers, Frances Trollope, Gro Svendsen, and Catherine Beecher

The Invention of Housework: Industrialization

were either misguided, or observing the wrong housewives, or grinding some other, unstated, historical axe. The paradox can be resolved, however, without impugning either the reputations or the motives of these, and many other, participants in and observers of the patterns of daily life in nineteenth-century America. Labor-saving devices were invented and diffused throughout the country during those hundred years that witnessed the first stages of industrialization, but they reorganized the work processes of housework in ways that did not save the labor of the average housewife.

This point can best be dramatized if we analyze the work processes and the technological systems involved in preparing a beef stew in 1850. Meat was still a dominant constituent of the average American diet, and stewing was still (as it is today) a standard form of preparation. Let us imagine what it might have been like for the grandchildren, or perhaps the great-grandchildren, of the young Connecticut couple who appeared in the last chapter, to be preparing the same dish a century later, some place in Connecticut, perhaps in a farm town in the Connecticut River valley which was just beginning to feel the impact of industrialization.

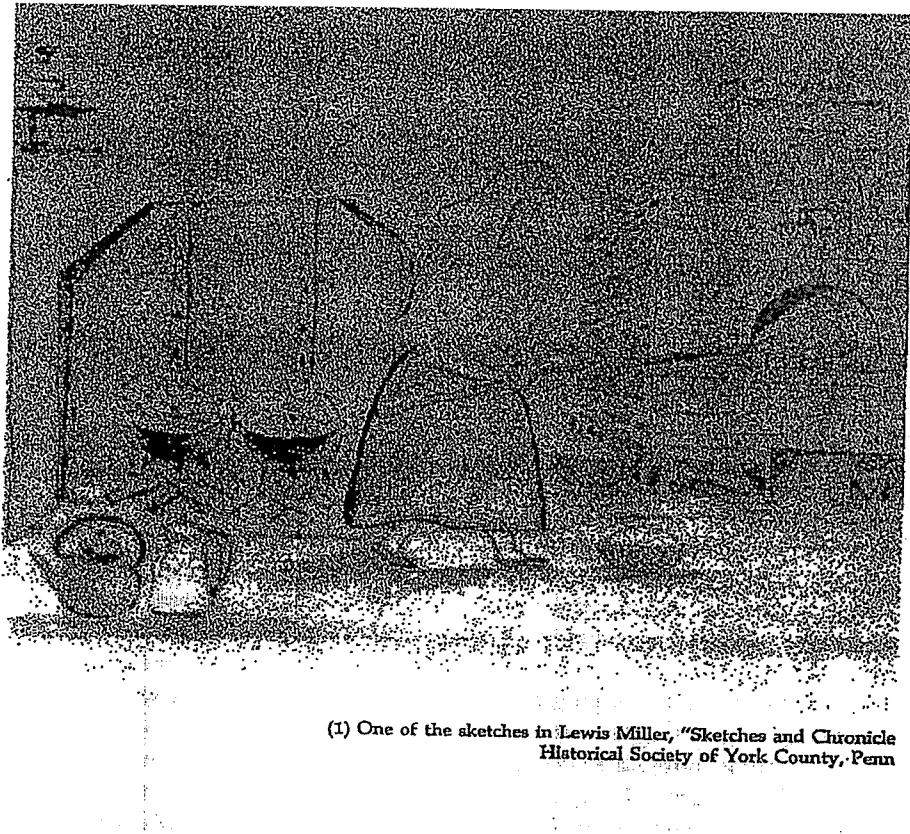
The stew would require, then as it does now, roughly the same ingredients: meat, vegetables, salt and other spices, water to do the stewing, fuel to heat the water, and grain to thicken the resultant liquid so that it could be served effectively as sauce. In a farm household in rural Connecticut in 1850, these ingredients would have been obtained in much the same fashion as was common one hundred years earlier—with one exception. The meat would have come from an animal that was owned by the family and butchered at home, and the vegetables from a garden that was likely to have been tended by the wife; the fuel to have been cut by the husband and his assistant on their own woodlot; the salt and some of the spices obtained by trade (either in cash or in kind); and the water carried, by hand, from their own well or from a nearby spring. The single exception would have been the grain—the thickening agent for the stewing juices; and thereby hangs a significant point about the ways in which household labor changed in the early years of industrialization.

MORE WORK FOR MOTHER

Milling Flour and Making Bread

In the first half of the nineteenth century, the product of the merchant flour mills of Rochester, Buffalo, Baltimore, and Pittsburgh began to replace the product of local grist mills on the tables of ordinary families living both in urban and in rural circumstances in New England and the Middle Atlantic states. Despite the fact that textiles and armaments have received more attention from economic and technological historians, it was actually the flour business that first underwent industrialization in this country.⁹ Sometime early in the decade of the 1780s, Oliver Evans, a young wheelwright from Newport, Delaware, designed an automatic flour mill which was driven by water power and used a series of pulley-driven conveyer belts to carry the grain from one part of the mill to another, thus eliminating work that had previously been done by laborers. Evans also designed a "hopper boy"—the name is significant—which automatically sorted the various grades of meal and flour after the grinding, thus eliminating work that had previously been done by one worker, often a boy. Just after the close of the Revolutionary War, Evans and two of his brothers invested in the construction of a mill after this design; and not long after that, other mill owners, principally the Ellicott family of Baltimore, began to incorporate aspects of the design in their own newly constructed mills. In 1795, Evans and Thomas Ellicott published a complete set of instructions and designs for such a mill; thereafter, not surprisingly, Evans found it difficult to protect what he regarded as his right to licensing fees from people who adopted his designs—and he died poor and extremely embittered.¹⁰

The Evans mill required approximately half the standard number of workers; in addition, modifications that Evans made to the operation of the grinding stones themselves resulted in the production of more fine (white) flour from each bushel of wheat. The Ellicotts estimated that, by thus producing more of the highest priced flour, they had increased the profits of their mill by \$32,500 in the first year of operation and had, at the same time,



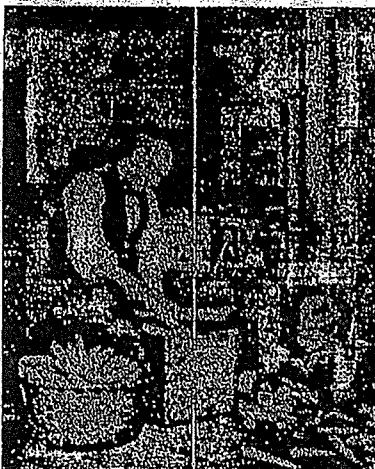
(1) One of the sketches in Lewis Miller, "Sketches and Chronicle
Historical Society of York County, Penn

From Housewifery to Housework

If you had been a housewife living before 1800, you would have cooked and baked aplenty (1), but your husband would have done much of the preparation—such as chopping wood (2), shelling corn (3), and pounding grain into meal (4); and your children would have helped as well, helping with such seasonal tasks as making sausages (5). But with the coming of industrialization, your life and theirs would have changed radically. The cast-iron cooking stove (seen here [6] in one of its earliest incarnations), the automatic flour mill (this is an early drawing of its innards [7]), and factory-produced food and clothing (\$4.50 was close to the weekly wage of an unskilled worker when these outfits were advertised in 1897 [8]) meant that you bore the whole burden of housework. For your husband and your children, the house became a place of leisure (9). The kitchen became a place in which men had no useful role to play (10), and the shop became a place in which men were more comfortable behind, rather than in front, of the counter (11).



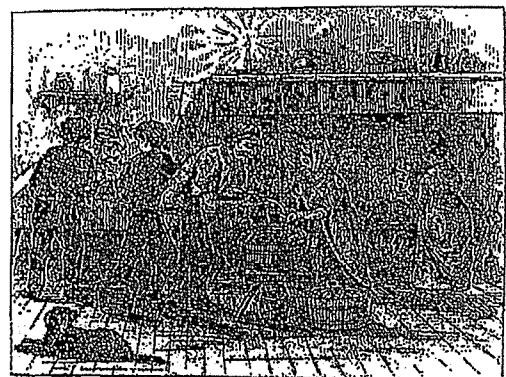
(2) Detail from "Winter Scene in Brooklyn,"
by Francis Guy, 1817-20.
Museum of the City of New York.



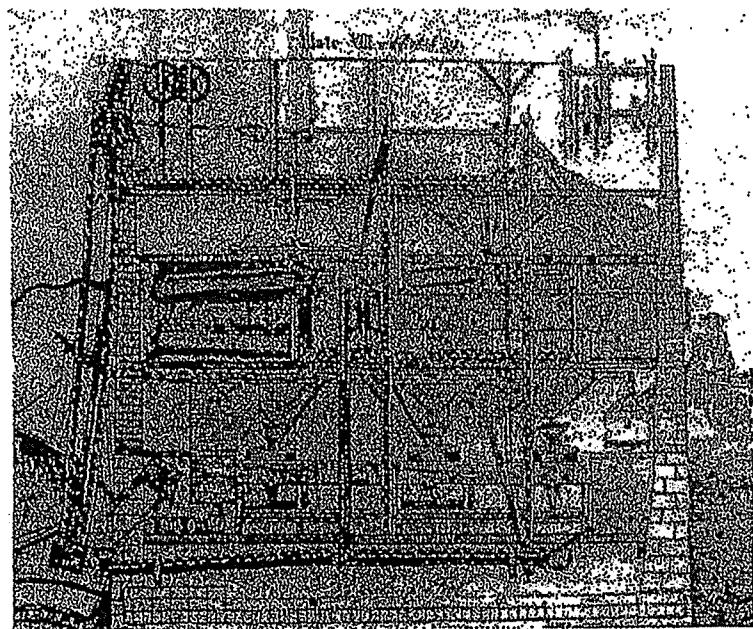
(4) "Pounding Meal on the Frontier,"
by an unknown artist, c. 1845.



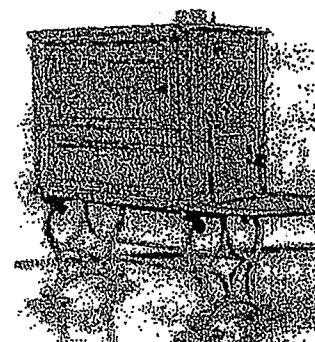
(3) "Corn Shelling," by Eastman Johnson, 1864.
The Toledo Museum of Art,
gift of Florence Scott Libbey.



