

GNP AND THE GARDEN OF EDEN:  
LONG-TERM TRENDS -  
IN U.S. REAL INCOMES

*"I will sum up another tale . . . the deathless gods who dwell on Olympus made a golden race of mortal men. . . . And they lived like gods without sorrow of heart, remote and free from toil and grief; miserable age rested not on them; but with legs and arms never failing they made merry with feasting beyond the reach of all evils."*

There, surely, is the ultimate legend. It appeared again, impressively, in the Bible's description of the Garden of Eden. Surely its most important secular version was Rousseau's idyll of natural man before civilization ruined his character. The legend did not lack for opposition. Perhaps the most succinct was Byron's: "The 'good old times'—all times when old are good—are gone."<sup>2</sup> But it was reserved for Marx to attack the legend most tellingly when he described the tremendous advance capitalism made over prior states, as humanity moved on toward socialism.

In our own day, however, a new and earnest set of romantics have appeared. Appeared in what they oddly term "Marxism," they ignore the adult Marx as they journey back to Rousseauism. And telling over each evil bead of industrialism, technology, and alienation they imply that a golden world did exist in Europe a few centuries back and on the U.S. frontier a mere century or so ago.

It is the purpose of this study to compare the physical conditions of existence in the U.S. at an earlier day with those at present. The measures used are limited. They can

<sup>2</sup> Hesiod, *Works and Days*, pp. 110-115.

<sup>1</sup> Data not otherwise footnoted are from ch. 15 in the author's *The American Economy: Income, Wealth and Want*.

<sup>3</sup> The Age of Bronze.

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hardly compete with those scientific intuitions which contrast levels of happiness then and now. Our goal is a far more modest one, of trying to see for what the increased output of the U.S. economy since 1900 has been used? Where has all the GNP gone? What key items drew largely on our resources, and for which can moderately reliable statistics be computed?<sup>3</sup>

I

*Hours of Work*

*"All these writers of economics overrate the importance of work. Every man has a profound instinct that idleness is the true reward of work, even if it only comes at the end of life."*

—Yeats, *Explorations*.

The moral contribution made by work, and workmanship, has been eloquently urged by Veblen, as others in the Puritan tradition. It may be true that workers in other cultures indeed guide their lives by a virtuous instinct of workmanship. But American workers since 1900 have followed Yeats rather than Veblen: they sought a shorter work day, a shorter work week, and a shorter work year. Of course the persistent advance of productivity has enabled them both to shorten their work week and consume more. Yet if they had continued to work a 1900 work day they could have reached still higher consumption levels. It is not without symbolic importance that the greatest and most violent initial surge of U.S. worker organization occurred in 1885, under the banner of "the 8 hour day."<sup>4</sup> From 1900 to 1970

<sup>3</sup> GNP in investment, net exports, and government are ignored here. These may be construed as eventually permitting various types of end consumption. However, even if that were certain—and the Kuznets position on war expenditures is well known—the amount allocated to any given year would inevitably be small relative to the consumption total.

<sup>4</sup> The Haymarket Riot took place, of course, as a direct outcome of the Mayday demonstration for a shorter work day.

the average worker cut his work week from 66.8 to 45.0 hours, or 33 percent. It does not, of course follow that today's worker could increase his income quite that much if he were satisfied to work 48 percent more hours a week. But he could increase it very substantially.<sup>5</sup> That margin measures the value of increased leisure—all of it quite omitted from the GNP estimates as normally made

Weekly Hours (Scheduled)  
Male Labor Force

	1900	1973	Decline 1900-1973
Total	66.8	45.0	-33%
Farm	74.0	53.9	-27
Non-farm	61.8	44.4	-28

Farmers and farm laborers—who made up 40 percent of the 1900 labor force—worked 12 hours a day for six days, and rested on the seventh with a mere 2 hours of chores. The farm work week was cut 20 hours by 1970. Farmers achieved this cut in three main ways. First, by buying tractors and gasoline instead of making hay, feeding, currying and caring for horses. Second, by buying commercial fertilizer instead of collecting and carting manure. And, third, by buying a dozen other products instead of continuing to make them in true handicraft fashion.

