

Debate #1:

Was the Industrial Revolution a blessing or a disaster for the working class?

Sources you can use that I have already provided:

- Textbook (*A History of Western Society*)
- Adam Smith, *The Wealth of Nations* (1776)
- Thomas Malthus, *Essay on the Principle of Population* (1798)
- David Ricardo, *The Iron Law of Wages* (1817)
- Friedrich Engels, *The Condition of the Working Class in England* (1844)
- Louis Blanc, *The Organisation of Labour* (1840)
- Charles Fourier, *Theory of Social Organization* (1820)
- Marx and Engels, *The Communist Manifesto* (1848)

SOURCE 1: Peter Stearns and Herrick Chapman, *Society in Upheaval*, 1992.

Background information: Stearns and Chapman are professors of history at American universities.

The question of whether conditions deteriorated or were improved by early factory employment has been hotly debated, particularly in the case of the British industrial revolution. There is evidence on both sides. Many have tried to prove that early industry was evil; others have asserted its beneficence. Even during the Industrial Revolution itself the question was argued with much partisan feeling. The issue is not merely an academic one. In order to understand the workers themselves, it is vital to know whether they experienced a deterioration in conditions as they entered industry. That the workers were in misery from a modern point of view cannot be denied; that they were severely limited in their conditions is obvious; but whether they felt themselves to be miserable, judging by the standards they knew, is far from clear....

Furthermore, in England and elsewhere, rural conditions had usually been declining before the Industrial Revolution began. This was, after all, the main impulse for peasants to accept factory jobs. Peasant standards of living were low anyway; preindustrial society was simply poor. And the people entering industry were often drawn from the lowest categories of the peasantry. These were the people who suffered most from expanding population and declining domestic industry. There was deterioration of material conditions in the early industrial period, but it occurred primarily in the countryside among the landless and the domestic producers and among the unskilled in the slums of cities like London. When they found factory employment, workers seldom could note a significant worsening of their situation: many factory workers actually gained some ground in standard of living.

The worst problem for factory workers, as for the poorer classes even in premodern times, was the instability of conditions. Sick workers were rarely paid and sometimes lost their jobs. With age workers' skill and strength declined, and so did their earnings. Old workers, lacking property to fall back on, suffered from falling wages and frequent unemployment. Machine breakdowns caused days and even weeks of unemployment. Most important, recurrent industrial slumps plunged many workers into profound misery. Wages fell, sometimes by as much as 50 percent; up to a quarter of the labor force lost their jobs. Some returned to the countryside to seek work or to roam in bands to find food. Some survived on charity; the charity rolls of manufacturing cities often embraced over half the working class, though only meager support was offered. Some sold or pawned their possessions. All reduced expenses by eating potatoes instead of bread and ignoring rent payments. Old age, finally, could bring disaster. Working-class life was thus punctuated by a number of personal and general crises, creating a sense of insecurity that haunted workers even in better times.

In prosperous years the worst feature of the average worker's material standard of living was housing. Rural cottages had often been flimsy and small, befouled by animals, but city housing was sometimes worse....

With poor housing and urban crowding, along with the pressures of factory work itself, many workers were in poor health. Rates of infant mortality were high, and many workers had a life expectancy at birth only half as high as that of their employers....

Unquestionably factory wages were better than those of the countryside. Highly skilled male workers, many of them former artisans, were paid three to six times as much as ordinary laborers. For early mechanization did not eliminate the need for skill, though it reduced the percentage of skilled workers and changed the skills required. Hence the men who built and installed machines or puddle iron or ran the more complex spinning machines required years to learn their trade fully. But even lesser-skilled workers could command a money wage that was higher than what was available in the countryside or to the transient workers of the cities. There was little left over for purchases beyond food, housing, and clothing. A bit of tobacco or a small contribution to a mutual aid group were all that the ordinary worker could afford. However, wages tended to go up with time. They definitely rose in England after 1840. The main factory centers in France saw an increase in real wages in the 1830s and 1840s, and there was improvement in Germany in the 1840s and 1850s, in Russia in the 1890s.

So it is safe to conclude that material conditions, though bad, provided modest gains and some solace for many workers during the early industry period as a whole. On the average, conditions were better than the new workers' traditions had led them to expect.

SOURCE 2: Clark Nardinelli, "Industrial Revolution and the Standard of Living," *The Concise Encyclopedia of Economics, Library of Economics and Liberty*, Web.

< [://www.econlib.org/library/Enc/IndustrialRevolutionandtheStandardofLiving.html](http://www.econlib.org/library/Enc/IndustrialRevolutionandtheStandardofLiving.html) >

Background information: Clark Nardinelli is an economist at the U.S. Food and Drug Administration.