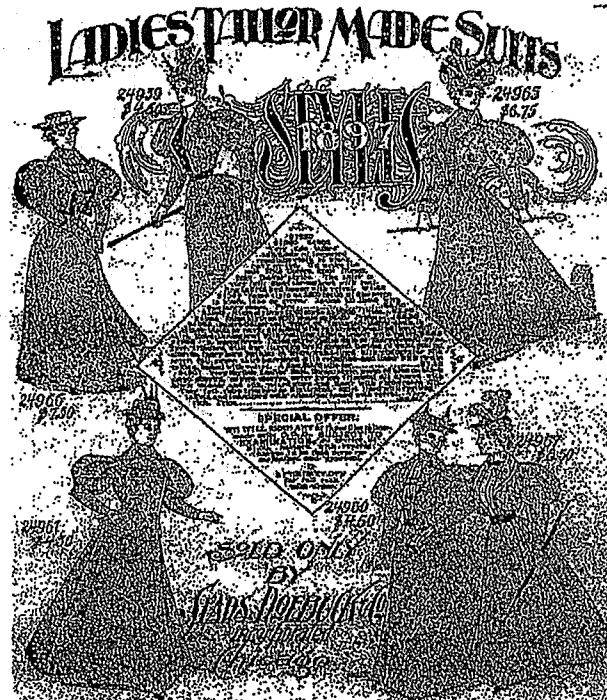
(5) "Making Sausage in the Old Manner,"
by Henry Barto.
From H. L. Fischer, *S alt Marik-Haus*
in D'r Schluß un Die Alt Zeite, Ein
Centennial Poem in Pennsy/lishan Deutsch, 1879.
Orical Society of York County, Pennsylvania.



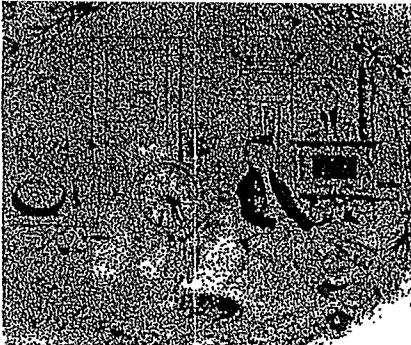
(7) Diagram of an automatic flour mill, from Oliver Evans, *The Young Mill Wright and Miller's Guide*, 1795.



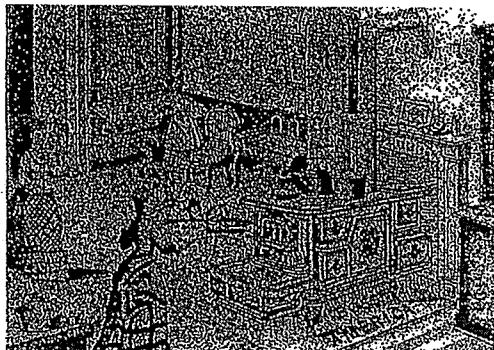
(6) An early box-type heating stove,
with a small baking oven cut
into its side, made
in Pennsylvania in 1767.



(8) Courtesy of Chelsea House
Publishers, New York, publishers
of 1897 Sears Roebuck Catalogue, 1968.

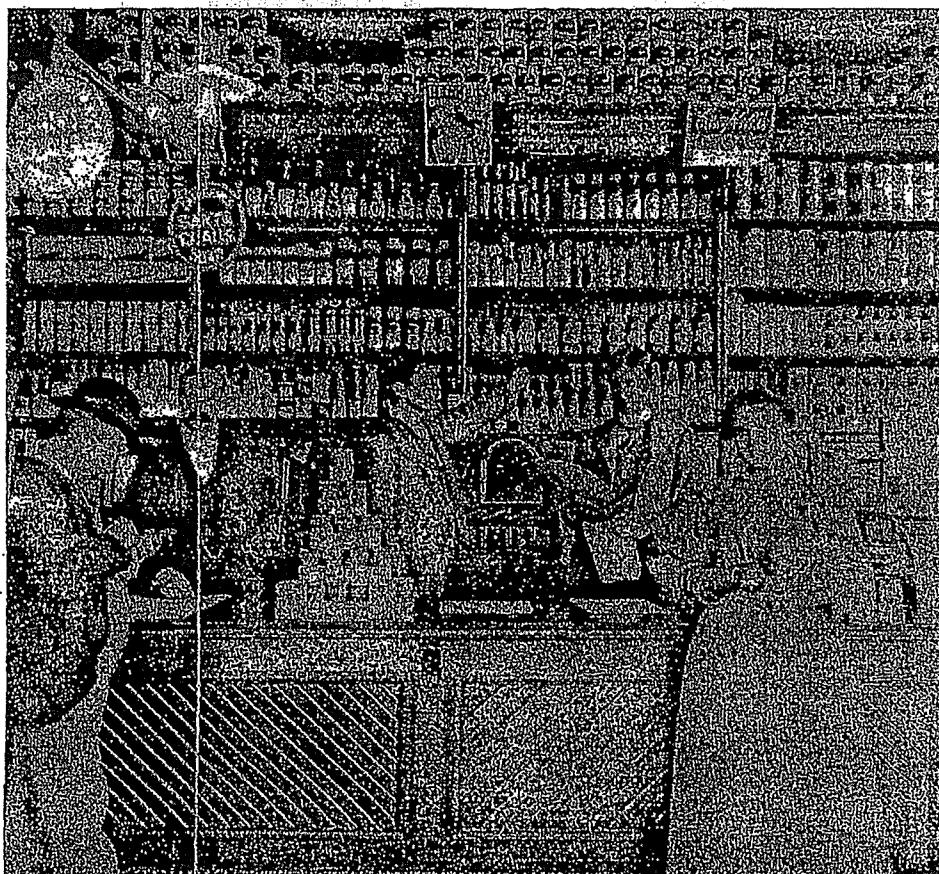


Detail from "Birth and Baptismal Certificate Margaret Munch," by Carl E. Munch, 1826.
Metropolitan Museum of Art, gift of
William and Bernice Chrysler Garbisch.



(10) Stove advertisement, c. 1870. Landauer Collection,
New-York Historical Society.

Grocery store, Hempstead, New York, c.1895, by an unknown photographer.
Long Island Picture Collection, Hempstead Public Library.



The Invention of Housework: Industrialization

reduced the wages they had to pay out.¹¹ Merchant flour milling was a booming business in the latter years of the eighteenth century; flour, biscuit, and meal had been the second most important American export product since the middle of the century (second only to tobacco), and the devastation wrought in Europe by the French Revolution and subsequently by the Napoleonic Wars made the people of that continent even more dependent upon American grains than formerly—and the American business that much more prosperous. In this period, almost all of the product of the merchant mills was intended for export; and it was principally the superfine flour—the white flour that had been deprived of germ and bran—that was so used, since it did not deteriorate. Residents of American cities purchased some of this merchant flour; but, by and large, Americans continued to grow their own grain and mill it at home or at a local grist mill, and thus cornmeal and whole flours (rye, but sometimes wheat) continued to be staples of their diets.

This situation began to change during the 1820s. With the cessation of European hostilities, the export market for wheat products collapsed, and American merchant millers, who had expanded their operations in the previous two decades, found themselves with surplus goods and surplus manufacturing capacity; they quite naturally attempted various techniques for expanding domestic sales of their goods. At the same time, canals were opened in upper New York State, New England, Pennsylvania, and Ohio, which greatly facilitated the transport of wheat products, thus lowering their price to consumers. Carriage between Buffalo and New York cost 19.12¢ per ton mile in 1817 (before the Erie Canal opened) and 1.68¢ in 1840 (after it had been in operation for about fifteen years).¹² The advent of the canals encouraged the growth of settlement and wheat production in the Middle Western states. Thus, at the very same time that it became easier and cheaper for ordinary households to obtain "mass-produced" grain, it also became less profitable for farmers in New England and the Middle Atlantic to grow wheat, rye, and corn for market. The end result of this dual economic process (as an early health-food advocate noted¹³) was the disappearance of home-grown and locally ground grains on the tables

MORE WORK FOR MOTHER

of ordinary families—urban and rural—in many settled parts of the country by the outbreak of the Civil War.

Unfortunately neither the government nor anyone else was in the habit of gathering data on household consumption during this period, so that we have no handy guide to the overall displacement of one form of flour by the other. Manufacturing and trade statistics can, however, provide a rough sense of the profound expansion in commercial flour milling during the first half of the nineteenth century. In 1835, 268,000 barrels of flour were shipped on the Erie Canal; this figure rose to 1,000,000 barrels just five years later and had quadrupled to 4,344,000 barrels by the time another decade had passed.¹⁴ The average wholesale price of 100 pounds of flour was \$8.48 from 1801 to 1805, and \$5.36 (a fall of about one third in price) from 1855 to 1860; the largest drop in the price occurred during the five-year period from 1820 to 1825.¹⁵ In 1808, Evans designed a mill powered by a steam engine (also of his own design) rather than a water wheel. The development of this type of mill, which was prevalent by 1860, meant that milling could be conducted almost anywhere.¹⁶ By 1860 flour milling was the leading American industry; the value of its product was \$249 million, more than twice the value of the product of the cotton industry (\$107 million) and three times that of iron and steel (\$73 million).¹⁷

Thus it seems likely that our imaginary rural couple, living in Connecticut in 1850, would have switched from the home-grown wheat, rye, and cornmeal, with which their ancestors had been familiar, to the fine and superfine wheat flours that were being produced not at local grist mills but at large automated flour mills scattered throughout the eastern half of the country. They would thus have made, in one, not insignificant aspect of their lives, the crucial transition from being producers to being consumers, from being involved with the product (grain) at almost all stages of its preparation to encountering it only at the very last stage—and acquiring it only through trade. They would have, in short, begun the first stages of the industrialization of their household.

The impact of this transition would have been different on each member of the family. Hand grinding of corn or wheat had traditionally been part of the male (both adults and children) contribu-

The Invention of Housework: Industrialization

tion to household work: "Pounding hominy was an evening job. If the men were notified that some was needed, they would on one evening select and shell half a bushel or a bushel of corn, and the next evening carry it to the mortar and pound it. We never took daylight to do it in."¹⁸ The chore of hauling grain to the mill for grinding in those communities where such a facility was available also fell to men. "Today we all eat a dinner of pork, potatoes, and cucumbers without any bread," one young woman wrote in her diary in 1805. "Father went to mill yesterday and expected to come home the same day but was hindered."¹⁹ These grain-related chores were fairly burdensome. Rye, wheat and corn will keep indefinitely once they have been harvested and dried; but as soon as they have been ground into meal or flour, they begin to deteriorate fairly quickly. Thus large quantities could not be ground at one time, even where there was a mill large enough to do the chore. Trips to the mill (or hand milling itself) had to be undertaken at fairly regular intervals throughout the year. The trip to the mill and back might occupy a whole day, or even more (if the mill was faraway), and had to be made (depending on the size of the family or the season of the year) as frequently as once a week but rarely less than once a month. Hand grinding at home had to be done once every several days. Fine white flour does not deteriorate as quickly, but it could not be produced by a home mill; and even in a grist mill, little of it could be produced from a given quantity of grain. So white flour was expensive, and few families used much of it. Thus, in most families, processing of grain was a frequent and sometimes a tiresome chore. The switch from home-grown to "store-bought" grains relieved men and boys of one of the most time-consuming of the household chores for which they had been responsible.