Urban workers cut their work week even more dramatically, as the table indicates. The overall decline for the labor force was necessarily still greater, as the center of employment moved from farm to nonfarm work. How strongly even a 10 hour work day is disliked in our own time is suggested by the glacial rate at which a 4 day, 10 hour a day, work week has been introduced. (Less than

<sup>5</sup> Particular emphasis on the greater efficiency of shorter hours has been given by Edward Denison. Cf. His *Accounting for United States Economic Growth, 1929-1969* (1974), Table 9-4, in which he estimates that fully half the decline in growth arising from the 1929-1948 decline in average weekly hours was compensated by greater efficiency per hour.

1% of U.S. workers are on such a work week. Nor has any national union come out favoring it.) One can surmise that the increase in wages needed to persuade workers to return to the 1900 work day would be substantial. But that great increase would mark and measure the monetary value of the hours cut since 1900, a value omitted from GNP.

#### Hours: Holidays, Vacations

The tedium and toil of labor can be alleviated by shortening the work day. It can also be moderated by shortening the work year. One remembers how Marx, and more recently Mandel, have attributed to capitalism the lengthening of the work year as saints days and religious holidays disappeared from the secularized calendar. How has the number of holidays taken by American workers changed? The typical 1900 worker had, at most, the 4th of July, Labor Day, and Christmas (and was probably paid for none). The typical worker in 1970 had 7 paid holidays.<sup>6</sup>

What of the trend in vacations? In 1900 6 percent of non-farm workers took vacations, while in 1970 some 80 percent did. The expansion took place, almost completely, after World War II.

Percent of Non-Farm Workers  
Taking Vacations: 1901-1970

1901	6%
1930	1
1950	60
1960	66
1970	80

If one assumed that hardly any 1900 farm workers took vacations, the 1900-1970 rise for the entire labor force would have been from say 2 percent to 80 percent.

Surely the concentrated stretch of vacation was worth more to the typical worker than the equivalent shortening

<sup>6</sup> Bureau of Labor Statistics, Bulletin 1770, *Employee Compensation in the Private Nonfarm Economy, 1970*, Table A-29.

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of the typical work day. So was the variety, and remission, provided by the holidays. But suppose one were to ignore that advantage, and simply compute total yearly work hours at each date. The typical American worked 3,380 hours a year in 1900—and 2,200 in 1970. The grandfather of today's American therefore worked 50 percent more hours each year than his grandson does. According to a usual model, these extra hours could be valued for the 1970 worker at the typical hourly wage he now receives. If so his real income is really 50 percent greater than it is reported to be.<sup>7</sup>

### Hours of Work: Housewives

From 1900 to 1970 the work day for the typical worker fell by 50 percent, as noted above. The housewife's work day fell even more:

The Housewife's Day, 1900-1966 <sup>7a</sup>	
	1900    1966
Housework	12    5
Laundry	2    1
Cooking	6    1½
Sewing	2 }    2½
Cleaning	2 }    4¼
Leisure	½(?)
TV, radio	0    3½

"The cooking, service and 'cleaning up' of ordinary meals in a farmhouse, with the contributory processes of picking, sorting, peeling, washing, etc., and the extra time given to special baking, pickling and preserving, takes fully six hours a day." So wrote Charlotte Gilman in 1910. By 1966 cooking

<sup>7</sup> I.e., assuming his response if one were to ask him how much added income he would require to work as many hours as his grandparents did in their prime.

<sup>7a</sup> Sources for table appear in note 17.

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time had been reduced to 1½ hours. Marketing (by urban housewives) took ⅓ of an hour. And dishwashing, all other house cleaning, sewing, and all other chores (but laundry) took 2½ hours. Time freed from all these activities went for: more child care, travel, study. And (most of all) 2 hours of conversation plus 4¼ hours a day for leisure activities such as TV. The vacuum cleaners, washing machines, and other household helps that made all this possible were not bought by her husband lengthening his work day to earn more. For his too was cut sharply. That pair of facts offers a profound comment on the U.S. economy. Whether many people would wish to return to the household work day that characterized mankind for thirty centuries is unknown. But one may surmise.