Between 1760 and 1860, technological progress, education, and an increasing capital stock transformed England into the workshop of the world. The industrial revolution, as the transformation came to be known, caused a sustained rise in real income per person in England and, as its effects spread, in the rest of the Western world. Historians agree that the industrial revolution was one of the most important events in history, marking the rapid transition to the modern age, but they disagree vehemently about many aspects of the event. Of all the disagreements, the oldest one is over how the industrial revolution affected ordinary people, often called the working classes. One group, the pessimists, argues that the living standards of ordinary people fell, while another group, the optimists, believes that living standards rose.

At one time, behind the debate was an ideological argument between the critics (especially Marxists) and the defenders of free markets. The critics, or pessimists, saw nineteenth-century England as Charles Dickens's Coketown or poet William Blake's "dark, satanic mills," with capitalists squeezing more surplus value out of the working class with each passing year. The defenders, or optimists, saw nineteenth-century England as the birthplace of a consumer revolution that made more and more consumer goods available to ordinary people with each passing year. The ideological underpinnings of the debate eventually faded, probably because, as T. S. Ashton pointed out in 1948, the industrial revolution meant the difference between the grinding poverty that had characterized most of human history and the affluence of the modern industrialized nations. No economist today seriously disputes the fact that the industrial revolution began the transformation that has led to extraordinarily high (compared with the rest of human history) living standards for ordinary people throughout the market industrial economies.

The standard-of-living debate today is not about *whether* the industrial revolution made people better off, but about *when*. The pessimists claim no marked improvement in standards of living until the 1840s or 1850s. Most optimists, by contrast, believe that living standards were rising by the 1810s or 1820s, or even earlier. The most influential recent contribution to the optimist position (and the center of much of the subsequent standard-of-living debate) is a 1983 paper by Peter Lindert and Jeffrey Williamson that produced new estimates

of real wages in England for the years 1755 to 1851. These estimates are based on money wages for workers in several broad categories, including both blue-collar and white-collar occupations. The authors' cost-of-living index attempted to represent actual working-class budgets. Lindert's and Williamson's analyses produced two striking results. First, they showed that real wages grew slowly between 1781 and 1819. Second, after 1819, real wages grew rapidly for all groups of workers. For all blue-collar workers—a good stand-in for the working classes—the Lindert-Williamson index number for real wages rose from 50 in 1819 to 100 in 1851. That is, real wages doubled in just thirty-two years.

Other economists challenged Lindert's and Williamson's optimistic findings. Charles Feinstein produced an alternative series of real wages based on a different price index. In the Feinstein series, real wages rose much more slowly than in the Lindert-Williamson series. Other researchers have speculated that the largely unmeasured effects of environmental decay more than offset any gains in well-being attributable to rising wages. Wages were higher in English cities than in the countryside, but rents were higher and the quality of life was lower. What proportion of the rise in urban wages reflected compensation for worsening urban squalor rather than true increases in real incomes? Williamson—using methods developed to measure the ill effects of twentieth-century cities—found that between 8 and 30 percent of the higher urban wages could be attributed to compensation for the inferior quality of life in English cities. John Brown found that much of the rise in real wages in the factory districts could be explained as compensation for poor working and living conditions. Another criticism of Lindert's and Williamson's optimistic findings is that their results were for workers who earned wages. We do not know what happened to people who worked at home or were self-employed. Because the consumption per person of tea and sugar, thought of as luxury goods at the time, failed to rise along with real wages, Joel Mokyr has suggested that workers who were not in the Lindert-Williamson sample may have suffered sufficiently deteriorating real incomes to offset rising wage income; in other words, the average person was no better off. Mokyr's explanation could also explain a lag between industrialization and the diffusion of its benefits.

What does “standard of living” mean? Economic historians would like it to mean happiness. But the impossibility of measuring happiness forces them to equate the standard of living with monetary measures such as real wages or real income. “Real income” is usually defined as money income adjusted for the cost of living, but not for effects of things such as health, longevity, unemployment, pollution, the condition of women and children, urban crowding, and the amount of leisure time. Although some new indexes attempt to capture the various dimensions of well-being, for most practical purposes real income per person remains the most telling indicator.

According to estimates by economist N. F. R. Crafts, British income per person (in 1970 U.S. dollars) rose from about \$400 in 1760 to \$430 in 1800, to \$500 in 1830, and then jumped to \$800 in 1860. (For many centuries before the industrial revolution, in contrast, periods of falling income offset periods of rising income.) Crafts's estimates indicate slow growth lasting from 1760 to 1830 followed by higher growth beginning sometime between 1830 and 1860. For this doubling of real income per person between 1760 and 1860 not to have made the lowest-income people better off, the share of income going to the lowest 65 percent of the population would have had to fall by half for them to be worse off after all that growth. It did not. In 1760, the lowest 65 percent received about 29 percent of total income in Britain; in 1860, their share was down only four percentage points to 25 percent. So the lowest 65 percent were substantially better off, with an increase in average real income of more than 70 percent.