At the very same time, the switch may well have increased the time and energy that women had to spend in their tasks, particularly cooking and baking. Before the early nineteenth century corn was the dominant grain on American tables in every settled section of the country; it was the easiest to grow, the easiest to harvest, and the easiest to cook with once it had been made into meal. Baking with cornmeal was a fairly straightforward process; liquid and leavening were added to meal, after which it was either

MORE WORK FOR MOTHER

fried or baked; neither yeast nor kneading was required or recommended. The process is simplicity itself; witness these descriptions of two basic techniques commonly used in the hills of Kentucky at a time when the way of life there was still unaffected by industrialization:

She mixed a little cornmeal with a pinch of salt and soda, and mixed it with a little water, making a very thick paste. Then she took a board from behind the wood pile stacked in the corner of the room. This board was about three feet long, eight inches wide, and one inch thick. One side of it had been made very smooth. She placed this board at a forty-degree angle before the fire, propping it up by placing a smaller one behind it. She divided the cornmeal dough into two patties and placed them on the hot board.... Soon the cabin was filled with the smell of food.

The bread [could be baked] under the grate in the hot cinders.... You add a little soda and salt to cornmeal and just enough water to make a thick paste. The skillet must be preheated and the inside covered with a small layer of lard or grease.... the fire must not be too hot. The cinders under the grate are hollowed out to form a place for the skilletful of dough. Some folks put a lid over the skillet and then knocked more hot coals on top.²⁰

Similarly, the coarse flours that were produced by hand grinding or grist milling of wheat and rye were prepared into "quick-breads," porridges, and griddle cakes, none of which required complex or laborious preparations. One quick bread was called "salt rising":

To one quart of water, [add] one teaspoon salt, [and then] thicken with flour until a stiff batter. I then set the little bucket containing this yeast into the... kettle (covering it tightly to keep out the dust) and letting it remain in the... sun to keep it warm. [When it has risen, after occasional stirring] pour it into the bread pan adding as much more water and thickened flour; when it becomes again light, knead it into a large loaf and bake.²¹

The leavening for this bread was apparently accomplished by the interaction between the salt and certain components of the whole grain flour (the dough will not rise if made with white flour). Those who were rich and blessed with many servants may have

The Invention of Housework: Industrialization

regarded corn and whole grains as coarse fare; but whatever their failings may have been, they were the staff of life to those who depended upon them.

What caused them to pass from the scene was the introduction of fine wheat flour at reasonable prices—the product of the merchant flour mills. This flour is a profoundly different material from the product of the hand or the local grist mill, as it is composed of very small particles of the endosperm of the grain, and lacks the germ and the bran. Prior to industrialization, this flour was used only by the rich, by city dwellers, by people who were going on long voyages—or for the preparation of special treats. "White flour was used at my grandfather's," wrote one woman, recalling the middle-class household in which she was raised at the beginning of the nineteenth century, "only to make pie crust, cake and such delicacies. It was bought only in quantities of seven pounds at a time. Rye flour and Indian cornmeal were used to make the bread which was ordinarily eaten."²² As the years wore on, however, and white flour became cheaper and easier to obtain, yeast breads began to replace quickbreads on American tables. Yeast breads, when prepared by the standard technique of the time, required hard labor (in the kneading) and considerable attention to details (particularly in maintaining yeast cultures). The conversion from meal to flour and from quickbreads to time-consuming breads indicated that the household could afford both the cash that was necessary for the purchase of the flour and the housewifely (or servantly) time that was required for its preparation. Thus, white bread became one of the first symbols of status in the industrial period.

Bread: What ought it to be? It should be light, sweet, and tender. This matter of lightness is the distinctive line between savage and civilized bread. The savage mixes simple flour and water into balls of paste, which he throws into boiling water... of which his common saying is "Man eat dis, he no die."... So far as we know there are four practicable methods of aerating bread [and of the four] the oldest and most time-honored is by fermentation. The only requisites for success in it are, first, good materials and second, great care in small things....

MORE WORK FOR MOTHER

The true housewife makes her bread the sovereign of her kitchen—its behests must be attended to in all critical points and moments, no matter what else must be postponed. Some persons prepare bread for the oven by simply mixing it in the mass, without kneading, pouring it into pans and suffering it to rise there. The air-cells in bread thus prepared are coarse and uneven; the bread is as inferior in delicacy and nicety to that which is well kneaded as a raw servant to a perfectly educated and refined lady.²³

Quickbreads were, in short, thought to be fit only for Negroes, Indians, and the Irish; the maintenance of status (as well, it was thought, as the maintenance of good digestion) required the whitest breads, prepared in a manner that was both time and energy consuming.

What was true of bread was also true of cakes. Meals and whole flours do not lend themselves to cake making; only fine flours can be used successfully in pastries, cakes, and other confections. Eighteenth-century travelers rarely reported that cakes constituted an important part of the American diet, but the situation had clearly changed one hundred years later. Charles Latrobe, a Frenchman who toured the United States in 1836, was just one of many foreign visitors who noticed this phenomenon:

Nowhere is the stomach of the traveller or visitor put in such constant peril as among the cake-inventive housewives and daughters of New England. Such is the universal attention paid to this particular branch of epicurism in these states that I greatly suspect that some of the Pilgrim fathers must have come over to the country with the Cookery book under one arm and the Bible under the other.²⁴

Under the conditions that prevailed in nineteenth-century kitchens, cake baking required a great deal of hard work and a considerable amount of time. Since sugar was sold in loaves, it had to be beaten before it could be combined with other ingredients; eggs and butter had to be worked by hand or with a spoon until they had reached the necessary state of aeration. Even the most energetic of cooks could well have been exhausted after making, for example, this simple cake:

Take eight eggs, yolks and whites, beat and strain them and put to them a pound of sugar beaten and sifted; beat it three quarters of an hour.

The Invention of Housework: Industrialization

together, then put in three quarters of a pound of flour well dried and two ounces of caraway seeds; beat it all well together and bake it in an oven in broad tin pans. [Italics mine]²⁵

The eggbeater, which was invented and marketed during the middle decades of the century, may have eased the burden of this work somewhat; but unfortunately the popularity of the beater was accompanied by the popularity of angel food cakes, in which eggs are the only leavening, and yolks and whites are beaten separately—thus doubling the work.²⁶

In short, whether it was bread or cakes that she was routinely preparing, the nineteenth-century housewife whose household (like that of our imaginary couple in Connecticut in 1850) had converted from the product of the local grist mill to the product of the far-off flour factory, would have found, for a variety of reasons, that she was spending considerably more time working with that flour than her grandmother had—and her husband considerably less than his grandfather. The advent of industrialized flour brought with it a profound shift in the responsibilities and time allocations of the two sexes vis à vis their work in their own homes: men's share in domestic activity began to disappear, while women's share increased. Thus, housework was becoming truly "women's work"—and not an obligation shared by both sexes.

The Evolution of the Stove

The imaginary nineteenth-century stew with which I started—the one containing fine white flour instead of coarse brown meal—would have been prepared with tools that were also slightly, but significantly, different from its eighteenth-century predecessor. The knives, spoons, pots, and brushes that the Connecticut couple used to do their work in 1850 would have been more or less similar to the ones their grandparents had used a century earlier; but the open hearth—with its andirons, bellows, cranes,

and trammels—would have disappeared, to be replaced by that marvelous product of American ingenuity, the gargantuan cooking stove. The cast-iron cooking stove could well serve as the single most important domestic symbol of the nineteenth century; kitchens are almost invariably represented with open hearths in the early years of the century and with stoves later on. Cookbooks published during the century track the transformation. In 1841, Catherine Beecher's chapter "On the Construction of Houses" contained a long section on fireplaces; twenty-eight years later, when she and her sister published *The American Woman's Home*, this chapter had been replaced by an entirely new one, "On Stoves, Furnaces and Chimneys."²⁷

The evolution of the stove is difficult to trace because it was an implement that changed profoundly in a short time.²⁸ The changes were wrought by hundreds of independent manufacturers, scattered throughout the country, some of whom patented their designs, some of whom did not. Benjamin Franklin's stove, which he invented during the 1740s, was intended for room heating, not for cooking, and it was not enclosed; the original Franklin stove had an open hearth, with channels through which the warm combustion gases could pass (so as to provide additional heat) before being vented out the chimney. Enclosed stoves developed from simple plate or box stoves that were made by German or Scandinavian ironworkers, this form of stove having been common in their countries of origin. When the idea of controlling the passage of the combustion gases so as to provide heat for other functions was combined with the design of the European box stove, the American cooking stove was born. Benjamin Thompson (Count Rumford) advocated the use of such stoves in several works that he published toward the end of the eighteenth century, but the earliest cooking stoves are so different in design from the ones that Rumford advocated that it is hard to know precisely what impact his ideas actually had.²⁹ Most likely some enterprising, and now anonymous, foundryman discovered that a door could be made in one of the plates of a heating stove, and that a box created inside this door could serve as a baking or warming oven.

Someone else may have noticed that if a circular hole were cut in the top of a stove, directly over the firebox, the heat was sufficient to allow water to boil in a pot placed over the hole.

Within very few years the simple small stoves, which were little more than enclosed heating stoves with a few minor modifications, had been elaborated into the monster American cooking stove with four to eight cooking holes on its top surface (or surfaces, since some of the early stoves were "stepped"), two or three ovens for warming and baking (the heat being controlled by proximity to the firebox and by dampers), and attached reservoirs dispensing hot water. By the 1830s the cookstove had come into its own, and the heating stove had begun to evolve on a separate path. As cookstoves got bigger, heating stoves got smaller, culminating in the very efficient "base burner" (which had the fire at its base and a magazine for maintaining a continuous supply of fresh coal above) that became popular toward the end of the century. The poor, or those for whom portability was a prime consideration (especially westward pioneers), used stoves that could, as the open hearth once did, serve as both heaters and cookers; the middling classes and the rich used separate instruments. In some middle- and upper-class households, individual room-heating stoves were even being replaced by central-heating furnaces as early as 1860.

The enclosed stove, whether for cooking or for heating, was not greeted with complete enthusiasm, at least by some segments of the population, when it first came on the market. The hearth, with its blazing fire, had long been a potent symbol of home to people of English descent. The roasted joint cooked in front of that fire (when we make a roast beef today we are actually baking, not roasting, it) had also been a symbol of prosperity, particularly in England's American colonies, where meat had been abundant. Albert Bolles, an early historian of the stove industry, was probably expressing the sentiments of the dominant English part of the population (and consequently ignoring the attitudes of the people of German or Scandinavian descent) when he wrote:

The old-fashioned fireplace will never cease to be loved for the beautiful atmosphere it imparts to a room, and the snug and cheerful effect of an open wood-fire. When stoves were first introduced, a feeling of unutterable repugnance was felt by all classes toward adopting them and they were used for a generation chiefly in school houses, court-rooms, bar-rooms, shops and other public and rough places. For the home, nothing except the fireplace would do. The open fire was the true centre of home-life, and it seemed perfectly impossible to everybody to bring up a family around a stove.³⁰

As late as 1869, when the stove revolution had been under way for almost forty years, the Beecher sisters—themselves members of the old English élite—still railed against the caprices of the newfangled invention; in classic English fashion, they expressed their objections in the quasi-scientific/quasi-religious vocabulary of natural theology. "Warming by an open fire," they wrote, "is nearest to the natural mode of the Creator, who heats the earth and its furniture by the great central fire of heaven, and sends cool breezes to our lungs."³¹

Ethnicity, symbolism, status, and tradition aside, cooking and heating stoves had replaced the open hearth in most American homes by the close of the Civil War for reasons that lie partly on the demand side of the situation and partly on the supply side. People wanted stoves in their homes because stoves were economical, portable, and efficient; stovemaking, on the other hand, began to flourish in the 1830s because of internal changes in the iron and steel industry itself. The demand for stoves and the ability to meet that demand were—fortunately for the prosperity of the stove industry—contemporaneous social developments.