### Housing: Privacy: I

Between 1900 and today a frequent member of the American family has disappeared. In 1900 1 American urban family in every 4 sacrificed its privacy and expanded its income by taking in boarders and lodgers. By 1970 only 2 percent did so. In 1900 something like 15 percent of farm families had a resident hired hand—rarely viewed as romantically as in Frost's "The Hired Man." (Moreover, many farm families housed and fed harvest workers for short periods.)

Housewives once accepted the work of cleaning lodger's rooms, doing the extra cooking, serving, and washing. Few do so any longer. The psychological consequences of a resident outsider, and the extra work he created, apparently became too great relative to the income he provided. Two factors created this significant change. One was economic. As incomes rose, families gave up so unsatisfactory a source of income. (It is suggestive that the long-run decline reversed itself during the depression. The percent with lodgers actually rose from 11 percent to 15 percent when incomes fell between 1930 and 1934-1936.) Rates for non-whites—with their generally lower incomes—were about

double those for whites in 1930, 1960, and 1970.<sup>8</sup> But a second factor was at work: changing cultural patterns. Foreign-born rates were far above those for native whites and non-whites in 1910, but appear to be—there are no data for 1970, only impressions—nowhere as distinct in recent times. Thus the combination of low incomes and different cultural patterns explain 1910 rates of 11 percent for German foreign born, 18 percent for Irish, 27 percent for South Italian, and 77 percent for Lithuanians. By the third generation there exists little indication of any such differences; economic advance and the melting pot have together ended this ancient method of supplementing family income. The increased privacy families now enjoy, however, and the reduced emotional costs, fail to enter into measured GNP,<sup>9</sup> or into the measured increase since 1900.

*Housing: Privacy, Crowding: II*

The simplest indication of the increase in private space (i.e., decrease in "overcrowding") is given by the number of persons per room:

Year	Persons per Room	
	U.S.	White Non-White
1910	1.13	1.11 1.30
1970	.62	.61 .77

<sup>8</sup> The white/non-white comparisons reported below in Part III are somewhat less reliable for other years. Thus in 1910 the nonwhite sample was very small; in 1934-1936 it was restricted to non-relief families, a quite atypical group for non-whites in those years.

<sup>9</sup> Because of the methods of estimate used hitherto, the value of services provided to lodgers in 1900 appears implicitly in GNP: imputed rental values for family housing were higher than they would have been if space had not been rented and then sub-let to lodgers. Presumably the family was a more efficient provider of such space and facilities than the alternatives available in the private market. It would, then, be that differential which declined over time, and the rent component of the cost of living index would have risen more in consequence of that declining differential—yielding a smaller growth in real GNP than truly occurred.

Almost 50 percent more rooms were used per person in 1970 than in 1910.<sup>10</sup> It is likely that the amount of cubic feet per person did not increase as much. On the other hand, the amount of privacy, and the reduction in "crowding," probably increased still more.

The level of crowding at the beginning of the century can usefully be contrasted with that in some European cities.<sup>11</sup> (Americans in 1910 who were foreign born tended to live primarily in cities.)

Percent of Families with 2 or More Persons Per Room		1910: U.S. Foreign Born	
1895: Europe	14%	French	6%
Paris	14%	English	4
London	20	German	9
Berlin	28	Bohemian	16
Vienna	28	Russian	43
Moscow	31		
St. Petersburg	46		

The 1910-1970 change may also be looked at by a measure of more extreme crowding. The percent of U.S. families with more than 1 person per room ran:

49% in 1910
20% in 1940
8% in 1970

*Housing: Privacy: III*

There was a third change in housing usage over the past three-quarters of a century. Families devoted more of their space to separate bedrooms. The 1910 Immigration Survey reported how many families customarily used every room in the dwelling unit for sleeping.