Stoves were economical for two reasons: first, because they required less fuel than fireplaces; and, second, because they were cheaper to install. In a stove the flow of air to the fire is restricted and controlled, thus slowing combustion and extending the useful life of the fuel. We cannot be certain precisely how much fuel was saved by converting from fireplace to stove because the amount would vary considerably, depending upon the nature of the fuel itself (whether hard wood or soft, for example), upon the functions to which fireplaces or stoves were being put, and the peculiarities of their construction. Promoters of stoves estimated

savings ranging from 50 percent to 90 percent; and even if we take their lowest estimate as the one closest to reality, there must have been considerable savings—either in time or in money—for people who made the transition. The price of wood increased steadily during the early decades of the century in the eastern parts of the country because land clearing had slowed (most agricultural land having been cleared in the preceding century) and urbanization had accelerated (creating a large class of people who were forced to purchase fuel). As coal began to replace wood (a transition that began in the eastern cities early in the century and spread west with the advent of the railroad), stoves found even greater favor, because they could burn the cheaper fuel more effectively, foul air and filthy walls being a constant threat when coal is burned in a fireplace. In the unsettled portions of the country, where wood was abundant, stoves were still an economical choice because they could be installed without the services of skilled masons and without the use of brick—both of which were scarce, and consequently expensive, on the frontier. Small wonder, as a traveler reported after visiting Wisconsin in 1855, that "few houses in this part of the country have fire-places, the stove having almost banished them altogether."³²

Many people preferred stoves to fireplaces (at least for heating) because stoves were more efficient, providing more comfort for a given quantity of fuel. Since a stove could be placed more centrally in a room, the heat that it provided could warm a greater portion of the area where people actually spent their time. Large portions of the heat did not escape up the chimney flue (as was the case with open fireplaces). The room with a stove seemed warmer, even when one was at some distance from the source of heat; with a fireplace "one could see one's breath upon the air while sitting at the fireplace and find apples frozen upon the table in the centre of the room when the family were roasting in the blaze of the log fire."³³ Some people thought that the excess heat, coupled with dry air and poor ventilation, was actually ruinous to the health; but others were willing to suffer with any of the complaints so engendered rather than return to the frigid conditions that had formerly prevailed, as Edward Everett Hale recalled:

MORE WORK FOR MOTHER

Sometimes, in later years, when we children were sounding the praise of wood fires . . . my mother would dash cold water on our enthusiasms by telling us of her experiences with them in the early days of her married life. . . . [S]he would tell of the long cold winter days she had passed in piling ineffectual logs in the huge fireplaces in a fruitless endeavor to make some impression upon the freezing atmosphere of the rooms where the side of the unhappy fire-tender which was next to the fire would be scorched by the blaze which roared up the chimney, while the side towards the room would be shivering. She used to say: "You may take the poetry of an open wood fire of the present day, but to me in those early days it was only dismal prose, and I am grateful to have lived in the time of anthracite coal . . ."³⁴

When this kind of efficiency was combined with economy (and, for westward migrants, with portability as well), the stove was hard to beat, the Beecher sisters and old English tradition notwithstanding.

As I have said, the demand for stoves that was generated by their economy and efficiency coincided with developments in the iron industry which made it possible for stoves to become readily available at reasonable prices. During the middle years of the eighteenth century, several innovations in iron production were introduced in Great Britain; for a variety of reasons, these innovations were slow to diffuse across the Atlantic until after the Revolution, but they began to have an impact on the character of the American iron industry in the early decades of the nineteenth century. The traditional technique for refining iron ore had been to reduce the ore (which is mainly iron oxide) through direct contact with a fuel (usually charcoal) in a blast furnace. Charcoal was the preferred fuel because it was not contaminated with other minerals (particularly sulphur) that would endanger the quality of the resultant metal. Once refined, the molten iron was tapped off and cast directly into end-product molds (such as those for gun barrels, kettles, or stove plates) or into all-purpose molds (called "pigs"), so that the resultant product (called "pig iron") could be stored or transported somewhere else, for subsequent remelting and recasting, or for refining (by heating and hammering) into wrought-iron products. In the traditional form of the industry, furnaces (for the melting), foundries (for casting

The Invention of Housework: Industrialization

and finishing), and forges (for the treatment of wrought iron) were frequently parts of the same business establishment, which might also include ovens for preparing the charcoal and even mines for harvesting the ore.³⁵

Briefly described, the innovations that were introduced in Britain made it possible both to substitute coke and coal for charcoal as fuels in the refining of iron ore, and also to produce wrought iron directly from molten ore without passing through the pig-iron stage (by the techniques known as "puddling" and "rolling"). These innovations were significant in several ways: they allowed the substitution of a cheaper fuel, and reduced the amount of labor required to produce wrought iron, and thus cut costs. As the innovations were capital-intensive (requiring the construction of entirely new furnaces), they produced differentiation in the industry: producers of cast iron became different organizations from producers of wrought iron, and both separated from producers of the fuel. The innovations also altered the nature of the product itself; cast iron refined with coal is a different kind of material from cast iron refined with charcoal, and wrought iron made by puddling and rolling can be handled in ways that wrought iron made from pig cannot.

All of these changes were important factors in the growth of the large-scale industrial economy. The iron industry was one of the leading, and determinant, sectors of that economy; the rate of the production of steam engines and railroad tracks and manufacturing machinery (all of them necessary for industrialization) was dependent upon the rate of production of iron. These same changes were also of great significance in the industrialization of the home, because the production of such humble implements as stoves and kettles—the implements on which household economy depends—were also affected.

Prior to the 1830s stoveplates had been produced directly from molten ore; foundrymen believed that stoves made from remelted pig-iron would crack under the heat generated by domestic fires. Some foundries cast the plates and assembled the stoves themselves, selling directly to local customers; other foundries sold the plates to "stovemakers" who assembled the stoves (using bolts and rods from other sources) and sold them at retail. Stovemaking

seems to have been a relatively prosperous business in the early decades of the century: several foundrymen and stovemakers patented new designs, both for heating and for cooking stoves; and some of those designs appear to have sold fairly well, if one can judge from the longevity of the companies that made them. The business entered a boom phase early in the 1830s, however, when a New Yorker named Jordan Mott discovered that pig iron that had been made with coke or coal could be successfully remelted into stove plates.³⁶

Mott was born in New York in 1798; in 1819 he invented a stove that would burn small pieces of anthracite coal (known as "nut coal") for which, until then, no function had been found. Anthracite coal burned cleaner than bituminous coal but did not ignite easily and so was difficult to use in homes; Mott's design solved this problem. Mott went into business as a stovemaker and had plates made to his order by foundries in Pennsylvania and New Jersey. During the 1820s, he found it increasingly difficult to obtain plates made according to his specifications at prices that he found reasonable, so he decided to try making the castings himself. With a small capital outlay he built a cupola furnace (for remelting pig iron) and soon discovered that he could make perfectly suitable stove plates, just as long as he used pig iron that had been smelted with coal. Mott was thus the first stovemaker who actually "made" stoves (rather than simply assembling them); and his innovation spread rapidly to other firms, since it was profitable and did not require an enormous investment. "Mott's operation gained the attention of iron men, and before the close of the year [1835] cupola furnaces began to be erected, and soon spread over the cities and villages of the Union."³⁷ The boom period for manufacturers of stoves had begun. Fully one third of all the cast-iron products reported in the 1860 *Census of Manufactures* were stoves; and most of those had been made, not at traditional multipurpose foundries, but by single-product stove manufacturers. Of such establishments, 220 were reported in the census, which was the first to enumerate stove manufacturing as a branch of business separate from general iron founding.³⁸ Mott's innovation was thus part of the gradual process of differentiation in the iron industry; a group of businesses was created

that specialized in manufacturing one product and in serving only one kind of customer, the householder.

The cast-iron stove was, consequently, the first product to deserve the appellation "consumer durable." It was fairly expensive, but still not out of the reach of ordinary people. Through the middle decades of the century stoves ranged in price from five to twenty-five dollars, at a time when the standard pay for common laborers was one dollar a day, and a barrel of flour, enough to last a family of five for eight weeks, cost between five and six dollars.* Most people, except the very poorest, could probably have afforded to install some kind of stove in their living quarters. Not surprisingly Jordan Mott, who had been innovative in the production of stoves, was also innovative in marketing them. He purchased refuse heaps of nut coal and sold it, along with his stoves, to his customers. Other manufacturers soon followed suit with similar innovations, and it was not long before stoves were being marketed with all the hoopla that we have come to expect in the sale of consumer durables: large illustrated advertisements in newspapers and magazines, extravagant claims, competitions at county fairs, installment-buying plans, attractive give-aways (such as extra kettles and frying pans), licensed traveling salesmen, and "free" donations to prominent citizens.⁴⁰

The impact of those stoves on the houses in which they were installed is not difficult to discern: stoves were labor-saving devices, but the labor that they saved was male. The important activity that was radically altered by the presence of a stove was fuel gathering; if a stove halved the amount of fuel that a household required, it thus halved the amount of work that men had to do to in cutting, hauling, and splitting wood. The labor involved in cooking, which was the female share of the work, seems barely to have been affected at all; the process of frying bacon on a stove is little different from the process of frying bacon over a hearth. Hearth fires were difficult to maintain at constant or specialized temperatures—but stove fires were not easy either. "Had an offal [sic] time to get breakfast,

*Stove prices have been garnered from household account books such as those of Phoebe Hagner (1840–45) and Frederick E. Westbrook (1840–45). Mrs. Hagner paid \$11.69 for her stove (including the pipe, elbows, sheet iron—for the floor—and installation; Mr. Westbrook paid \$20.00 for his, and it came equipped with a set of pots and pans.³⁹

the fire would not burn. Did not get to school in time for prayers," confided one young woman in her diary in 1868—and her sentiments were echoed in the pages of domestic manuals that advised women on how to manage the cantankerous grates and dampers of their stoves.⁴¹ Pots and pans and kettles continued to be exceedingly heavy (as they continued to be made from cast iron for most of the century); and although the advent of the stove may have somewhat reduced the amount of stooping that had to be done to tend those implements, the stove did not eliminate the need to move thirty- and forty-pound burdens awkwardly back and forth.

As with the conversion from meal to flour, the conversion from hearth to stove may well have augured more work for mother, rather than less. One of the advantages of the stove—according to contemporary cookbooks—was that different kinds of cooking (say, fast boiling, slow simmering, and baking) could be accomplished with the same fire; the skilled cook needed to know how to regulate the dampers of her stove and how to move her pots various distances from the firebox; but once she had conquered this art, it was possible for her to boil potatoes, simmer a soup, and bake an apple pie for dinner all at the same time; this combination would have been near to impossible on a hearth. The stove, in short, augured the death of one-pot cooking or, rather, of one-dish meals—and, in so doing, probably increased the amount of time that women spent in preparing foodstuffs for cooking. The diet of average Americans may well have become more varied during the nineteenth century, but in the process women's activities became less varied as their cooking chores became more complex.⁴²

Furthermore, a stove had to be cleaned. As stoves were made from cast iron, they would rust if left dirty (or undried) for any length of time; once a stove started to rust, it would, if left unattended, eventually wear thin and crack. Thus stoves, unlike fireplaces, had to be cleaned at the end of each day, and stove polish (a black, waxy material) applied fairly regularly, in order to ward off the danger of rust. This work was done by women, since cleaning, like cooking, was one of the jobs that was stereotypically allocated to women, and to women alone.

More Chores for Women, Fewer for Men

If we imagine our Connecticut family making the transition, over several generations, from a wood-burning fireplace (with fuel supplied by the husband from his own woodlot) to a wood-burning stove (with some of the wood purchased in any given year) to a coal-burning stove (when local supplies of wood had given out, and the railroad had made it possible to bring in coal), we can understand precisely why men were more likely to enter the labor force than were women, and why, eventually, these rural Connecticut families became dependent upon the cash that wage labor supplied. The stove reduced the amount of labor that a man had to do in order to maintain the standard of comfort to which his family was accustomed; with his time thus freed, he could look for seasonal or part-time work that might bring in cash with which to purchase luxuries or necessities. When coal was substituted for wood, cash became itself such a necessity; coal could rarely be obtained by barter or by trade in kind, since the people who sold coal had to purchase it from the people who had transported it (as well as from other "middle" men); and this series of transactions required cash. As each generation of fathers ceased to cut, haul, and split wood, each generation of sons knew less and less about how it should be done—and more and more about how to find and to keep a job that paid wages. Each generation of mothers, on the other hand, would have found the burden of their domestic chores more or less the same—perhaps even heavier—and thus would have been less likely to look outside their homes for employment, unless dire necessity intervened. Each generation of young girls, consequently, continued to be trained in the pursuits of domesticity—despite the fact that their brothers had gone on to other sorts of enterprise.

And what was true of cooking was true of other household chores as well. As the nineteenth century wore on, in almost every aspect of household work, industrialization served to eliminate the work that men (and children) had once been assigned to do, while at the same time leaving the work of women either

untouched or even augmented. Factories made boots and shoes (this was one of the ten leading industries in the United States in 1860), so men no longer had to work in leather at home. Factories also made pottery and tin ware, so men no longer had to whittle. Piped household water (which was introduced in several eastern cities even before the Civil War and was fairly common in middle-class homes throughout the country by the end of the century) meant that children no longer had to be burdened with perpetual bucket carrying. The growth of the meat-packing industry, coupled with the introduction of refrigerated transport in the 1870s and 1880s, meant that men no longer spent much time in butchering. Virtually all of the stereotypically male household occupations were eliminated by technological and economic innovations during the nineteenth century, and many of those that had previously been allotted to children were gone as well.

But not so with the occupations of women. If the advent of manufactured cloth eliminated the need for women to spin (as well as for men to weave and children to card), it did not in the least affect the need for them to sew—and sewing was the part of clothing preparation which had always been exclusively female. Indeed, the advent of manufactured cloth seems to have been accompanied by an increase in the amount of clothing that people expected to own—and since ready-made clothing had not yet appeared on the scene, there was a radical increase in the amount of sewing that had to be done. The diaries and letters of women who lived during the middle decades of the nineteenth century are filled with comments about the pervasiveness and tediousness of sewing. Here is a representative sample, from a letter written by Ellen Birdseye Wheaton, a middle-class housewife living in Syracuse, New York, in April of 1850:

Since the second week, in March, I have been preparing garments, for children's summer wear, having shirts altered and made, for Charles [her husband], and having dresses made, and fixed till I am at times, almost bewildered. I began this work earlier than usual, this season, hoping much to get the main part of my sewing done, before the extreme heat of summer, but oh! it seems at times as tho' it could never be done.⁴³

Like many of her contemporaries, Mrs. Wheaton hired seamstresses to come into her home to help during these sewing seasons (another occurred during the early fall, when cold-weather clothing was prepared), but the seamstresses assisted and did not replace her labor; they might work on the girls' dresses, while she worked on the boys pants; or she might cut out fabrics, while they did the plain stitching. According to letters and diaries of women living later in the century, the advent of the sewing machine eliminated the need to hire seamstresses but not the hours spent by the housewife herself.

Manufactured cloth also served to augment women's work by increasing the amount of household laundry that had to be done, laundry—like sewing—having been one of those tasks that had long been exclusively female. Prior to industrialization, much of the clothing that people wore was virtually unwashable: the woven woolen goods, the alpacas and felts and leathers of which outer clothing was made, were cleaned by brushing; and the linen or knitted wools of which underclothing was composed, although potentially washable, were in fact rarely laundered. When cotton replaced linen and wool as the most frequently utilized fabric, laundering increased; indeed, one of cotton's attractions as a fabric was that it could be washed fairly easily. This development was no doubt viewed as an improvement by many people, but there is no question that it altered the pattern of women's household labor for the worse. In the diaries and letters of nineteenth-century women, laundering appears, for the first time, as a weekly—and a dreaded—chore. Since it was exceedingly hard work (what with the rubbing, wringing, toting, and ironing), children rarely became involved in it. Whether done by a female servant or by the housewife herself, laundry was a major component of women's work in the nineteenth century—and arduous work at that.

Like clothmaking, some female chores disappeared during the century, but almost every one was replaced by other chores, equally time and energy consuming. Candlemaking became a lost art. In its place there were the glass globes of oil and the gas lamps from which soot had to be removed almost every day—a chore that housewives were advised not to assign either to children or

MORE WORK FOR MOTHER

to servants, since the globes could not survive rough handling. Waste-water systems (commonly known as "water closets") eliminated the chore of collecting "slops" but added the chore of cleaning toilets. Furthermore, in those cities in which the cleaning of outhouses and cesspools had been a commercial enterprise undertaken by men, the water closet privatized this work—and shifted it to women. Home canning equipment made it possible to preserve more fruits and vegetables for consumption during the winter but vastly increased the amount of work that women were expected to do when the season was "on."

Small wonder, then, that so many people commented on the exhaustion and ill health of American women during the nineteenth century. Industrialization had introduced many novelties to their homes and probably had, overall, improved their standard of living—but they still had a great deal of hard work to do. With the exception of the very poorest women, or those who were dwelling on the most primitive frontiers, American women living toward the end of the century probably ate a more varied diet, suffered less from the cold, enjoyed more space and more luxuries in their homes, and kept their bodies and their clothes cleaner than their mothers and grandmothers who had lived earlier. These improvements had not, however, lifted the burden of women's domestic cares, in spite of radical changes in the patterns of daily work at home. The processes of housework had changed in such a way that adult males and small children of both sexes were no longer needed to do domestic labor: wood did not have to be chopped, nor water carried, nor grain hauled to the mill. Men and children could be spared, to the schools, to the factories, to the offices of the burgeoning industrial economy. Adult women and their grown daughters, on the other hand, could not be spared: meals still had to be cooked; sick children had to be tended; infants to be nursed; clothes to be made, mended, and laundered—and industrialization had done nothing at all to ease the burden of those particular chores.

Industrialization, at least in these its earliest phases, had in fact created the material conditions under which the doctrine of sepa-

The Invention of Housework: Industrialization

rate spheres—could take root and flourish. Merchant flour, cast-iron stoves, municipal water, and manufactured boots had made it possible for men to work at wage labor without endangering (indeed, with some chance of improving) the standard of living of their families. As time wore on, the need to pay cash for flour, or for coal, or for any of the other commodities that were so swiftly appearing on the market, ensured that, once having entered the market for wage labor, men would stay there. Once that had happened, they ceased to train their sons in the multitudinous crafts that had been the heritage of men's work at home—preparing fuel, mending ironware, working in leather, building fireplaces, making cider, butchering pigs—and then the process was complete. A new generation of men came into adulthood having learned the skills needed to work for wages, not the skills needed to work at home. For these men the doctrine of separate spheres served to make sense of the new patterns by which they were living, and it was this new pattern of living and thinking that they taught to their sons.

For women the transition to the industrial order was different. Merchant flour, cast-iron stoves, municipal water, and manufactured boots did not free them from their labors. Insofar as these commodities allowed men and boys to leave their homes, and insofar as these commodities also created new jobs that only women could perform, women were tied even more strongly than they had been before to their cast-iron hearths. Angel food cakes, strawberry preserves, clean clothes, ironed ruffles, and leavened bread may have made life easier and pleasanter for their families, but they also kept women working at home. The factories and the schoolrooms may have sung a siren call to some women, but most of these were either unmarried or in dire distress. For the rest, the material conditions of domestic life during the first phases of industrialization required women to stay at home so as to protect (and even to enhance) the standard of living of their families: when women were absent, meals were irregular, infant mortality was higher, clothes were dirtier, and houses poorly maintained. Grown daughters were needed at home as well (at least until they married) because, in

MORE WORK FOR MOTHER

the absence of servants, who was left to help? Girls learned the crafts that their mothers practiced; boys did not. In this way the obverse side of the doctrine of separate spheres, the side that identified women with home and with homely virtues, was sealed in the best social cement of all: the patterns of daily life and the relations between parents and children.

Chapter 4

Twentieth-Century Changes in Household Technology

IN the first phase of industrialization, changes in household technology altered the work processes of housework so that "separate spheres" for men and women became, from the point of view of the household, not only possible but also desirable. In the second phase, the phase that is more or less congruent with the twentieth century, inventors and entrepreneurs and advertising copywriters and consumers themselves simply assumed that the separation of spheres was a normal arrangement, and they continued to build, to refine, and to accept the technological systems of housework accordingly. Eventually, however, the increased productivity that became possible with these new technological systems would serve to undermine the very ideology that lay at their base. In order to understand this dialectical process, we must first understand the nature of the changes that occurred in household technology during the twentieth century;

MORE WORK FOR MOTHER

and in order to understand them, we must first disabuse ourselves of a set of commonly received notions.

Conventional wisdom has been telling us—for many decades now—that twentieth-century technology has radically transformed the American household, by turning it from a unit of production to a unit of consumption. Put into plain English, this means that the food and clothing that people once made in their homes is now produced in factories, and that what we do in our homes (eat the food, get dressed in the clothes, occasionally launder them) actually has little economic significance.

Now this particular piece of conventional wisdom (which, ironically enough, seems to be subscribed to by people as diverse as sociology professors and newspaper editors, political conservatives and Marxists) is a cultural artifact of vast importance, because it has two corollaries that guide people in the conduct of their daily lives: first, that as American families passed from being units of production to being units of consumption, the economic ties that once bound family members so tightly to each other came undone; and, second, that as factory production replaced home production, nothing was left for adult women to do at home.¹ Many Americans believe that these corollaries are true, and they act on this belief in various ways: some hope to re-establish family solidarity by relearning lost productive crafts such as baking bread or tending a vegetable garden; others dismiss the women's liberation movement as "simply a bunch of affluent housewives who have nothing better to do with their time"; husbands complain that their wives spend too much time doing inconsequential work ("What *do* you do all day, dear?"); and housewives can find no reasonable explanation for why they are perpetually exhausted.