<sup>10</sup> The 1910 data relate to urban and rural non-farm territory. Since farms with white residents probably had somewhat more rooms per person, the extent of decline is somewhat exaggerated.

<sup>11</sup> Bertillon data for Europe, quoted Adna Weber, *The Growth of Cities in the Nineteenth Century* (1899), p. 416.

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	1%
Native white	7
Negro	0
Foreign born	0
English	0
Irish	1
German	5
Hebrew	7
So. Italian	7
Polish	7
Bulgarian	63

The same survey also reported what proportion of the families had 3 or more persons per sleeping room:

Native white	17
Negro	34
Foreign born	
English	13
Irish	16
German	22
Hebrew	43
So. Italian	44
Polish	50
Bulgarian	66

Both measures show highest rates for the foreign born. However rates for the three largest sources of migration—English, Irish, and German—ran close to those for native whites, and below those for Negroes. Rates for the other foreign groups ranged well upward. Their excess reflected lower incomes, larger families, and different cultural practices brought over from the old country. By 1970 the customs of sleeping in rooms other than bedrooms, and more than 3 persons sleeping in a room, disappeared: family size decreased, incomes rose, customs changed. Family budgets permitted the desire for privacy and space to dominate the “efficient” use of housing space. The spread of housing codes may also have worked to this end. The codes may have coerced the behavior of families who preferred to use space more intensively and use more of their incomes

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for other objects. To that extent the codes were a further force contributing to expanding privacy in the home.

It would be a fascinating inquiry to determine whether the concern about “anomie” and “isolation” increased over recent decades as the extent of privacy in the American home developed. When children ceased to be raised 3 or 4 in a room, each one instead given his own room, did publicists’ concern about isolation, anomie, and rootlessness rise in proportion?

I

*Housing: Facilities*

It is suggestive of the extent of economic and public health advance in the past century that a key public issue in the 1970’s would be the possible carcinogens in public water supply. If they were present, and if they caused a few deaths, major changes in water supply were almost certain to take place.

The problems present at the beginning of the century were staggering by any such standard of concern. As late as the 1870’s “stinks arising from the Thames” would, on occasion, force members to leave the Mother of Parliaments. Deaths from water-borne disease were an inevitable part of life throughout Europe, Asia, and America. Around 1900 U.S. cities with relatively good water supplies could expect a typhoid death rate about 20 per 100,000 from causes other than polluted water. Cities that drew their raw water from polluted rivers, however, had substantially higher rates, reflecting that pollution:

Memphis	34
Washington, D.C.	48
Louisville	49
Philadelphia	51
Columbus	85
Pittsburgh	108

From 10 to 20 persons became ill from typhoid for every person who died of it. Moreover various water borne diseases significantly increased the contemporary death rate.

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From 1900 to 1970 major declines in these rates took place:<sup>12</sup>

	Deaths per 100,000	
	FROM	
Typhoid	31.3	0.0
Diarrheal Diseases	142.7	1.3

The path by which most households in the U.S. were provided with piped, clean,<sup>13</sup> running water can be briefly summarized:

	Percent of U.S. Households With Running Water				
	U.S.	Urban	Farm	White	Non-White
1890	24%	58%	1%	(27)%	(0)%
1940	70	94	37	74	39
1970	98	100	91	98	92

More than half of the city families in 1890 had piped water. But virtually none of the farm families did—and therefore virtually no non-white family did. By 1940 most urban families had running water, while somewhat over a third of farm families did. Because of the size of the farm population, this in turn meant that 74 percent of white and only 39 percent of non-white families had such supply. The major change since 1940, therefore, has been the expansion of water supply to farm households, and the departure of many whites, and most non-whites, to urban homes that are typically provided with piped water.

<sup>12</sup> *Historical Statistics of the U.S.*, II, p. 26 and 1974 *Statistical Abstract*, p. 62.