The conventional wisdom was once not so conventional; it has its roots in the painstaking sociological observations and patient economic research undertaken by the pioneer social scientists who did their most important empirical and theoretical work in the years from 1890 to 1930.² All of them were, in one way or another, keen and disciplined observers of the world in which they lived. They witnessed monumental technological changes in their own lifetimes (from the steam engine to the electric motor,

Twentieth-Century Changes in Household Technology

from the horse to the automobile, from handmade to factory-made clothing, from gas lamps to electric lights), and they were not unreasonably impressed with the impact that those changes were having on the daily life—and on the communal life—of their contemporaries. Unfortunately the conclusions that these social scientists reached may not be as fine a guide to our past (and to our present) as we have let ourselves believe.³

Twentieth-century household technology consists of not one, but of eight, interlocking technological systems: the systems that supply us with food, clothing, health care, transportation, water, gas, electricity, and petroleum products. Some of these systems have followed the conventional model—moving production out of the home and into the factories; but (and this is the crucial point) some of them have not. Indeed, some of the systems cannot even be made to fit this model at all. A brief historical sketch of the development of these eight systems, tracing them back, in some cases, to their nineteenth-century origins, should reveal, rather quickly, why the conventional model is, at best, incomplete and, at worst, grossly misleading.

The Shift from Production to Consumption

The food, clothing, and health-care systems are the ones the early social scientists examined in greatest detail—and they are the ones, not surprisingly, that fit the "production to consumption" model most precisely.

THE FOOD SYSTEM

Flour milling, as we have seen, had become an industrial enterprise fairly early in the nineteenth century; and by the latter decades of the century, the local grist mill had become a vestigial institution in most American communities. People were buying the flour that they needed (it was now more likely to be wheat flour than corn, oats, or rye; fine flour rather than meal or any of

the coarser grinds; and "white" rather than "whole") in barrels and in sacks rather than producing it themselves or carrying it themselves to the mill to be ground. The only significant change that occurred during the twentieth century was a shift from wood and cloth containers to paper ones, a decrease in the standard size of the package, and a decrease in the average household consumption of plain flour itself (a decrease that is coincidental with an increase in the use of factory-, or bakery-, made breads, biscuits, and cakes).⁴

Butchering also became a lost household art during the second half of the nineteenth century as the technology for canning meats was perfected (beginning about 1870) and the technology for refrigeration developed to the point where it became possible to keep large quantities of meat at low temperatures in packing plants and then ship it in ice-cooled (later machine-cooled) railroad cars to refrigerated warehouses in other cities. Even before the twentieth century, Americans were becoming unaccustomed to the sight of herds of cattle being driven through city streets to slaughterhouses, and few families (except in some rural areas) were eating meat that had been killed at the hand of some family member and preserved by the hand of another. The most significant change in this domain of food supply in the twentieth century was the introduction of the mass-produced (hence neither raised nor slaughtered at home) chicken in the years after the Second World War.⁵

Like milling and butchering, canning had become a big business during the last decades of the nineteenth century. A French inventor, Nicholas Appert, took out the first patents on the process before 1810: raw foodstuffs were placed in glass containers and cooked in water baths (container and all) for a long time. At first the food produced in this way was unpalatable and fairly likely to spoil—hence, early in the nineteenth century canned food was produced mostly under contract to national governments, who supplied it to soldiers and sailors on campaign. As the decades wore on, however, improvements in the technique (such as the introduction of vacuum cookers and tin, rather than glass, containers) increased the attractiveness of the food—at the same time rendering it sterile and thus longer lasting.⁶ During the

Twentieth-Century Changes in Household Technology

1820s, William Underwood went into the business of selling various meat products put up in bottles. Gail Borden patented a technique for condensing skimmed milk and preserving it with sugar in 1856; within a decade, his product had spread to all the national (and even some international) markets. During the Civil War years and immediately thereafter, businesses that specialized in canning such fruits and vegetables as cherries, tomatoes, peas, and corn flourished. H. J. Heinz began selling crocked pickles, horseradish, and sauerkraut in the 1870s. By the time another decade had passed, he had added cooked macaroni products to his line of goods, had entered all the major national markets, and had begun the practice of buying up whole crops of fruits and vegetables even before they were planted. The Franco-American Company was selling canned meals late in the 1880s—and in 1897, Dr. John Dorrance invented the process by which soup could be condensed, thus ensuring the continuing good fortune of the firm (Campbell's) that then employed him.⁷ The total national output of canned goods was only about five million cans in 1860 but, by 1870, was up to thirty million and, by 1880, had increased four-fold.⁸ By the turn of the century, canned goods were a standard feature of the American diet: women's magazines contained advertisements for them on nearly every page, standard recipes routinely called for them, and the weekly food expenditures of even the poorest urban families regularly included them. Indeed, by the end of the century, processed foods of all kinds—packaged dry cereals, pancake mixes, crackers and cookies machine-wrapped in paper containers, canned hams, and bottled corned beef—were part of the staple output of some of the largest, and most monopolistically organized, business enterprises in the nation. Not surprisingly, the meat-packing companies, the manufacturers of tin cans, and the biscuit makers were among the first groups of "trusts" to feel the impact of the government's "busting" activities.⁹

THE CLOTHING SYSTEM

By 1900 the manufacture and sale of ready-made clothing was also a booming enterprise in the United States: the total output

MORE WORK FOR MOTHER

of men's, women's, and children's clothing intended for domestic consumption in that year was estimated at \$817 million.¹⁰ The clothing trades, like the food trades, had begun to develop early in the nineteenth century. In cities such as New York, Philadelphia, and Boston, some tailoring shops expanded in the early decades of the century and adopted the practice of cutting and preparing fairly large batches of clothing to be sold "ready-made," rather than made up to individual order.¹¹ In the early years, ready-made clothing was intended for men, and poor men at that; it was made up in fairly coarse cloth and in the fairly loose-fitting styles that characterized the attire of laborers, sailors, farmers, and slaves. The invention of the sewing machine early in the 1850s greatly expanded the volume of ready-made clothes that could be produced by the enterprises then in existence (since the use of even the earliest sewing machines made it possible for each tailor or seamstress to increase production ten to fifteen times); and the development, during the 1860s, of better techniques for cutting clothes to fit (based in part upon statistical data about men's body sizes accumulated by the United States Army during the Civil War) made it possible for manufacturers to begin marketing ready-made clothing of higher quality. By 1879 an economist surveying the men's clothing business adjudged that it had become possible for any man or boy, from any walk of life, to obtain, at a reasonable cost, a well-fitting suit of clothes. By 1875 the Montgomery Ward Company (as well as other mail-order firms) was making it possible even for those men who did not live within easy access of clothing stores to dispense with their wives' handiwork.¹²

Women's clothing was industrialized somewhat later. Before the Civil War, there were a few manufacturers who specialized in producing ready-made cloaks, shawls, and mantuas—items of outer clothing that were difficult for women to work up at home and that, because of their loose fit, were suitable for manufacture; crinolines and hoopskirts followed, for much the same reasons. The Census Bureau did not begin enumerating manufacturers of women's clothing until 1860; but by that time, there were already ninety-six businesses engaged in this trade in cities up and down the Eastern coast. By 1870 the number had doubled; and by 1900,

Twentieth-Century Changes in Household Technology

as Eastern European immigrants were being attracted into this branch of industry, it had multiplied tenfold.¹³ During the 1870s and 1880s a few daring entrepreneurs attempted ready-made women's suits (actually they were what we would call two-piece dresses), but they were sold (by some of the early department stores such as Lord and Taylor's and B. Altman's) with the caveat that they would have to be altered by a seamstress in order to fit properly.¹⁴ Later in the century, especially after the advent of the "Gibson girl" style (which consisted of a blouse, called a shirt-waist, and a skirt which were purchased separately), the problem of fit became somewhat easier to solve—and at that juncture, the industry began to expand even more rapidly. By 1910, by which date sewing, cutting, and pressing machines had all been electrified, another economist, surveying women's ready-made clothing this time, adjudged that every article of women's clothing could be had ready-made, in styles and prices suitable for everyone from the poorest farm girl to the richest society matron. Contemporary documents tend to bear out this judgment: the Sears Roebuck catalogue, for example, did not contain a single item of women's clothing in 1894; but by 1920 it had ninety illustrated pages of female attire. In ensuing decades of the twentieth century, fashions and fabrics changed, and the industry continued to expand—but the nation had made the conversion from home-made to factory-made clothing before the outbreak of the First World War.¹⁵

THE HEALTH-CARE SYSTEM

The health-care system developed its modern form somewhat later than the food and clothing systems, but was also in the throes of moving out of the household and into centralized institutions by the end of the nineteenth century. Manufacturers of patent medicines were the first to take over some of the work that had earlier been done by housewives. Early in the nineteenth century most cookbooks or advice manuals had contained lengthy chapters devoted to the preparation of medicines and foods for the sick.¹⁶ By midcentury a few entrepreneurs had begun manufacturing these "home" remedies in bulk and mar-

MORE WORK FOR MOTHER

keting them by mail order, by peddlers, or in retail establishments; Lydia Pinkham's Potions and Carter's Little Pills (formerly, "Little Liver Pills") are just two, still famous examples of this popular type of medication.¹⁷ By the end of the century, the patent drug business was so active, and so many varieties of remedies were available, that pages upon pages of advertisements in women's magazines were devoted to them—and cookbooks had stopped giving recipes for preparing them at home.*

At the same time, various forms of health care which had once been proffered by housewives increasingly became the responsibility of specially trained workers. Nursing began to professionalize in the latter years of the century. The first schools for nurses were founded in New York, Philadelphia, and Boston between 1859 and 1862; by 1900 there were 432 schools that had produced 3,456 graduates, and a professional association of such graduates (the American Nurse's Association) had been formed.¹⁸ Nurses were employed in hospitals (by 1900 there were roughly 4,000 such institutions throughout the country with almost 400,000 beds), in sanitariums for the tubercular and the mentally unstable, in settlement houses, in schools, and in home-nursing associations—and every hour of care that they offered to their patients was an hour that would earlier, and under other circumstances, have been offered by a housewife.²⁰ By 1900 there were also 16,000 funeral directors and embalmers abroad in the land; and every dead body that they prepared for burial, and every wake that they supervised on their premises, represented that much less burdensome and grievous work that women had earlier performed.²¹

During most of the nineteenth century, hospitals had been institutions devoted to the care of the urban indigent, precisely those people who could not be cared for adequately in their own homes, if they had them. Mortality rates in hospitals were high, and the care offered was essentially primitive and custodial; people of any means whatsoever avoided them and physicians used them, not to care for private patients in distress, but to learn their