<sup>13</sup> "Clean" in terms of bacteria producing enteritis, diarrhea, typhoid, paratyphoid, etc. However, this change was achieved largely by introducing chlorine into the filtering and processing of raw water. Given that advance, the new standards of the 1970's involve concern over the impact of chlorine itself. Hence chlorine may itself be considered unclean when present in drinking water.

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II

Closely related to the investment in piped water supply, and closely linked to the dramatic reduction on death rates from key contagious diseases, was the replacement of privies by flush toilets:

	Percent of U.S. Households With Flush Toilets				
	U.S.	Urban	Farm	White	Non-White
1890	13%	46%	0%	14%	5%
1940	60	85	9	63	26
1970	96	99	87	97	89

I

Heating

From the most ancient times fire, and heat, were provided when lightning began forest fires. More tractable forms of heating evolved from that history. But the typical fuel used by man for many centuries, as by nature, was wood. Chopping down trees, hauling them, sawing, splitting, and seasoning, however, was a long wearying and tiresome process. As incomes rose in the U.S. less demanding fuels replaced wood:

	Percent of U.S. Families Heating by			
	Wood	Coal	Oil	Gas
1880	65%	35%	0%	0%
1908	36	63	1	1
1940	23	55	11	11
1970	1	3	26	56

Coal initially superseded wood because the concentration of coal deposits made the total labor and resource requirement far less. But coal itself still put heavy demands on the family: it had to be shoveled into the coal bin, into the furnace; clinkers removed at uncomfortable intervals; and ashes taken out daily. The process still demanded much labor, much discomfort for the head of the household, who

typically moved coal in and ashes out. It also involved much work for the housewife, who had to clean clothing, curtains, and cellars dirtied by coal smoke. As incomes rose after the Great Depression, therefore, coal was swiftly replaced by far more convenient fuels—oil and gas. And when a combination of discoveries and federal regulation kept down the relative price of gas, that most convenient of these fuels swiftly became the primary source. By 1970 it heated about the same percentage of American homes as wood had a century earlier. But the work load within the home associated with heating had dropped markedly—and pleasantly.

II

Another change in heating mode was the extension of central heating. The traditional description of families cosily met around the winter fireside reflects the fact that the rest of the home was nearly freezing. But, however appreciated, heating in every room was not to become at all common until income levels had risen and other priorities had been met. In the United States central heating did not permit the comfortable use of every room in the dwelling until after the piping times of the honorable Woodrow Wilson and Warren Harding:

Percent of American Dwelling Units with Central Heat

1900	0%
1910	0
1920	1
1940	42
1950	50
1960	66
1970	78

When it came, however, it came with a rush. From the early 1920's to the early 1930's the proportion went from 1 percent to near 40 percent. From 1950 to 1970 the proportion rose from half to three-fourths, with the non-white proportion rising from 40 percent to 58 percent. What the

dramatic change in fuel prices in the early 1970's would do to this trend is unclear. The dollar costs of central heating were not great relative to incomes, judging by earlier standards. But the change in prices of fuel relative to other items was, of course, unprecedented. As with the change in persons per room, the extension of central heating also created more privacy, separateness, and isolation than characterized earlier, urban, days.

Consumer Durables in the Home

In considering the 1910 housewife's day, Charlotte Gilman estimated that 2 hours went for laundering, 2 hours for sweeping, cleaning, and setting "to rights."<sup>14</sup> Whatever the precision of her guess, it pointed to the substantial amount of time that such work required. Ever since Thomas Jefferson first began issuing U.S. patents, a thousand inventors had tried to reduce that work load, inventing sinks, washboards, washing machines, and cleaners. But housewives did not substitute machines for their own work until two things occurred. First was a rise in incomes that permitted purchases beyond the most essential. Second, of course, was the development of electricity as something beyond a laboratory curiosity. The table below suggests the rate at which the new household durables spread.

	Percent of American Families With				
	Refrigerators Ice	Mechanical	Washing Machines	Vacuum Cleaners	Radios
1900					
10	18%	0%		0%	0%
20	48	0		0	0
30	40	1	8%	9	0
40	27	8	24	30	40
50	11	44			83
60		80		(54)	96
70	1	99	73	73	92
			70	92	96

<sup>14</sup> Charlotte Perkins Gilman, *The Home* (1910), pp. 96-97.

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After Edison, Tesla, Westinghouse, and a hundred others had done their work, the U.S. household characteristically relied on a range of electrical appliances to reduce the housewife's workload. No other nation provided its housewives with so many mechanical servants. The U.S. home used, not cold water and wash boards, but hot water in mechanical washing machines. Instead of feather dusters it had vacuum cleaners.

The widespread U.S. reliance on refrigerators—first ice-boxes and then mechanical—may have saved even more work. They dramatically reduced the number of shopping trips that the housewife and/or children had to make each day, for milk, for meat, and for other items that could not keep readily without refrigeration. Work apart, the refrigerator reduced food waste, spoilage, and infection from spoiled food, just as easy-to-use washing machines led to more frequent washing and decreased disease spread by lice and thru dirty clothes.<sup>25</sup>

As late as 1970 the difference between the array of conveniences that assisted the American housewife and household still contrasted markedly even with Western Europe.

### Percent of Households in 1970

With:	U.S.	Western Europe
Refrigerator	99%	72
Washing machines	70	57
Dryer	45	18
Iron	100	93
Vacuum cleaner	92	61
Dishwasher	26	2
Toaster	93	21
TV	99	75
Telephone	91	33

<sup>25</sup> Tradition has it that the great plague of the 14th century was carried westward from bales of clothes in Genoese storehouses near the Black Sea.

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### III

What single item was responsible for more social change in the U.S. over the past three-quarters of a century than the automobile? Americans may have adopted it because it permitted them to carry goods at lower resource cost. But if that were its chief contribution, probably few would be in use except on farms. What did account for the rise since 1910? for the enormous rise in the single decade, 1920-1930? and for the pattern of spread shown below?

	Percent of Families with Automobiles		
	Total	Urban	Farm
1900	0%		
1910	1%		
1920	26	35%	29%
1935	55	44	59%
1971	80	(73)	(87)
			Non-White
			15%
			53

The primary attraction of the automobile was that it expanded choice. A complicated Aladdin's lamp, it permitted families to be transported from where they were to place where they preferred to be—to stores and movies, to vacation spots, the country, the city, etc. Its ability to carry bundles of groceries, pieces of furniture, bags of cement, is purely secondary. Therefore city residents, who have more ready access to a variety of amusements and opportunities, have lower ownership rates. (That factor, together with lower incomes, accounts for some of the white-non-white differential.)

Needless to add, TV (as radio) also expands choice; the listener can visit various never-never lands, at least for the moment. The choice analogy may even maintain for electricity, which enables one to choose between a pseudo-day and a real night. And for central heating, which permits one to choose between a pseudo-summer and a real winter.



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Roman emperors were careful to guarantee the steadiness of the grain supply to Rome, as well as occasional carnivals of destruction of humans and animals. Having already considered circuses (in the American form of radio and TV) we may well turn to bread, reviewing the trend in U.S. food consumption.

### Food

Always the largest item in the family budget, food expenditures might be expected to change less over the course of growth than spending for many other items, such as consumer durables. Moreover, "the capacity of the human stomach is limited."<sup>16</sup> But the share of consumer spending for food has not declined dramatically since 1900. For housewives largely changed the way in which food was prepared.

As Table 1 indicates, families rapidly decreased their consumption of inferior foods. Salt pork, preferred in the centuries before cheap refrigeration became available, left the diet, to be replaced by fresh. Lard was replaced by butter and other fats; molasses, by refined sugar; and corn meal, by wheat bread. At the same time, families used their rising real incomes to increase their consumption of preferred foods. Ice cream and sugar consumption rose by 30 pounds 1945-1970. Beef consumption in the postwar period alone, rose by 79 percent. Poultry consumption doubled, and processed citrus intake more than doubled in that same period. One element not shown in the table is the shift to food packaged ever more conveniently—sugar no longer scooped from barrels, pickles no longer dipped from brine, etc.