*For example, *The Boston Cooking School Cookbook*, one of the most popular cookbooks of its day, contained no special section on "household remedies" and only a few recipes for special foods for the sick.¹⁹

Twentieth-Century Changes in Household Technology

trade and give vent, for a few hours a month, to their charitable inclinations.²²

This situation began to change in the 1890s, however, as the principles of what was then called "scientific medicine" began to spread from Germany and France, where they had first developed, into the United States—and as physicians and hospital boards of trustees became increasingly aware that middle-class patients would be willing to pay for suitable hospital care.²³ Scientific medicine meant, among other things, that surgery could and should be performed under sterile conditions with the aid of anesthesia, and that wounds should be dressed with sterile bandages so as to lessen the danger of infection; clearly, these were tasks that could be performed better in hospitals than in homes and better by trained personnel than by amateurs. Increasingly, middle-class people, who could not care for the sick at home according to the standards that were becoming acceptable, were willing to pay for the service; at the same time, hospitals found the provision of private rooms a particularly easy way to offset their chronic shortages of funds. Physicians were, apparently, more than happy to go along with the trend, since the hospitalization of their patients meant less time and trouble spent in travel—and probably better care for their patients. The transition to hospitalization—even for pregnant women—was fairly rapid, as such social transitions go: between 1900 and 1920 the number of hospital beds doubled; it did not double again for another fifty years.²⁴ By 1930, when the first nationwide survey of such matters was undertaken, out of every one thousand people surveyed, seven hundred days were recorded as having been spent in the hospital in the previous year—and each of those days meant, from the point of view of the adult women who might otherwise have had to care for those patients in their own homes, a significant shift from the net production to the net consumption of health-care services.²⁵

CONCLUSION

Thus, in all three of these technological systems (for food, clothing, and health care) the shift from production to con-

MORE WORK FOR MOTHER

sumption occurred slowly, over a long period—but with increasing momentum as the twentieth century approached. Butchering, milling, textile making, and leatherwork had departed from many homes by 1860. Sewing of men's clothing was gone, roughly speaking, by 1880, of women's and children's outerwear by 1900, and finally of almost all items of clothing for all members of the family by 1920. Preservation of some foodstuffs—most notably peas, corn, tomatoes, and peaches—had been industrialized by 1900; the preparation of dairy products such as butter and cheese had become a lost art, even in rural districts, by about the same date. Factory-made biscuits and quick cereals were appearing on many American kitchen tables by 1910, and factory-made bread had become commonplace by 1930. The preparation of drugs and medications had been turned over to factories or to professional pharmacists by 1900, and a good many other aspects of long-term medical care had been institutionalized in hospitals and sanitariums thirty years later. Individual families no doubt differed in the particular times and particular patterns by which they made (or underwent) this transition. Those who lived in urban areas probably had shifted from the production to the consumption of most goods earlier than those who lived in rural districts, and those who were economically comfortable before those who were economically deprived—but there were significant variations in these overall patterns. The urban poor received hospital care long before the urban rich, and some of the rural poor were probably wearing ready-made clothes decades before the urban rich (or even the urban middle classes) had made the same transition. Personal idiosyncrasies also make generalizations difficult because there were surely people who—for reasons of pride in skills well learned, or reverence for traditions, or religious scruple, or aesthetic judgment, or pure intransigence—refused to give up brewing their own beer when everyone else was buying theirs in bottles, or continued to make strawberry jam when everyone else was settling for store-bought, or continued to construct hand-made clothes when everyone else was getting theirs from the catalogues or the department stores.

Twentieth-Century Changes in Household Technology

A Shift in the Other Direction: Transportation

Yet whatever variations of social station or personal inclination there may have been, the general pattern that most American families would adhere to in most of the arrangements for providing food, clothing, and health care had been settled, at the very latest, by 1930. This, of course, is the social trend that the earliest social scientists so correctly observed. What they did not observe—perhaps because the Depression and the Second World War gave them other problems to worry about, or perhaps because the postwar years found them either in retirement or in pursuit of other realms of investigation—was the impact that developments in the fourth of the household technological systems—the transportation system—would have on the work processes of housework and on the time allocations of housewives. As most modern housewives know far too well, you cannot consume frozen T.V. dinners or acrylic knit sweaters or aspirin or a pediatrician's services unless you can get to them, or unless someone is willing to deliver them to your door. In either case you, or someone else, is dependent upon whatever means of transportation is most convenient. Consequently, in order to understand why housework did not magically disappear when twentieth-century factories, pharmacies, and hospitals took over the work that nineteenth-century women once had done, the history of urban and rural transportation must also be considered.

The household transportation system has developed in a pattern that is precisely the opposite of the food, clothing, and health-care systems: households have moved from the net consumption to the net production of transportation services—and housewives have moved from being the receivers of purchased goods to being the transporters of them.²⁶ During the nineteenth century, many household goods and services were delivered virtually to the doorsteps of the people who had purchased them—and many others were offered for sale in retail establishments located a short walk from the houses in which people lived. Peddlers carried pots and pans, linens, and medicines to farm-

MORE WORK FOR MOTHER

houses and to the halls and stairways of urban tenements. Seamstresses almost always came to the homes of the women and children for whom they were fashioning clothing; and tailors occasionally provided the same service for men. Milk, ice, and coal were regularly delivered directly to the kitchens and basements of middle-class urban dwellers and not infrequently also into the homes (or at least to the curbsides) of those who were poor. Butchers, greengrocers, coffee merchants, and bakers employed delivery boys to take orders from and then carry purchases back to the homes of their more prosperous customers. Smoked, dried, and pickled fish, fruits and vegetables, second-hand clothing, and linens were routinely sold from pushcarts that lined the curbs and traveled the back alleys of poor neighborhoods. Knife sharpeners traveled the streets with flintstones and grindstones on their backs or in their carts, and frequently so did the men who repaired shoes and other leathergoods. Bakeries and grocery stores were located in every city neighborhood, so that housewives, children, and servants could "run out" for extra supplies whenever they were needed. Even doctors made house calls. Under ordinary circumstances the individual urban householder, whether rich or poor, rarely had to travel far from his or her own doorstep in order to have access to the goods and services required for sustenance. For rural householders such convenience was not feasible; what shopping there was to be done in rural areas usually waited for the weekly, monthly, or even, in some cases, the annual trip into town or arrival of the peddler.

In the latter decades of the nineteenth century, this pattern of shopping began to change. In urban areas department stores flourished: Marshall Field went into business in Chicago in 1852; Stewart's opened in New York in 1861; and Wanamaker's, in Philadelphia one year later.²⁷ At first these stores (which, by definition, sold more than one category of goods) were patronized only by the "carriage trade"—people who could afford to keep a horse and carriage and hence could travel to such a store to do their shopping; but later in the century, the range of their business expanded somewhat as horse-drawn omnibuses and trolley and subway cars made it possible for people of lesser means to

Twentieth-Century Changes in Household Technology

travel. Even after the turn of the century, however, the department stores still did not appeal to the poor, and their total sales represented only a fraction of the retail sales in most urban areas. Most people living in cities, especially those who were in less comfortable economic circumstances, still acquired most of the goods that they needed, day in and day out, without having to spend much time either getting to the places where goods were offered for sale, or in getting their purchases home.

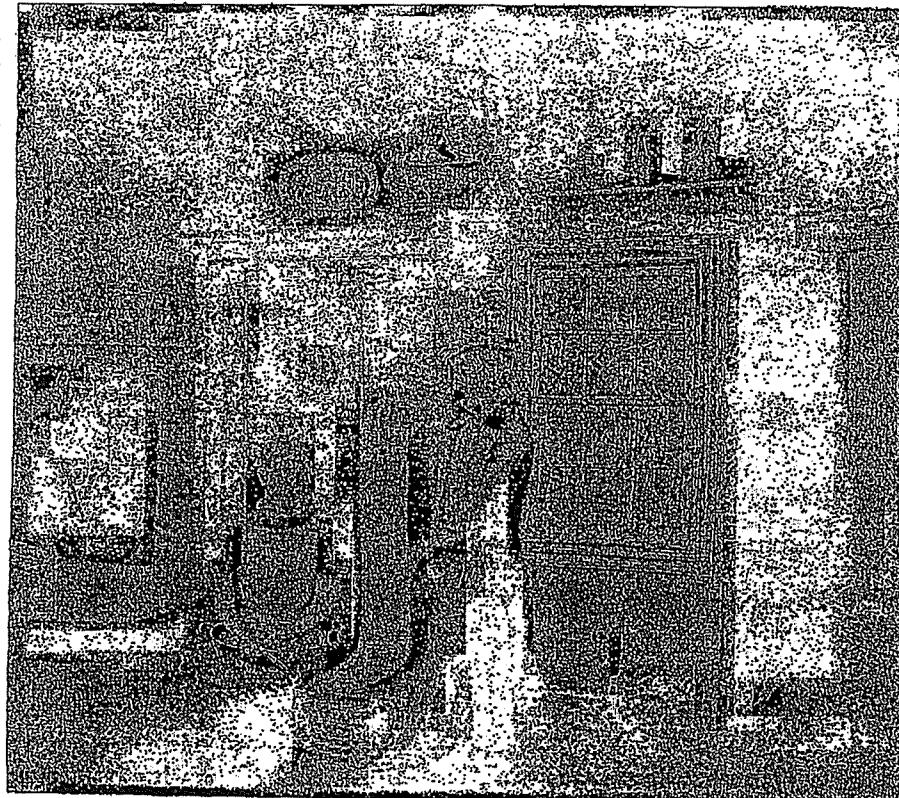
In rural areas, toward the end of the century, the total time spent in shopping for and transporting goods was additionally decreased by the widespread popularity of mail-order catalogues. A good part of the business done by urban department stores had always been either by mail (or, later, by telephone) ordering; in the last decades of the nineteenth century, this service became available to rural Americans as well. Montgomery Ward and Sears Roebuck (as well as hundreds of smaller enterprises) had entered the mail-order business during the 1870s; and by the time twenty years had passed, there was virtually nothing—from soup to nuts, from underwear to outerwear, from nails and screws to plows and buggies—that rural residents could not order from a catalogue.²⁸ And clearly they did: the mail-order companies were among the country's leading business enterprises by the turn of the century—and continued to flourish for decades afterward. The creation of rural free-delivery services, which were begun on an experimental basis in the 1890s and extended to most parts of the country before the First World War, further increased the accessibility of this service. Rural women, like their urban counterparts, simply did not have to spend much time either in shopping or in transporting the goods they were buying—even though, as the decades passed, they were buying more than their mothers and grandmothers ever had.