But the housewife decreased her workload in the kitchen chiefly by making three major changes in her pattern of food buying. (a) In 1900 the typical housewife baked nearly half a ton (1,000 pounds) of flour each year into bread

<sup>16</sup> So far as food expenditures are concerned a variety of Roman emperors disproved any such statement many centuries ago.

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TABLE 1  
FOOD: CONSUMPTION AND PREPARATION, 1900-1970

### I. PERCENT OF URBAN FAMILIES CONSUMING

	Salt Pork	Lard	Molasses	Corn Meal
1900	83%	94%	69%	—
1918	66	64	—	84
1942	9	35	7	12
1965	4	9	2	22

### II. CONSUMPTION PER PERSON (LBS)

	Beef	Poultry	Ice Cream	Citrus (Processed)	Sugar
1910	56	17	2	0	77
1920	47	16	8	0	86
1940	43	18	12	4	99
1945	47	26	16	8	78
1970	84	50	26	19	108

### III.

	Percent of Flour Consumed		Percent of Money Spent for Vegetables		Percent of Food Expenditure	
	at home	in baked goods	raw prepared	at home	away from home	
1900	92%	8%	96%	4%	99%	1%
1965	22	78	30	70	82	18

and other items. But by 1965, 78 in every 100 pounds of flour she bought came in the form of bread etc. already baked. (b) Over the same period the housewife increased the share of her vegetable budget from 4 percent on prepared vegetables to 30 percent. She had transferred to major corporations much of the job of shopping for her vegetables, then cleaning, coring, scraping, and cooking them. (c) And, most complete substitute of all for kitchen work, the share of family food budgets for "food away from home" rose from 1 percent to 18 percent. That increase, of course, had many components: fewer lunches were prepared at home and more eaten at work by the head of the household, and at school by the children; more

meals were taken in restaurants; and more prepared food was brought home for dinner. Spending on a plethora of small appliances—toasters, timers, mixers—also reduced kitchen chores. Easier cleaning pots, and detergents instead of hard soaps, undoubtedly did so as well. But the major changes in food preparation noted above undoubtedly demanded the greatest share of increased family spending on food. They also brought the most substantial cuts in the amount of work required in the American kitchen.

One key aspect of these changes in family diet is given by two figures on time required to prepare meals in the home. An informed guess by Charlotte Gilman for 1910 contrasts with a figure from the Converse-Robinson time budget study for 1965-1966.<sup>17</sup> Preparing meals took 6 hours in 1910—including clean up. Cooking took 1½ hours in 1965-1966.

There are two sharply different ways to consider this (partial) record of American consumption. One is philosophical and meditative in character. It leads to the basic puzzle of what it is that societies achieve. That approach eventuates in important questions, and nearly overwhelming ones. For example, one may refer to Santayana's query: "The question was, Is material civilization worth while? Is the dull anonymous unhappiness that it steadily diffuses more tolerable than the sudden and horrible scourges that fall upon primitive peoples? Or should the question of happiness be ignored altogether. . . ."<sup>18</sup>

A second, albeit not alternative, approach exists. If the task of any economy is to provide the goods desired by the members of that society, then one may ask a conditional question about economic advance. Given history, as in fact it is given to this moment, how readily would the typical American give up the goods and facilities that penetrate

<sup>17</sup> Charlotte Perkins Gilman, *The Home* (1910), pp. 95, 133. U.S. 44 city sample for 1965 data (Converse and Robinson), reported in Alexander Szalai et al., *The Use of Time* (1972), p. 691.

<sup>18</sup> George Santayana, *Persons and Places* (1944), pp. 200-201.

his existence today, to return to the lower levels of 1900? Put another way, would he wish to return to the 50 percent longer work year of 1900, to do without central heating, running water, flush toilets, automobiles, TV, "a room of one's own"? And would one wish to do the work of the household in a world without mechanical refrigerators, washing machines, vacuum cleaners, sewing machines or electric light?

Both approaches raise real questions. They are probably more important than any given set of answers.