Prior to the advent of the motorcar, many transportation services were provided—when they were provided by the household at all—by men or by servants.²⁹ Stereotypically, it was the man of the family who hitched the horse to the buggy and went into town to get the mail and buy the flour and the cloth or whatever else it was that his family required. Similarly, in urban middle-class families it was the servant who fetched the doctor,

MORE WORK FOR MOTHER

or went to market in search of fresh meat or vegetables, or drove the family carriage through the streets. Among some immigrant groups men were responsible for handling the family's money and hence for making the family's purchases in the marketplace—carrying over into the New World traditions of the Old; and in these families, at least in the first generation of immigration, women were not regular participants in shopping expeditions or decisions. Needless to say, in actual practice stereotypic conditions did not always prevail. There must have been many occasions when, for one reason or another, mother rather than father made the trip into town, or a middle-class urban housewife chose to do her marketing herself; and there were certainly immigrant groups (for example, the Jews) among whom the standard of sex-role behavior dictated that purchases of food and clothing were made by women rather than by men. Yet even when these exceptions are included, it seems a fair generalization to say that in the years before (roughly) 1920 what shopping and transporting there was took little time, and that a large part of that time was spent by men and servants.

In the years just before and after the First World War, all this began to change—and the agent of change was, of course, the motor car.³⁰ "Why on earth do you need to study what's changing this country," one person asked Helen and Robert Lynd during 1925, when they were studying social conditions in Muncie, Indiana. "I can tell you what's happening in just four letters: A-U-T-O."³¹ The speed with which the automobile became an integral part of daily life in America was, in historical terms, astounding. In 1890, for all intents and purposes, the automobile simply did not exist, except in the dreams of a few willful inventors. A decade later, there were already several dozen American entrepreneurs in the business of manufacturing automobiles, but their products were extremely expensive and intended for the delight of only the wealthiest segment of the population. By 1910, Henry Ford was already manufacturing the Model T, in a determined effort to lower the cost and thus increase the diffusion rate of the motor car to all classes of the population—and twenty years afterward, just at the onset of the Depression, he had virtually succeeded.³² In 1921, President Harding told the Congress



(1) "The Yankee Pedlar," artist unknown, 1
Collection of the IBM Corp

The Transportation System

In times gone by, all kinds of goods and services came right to your door. Peddlers visited farmhouses (1), horsedrawn wagons delivered groceries (2) or trundled vegetables (3) or pots and pans (4) up and down city streets, pushcarts brought all kinds of goods right to the curb (5), laundry could be picked up and delivered (6), and even doctors made house calls (7). Although you might have used your first automobile just for fun (8), before many years had passed you would have been using it every day for domestic chores (9). As the years passed and suburbia spread, delivery services disappeared, and you would have hardly been able to run a household without a car, performing services that retailers had once offered (10) and chores—such as picking children up at school (11)—that had never existed before.

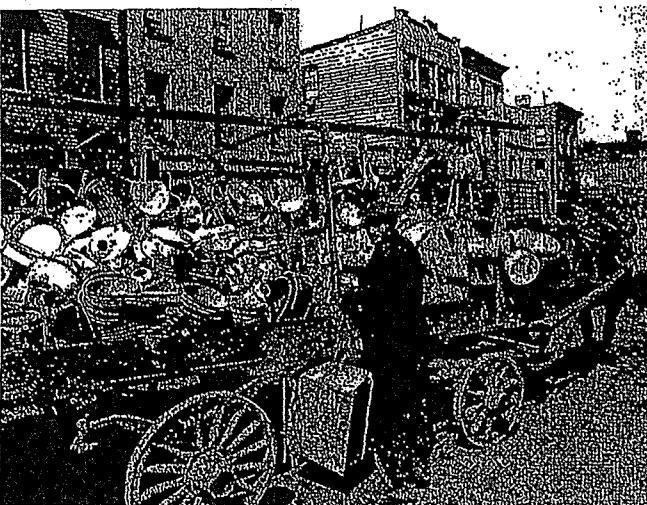
(3) Old Westbury, New York,
photographer unknown, c. 1905.
Velsor Collection,
Nassau County Museum.



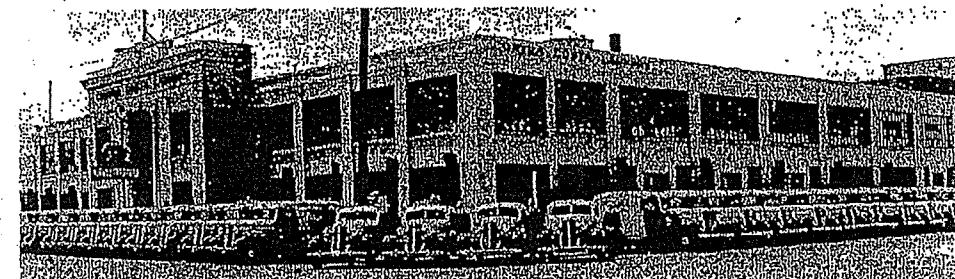
(4) Homestead, Pennsylvania,
Lewis Hine, c. 1910.
Courtesy of the
Russel Sage Foundation.



(4) Travelling Tin Shop,
Brooklyn, New York,
Bertrand Abbott,
22 May 1936.
Abbott Collection,
Museum of the City
of New York.



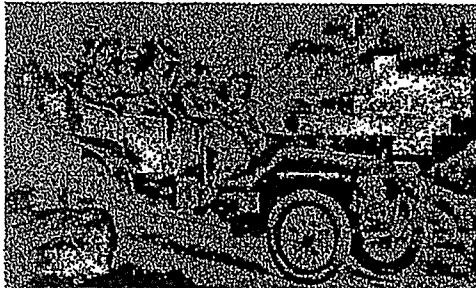
(5) Street Vendors, Hester Street, New York City, photograph by Byron, 1898.
The Byron Collection, Museum of the City of New York.



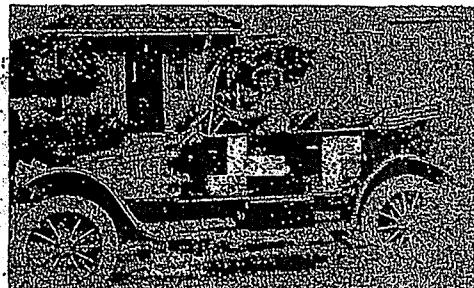
(6) Probably Oakland, California,
by an unknown photographer, c. 1939.



(7) Scott County, Missouri,
John Vachon, 1942.
Library of Congress.



(8) Illustration from Robert S. Crandall,
Around the World in an Auto, 1907.



(9) Bellrose Village, New York,
photographer unknown,
c. 1907. Nassau County Museum.

(10) Supermarket parking lot, Glen Cove, New York, Ruth Schwartz Cowan, 1983.



(11) Picking-up children, Cherrywood School, Levittown, New York,
photographer unknown, c. 1968. Levittown Public Library.



Twentieth-Century Changes in Household Technology

that "the motorcar has become an indispensable instrument in our political, social and industrial life."³³ By 1930, just as bad times were beginning, there were roughly thirty million households in the United States—and twenty-six million registered automobiles.³⁴ Allowing for some households that had two automobiles (not yet a common practice, even in the upper middle classes) and for some automobiles that were used only for business purposes, it still seems reasonable to conclude that the daily lives of at least half the people then living in the United States had been touched by this newfangled mode of transportation before the advent of the Depression. When horse transport had been the rule, a private carriage was beyond the means of all but the very rich; everyone else depended upon his or her feet, on public transport, and—in rural areas—on saddled horses or open carts. The automobile brought the advantage not just of speed in transport but also of privacy to more Americans than had ever before had this privilege. The Lynds estimated that, in Muncie in the 1890s, only 125 families owned a horse and buggy—and they were all members of the élite; by 1923, there were 6,222 passenger cars in the city, "roughly one for every 6.1 persons or two for every three families."³⁵ And what was happening in Muncie was apparently happening nationwide (with the possible exception of the older Eastern cities which were well supplied with public transportation systems): people of many social classes were finding that it was possible for them to get where they wanted to go faster, over longer distances, according to their own schedules—and with carrying capacity attached.

Interestingly enough, when the automobile began to replace feet and horses as the prime mode of transportation, women began to replace men as household suppliers of the service. For reasons that may be clear only to anthropologists and psychologists, automobile driving was not stereotypically limited to men. This situation may have arisen because advertisers of automobiles made a special effort to attract the interest of women, or because the advent of the automobile coincided with the advent of what was then called the "new girl"—more athletic, better educated, less circumscribed by traditional behavior patterns—or for a host of other reasons presently beyond our ken, but it

MORE WORK FOR MOTHER

unquestionably happened. The woman who could drive even became something of an ideal for a time:

*Like the breeze in its flight, or the passage of light,
Or swift as the fall of a star.
She comes and she goes in a nimbus of dust
A goddess enthroned on a car.
The maid of the motor, behold her erect
With muscles as steady as steel.
Her hand on the lever and always in front
The girl in the automobile.³⁶*

The girl who drove an automobile in 1907 (when this jingle was published) was a middle-aged matron by 1930—and then what she was driving to was not the moon but the grocery store. As the nation shifted from an economy dominated by the horse to an economy dominated by the automobile—and as the Depression created stiff competition among retailers for shares of a declining market—delivery services of all kinds began to disappear. The owners of grocery shops and butcher's markets began to fire their delivery boys in an effort to lower prices and thus more effectively to compete with the chain stores and supermarkets which were cropping up throughout the land.³⁷ Some of the chain stores began to eliminate these services as the Depression deepened. The supermarkets (self-service markets with many departments) almost by definition had never had them. After the Second World War, mail-order companies such as Sears Roebuck and Montgomery Ward discovered that they could compete effectively with department stores by opening retail outlets of their own, thus converting their mail-order customers into shoppers. Department stores discovered that many of their customers had moved out of the central city neighborhoods and so opened suburban branches—which were accessible only by car. Physicians discovered that they could stop making house calls and require that all ambulatory patients (in itself an ironic euphemism) be brought to their offices—without losing a significant number of patients. Indeed, a survey of private practitioners in Philadelphia in 1929 revealed that physicians were spending roughly six hours a week making house calls during an average

Twentieth-Century Changes in Household Technology

working week of fifty hours; the rest of the time they were in offices, hospitals, or clinics.³⁸ Medical care, in general, became more dependent upon the availability of complex and expensive equipment (X-ray machines, iron lungs, intravenous feedings, anesthetics), so that visiting nurses were less able to cope, and hospital visits (which required transporting the patient back and forth, rather than waiting at home for the nurse to arrive) became more frequent.

These various individual and corporate decisions were spread out over two decades, but they all conspired in the same direction—to shift the burden of providing transportation services from the seller to the buyer. By the end of the 1930s, the general notion that businesses could offer lower prices by cutting back on services to customers was ingrained in the pattern of business relations. The growth of suburban communities in the postwar years did little to alter that pattern: as more and more businesses converted to the "self-service" concept, more and more households became dependent upon "herself" to provide the service.

By midcentury the time that housewives had once spent in preserving strawberries and stitching petticoats was being spent in driving to stores, shopping, and waiting in lines; and the energy that had once gone into bedside care of the sick was now diverted into driving a feverish child to the doctor, or racing to the railroad station to pick up a relative, or taking the baseball team to the next town for a game. The automobile had become, to the American housewife of the middle classes, what the cast-iron stove in the kitchen would have been to her counterpart of 1850—the vehicle through which she did much of her most significant work, and the work locale where she could most often be found.

The Household Utility Systems: Water

~~The historical development of four household utility systems those that supply us with water, gas, electricity, and petroleum~~