The estimates of real income imply that a mildly optimistic conclusion on living standards is justified for the century after 1760. But the long period of slow growth makes pessimistic conclusions about shorter periods plausible. For example, did the working class become worse off during the early years of England's industrialization (1760–1830), when Crafts's estimates show real income per person growing at only about 0.3 percent annually? Growth at such a slow rate made deterioration in the lot of the working classes possible. A simple numerical illustration will show why. If we take 0.3 percent per year as the annual rate of growth of real income, average real income in 1830 would have been about 16 percent higher than in 1760. The share of total income going to the lowest 65 percent of the income distribution need only have fallen to 86 percent of its 1790

level to negate the benefit of rising average income. Most economic historians agree that the distribution of income became more unequal between 1790 and 1840. Moreover, if we add the effects of unemployment, poor harvests, war, pollution, urban crowding, and other social ills, the modest rise in average income could well have been accompanied by a fall in the standard of living of the working classes.

Other evidence supports the conclusion of slow improvement in living standards during the years of the industrial revolution. Crafts and C. K. Harley have emphasized the limited spread of modernization in England throughout most of the century of the industrial revolution. Feinstein estimated consumption per person for each decade between the 1760s and 1850s, and found only a small rise in consumption between 1760 and 1820 and a rapid rise after 1820. On the other hand, according to historians E. A. Wrigley and Roger S. Schofield, between 1781 and 1851, life expectancy at birth rose from thirty-five years to forty years, a 15 percent increase. Although this increase was modest compared with what was to come, it was nevertheless substantial.

The research of economic historians, then, has altered the old standard-of-living debate. They now seek to answer not the question of what happened to the standard of living, but the question of the effect of the industrial revolution net of other historical events. For example, the positive effect of the industrial revolution may well have been offset by the negative effect of frequent wars (the American Revolution, the Napoleonic Wars, the War of 1812) and the high taxes that accompanied them. Some economic historians include bad harvests, misguided government policies, rapid population growth, and the costs of transforming preindustrial workers into a modern labor force as additional causes of slow growth. In a counterfactual simulation, Mokyr has shown that without the technological changes of the industrial revolution, population growth could have substantially reduced real income per person between 1760 and 1830. In other words, the net effect of the industrial revolution was strongly positive but was largely offset by the negative effects of rapid population growth.

SOURCE 3: Testimony for the Factory Act of 1833: Working Conditions in England

Background information: Investigations into conditions in factories and mines conducted by the British Parliament in the 1830s and 1840s led eventually to the enactment of legislation, such as the Factory Act of 1833. The following selection contains three excerpts from a parliamentary commission's investigations into child labor in factories.

TESTIMONY OF THE COMMISSION OF MEDICAL EXAMINERS (from Northeastern England)

The account of the physical condition of the manufacturing population in the large towns in the North-eastern District of England is less favorable. It is of this district that the Commissioners state, "We have found undoubted instances of children five years old sent to work thirteen hours a day; and frequently of children nine, ten, and eleven consigned to labor for fourteen and fifteen hours." The effects ascertained by the Commissioners in many cases are, "deformity," and in still more "stunted growth, relaxed muscles, and slender conformation;" "twisting of the ends of the long bones, relaxation of the ligaments of the knees, ankles, and the like." "The representation that these effects are so common and universal as to enable some persons invariably to distinguish factory children from other children is, I have no hesitation in saying, an exaggerated and unfaithful picture of their general condition; at the same time it must be said, that the individual instances in which some one or other of those effects of severe labor are discernible are rather frequent than rare...

"Upon the whole, there remains no doubt upon my mind, that under the system pursued in many of the factories, the children of the laboring classes stand in need of, and ought to have, legislative protection against the conspiracy insensibly formed between their masters and parents, to tax them to a degree of toil beyond their strength.

"In conclusion, I think it has been clearly proved that children have been worked a most unreasonable and cruel length of time daily, and that even adults have been expected to do a certain quantity of labor which scarcely any human being is able to endure. I am of opinion no child under fourteen years of age should work in a factory of any description for more than eight hours a day. From fourteen upwards I would recommend that no individual

should, under any circumstances, work more than twelve hours a day; although if practicable, as a physician, I would prefer the limitation of ten hours, for all persons who earn their bread by their industry.”

TESTIMONY OF JOHN WRIGHT (a steward in a silk factory)

How long have you been employed in a silk-mill?—More than thirty years.

Did you enter it as a child?—Yes, betwixt five and six.

How many hours a day did you work then?—The same thirty years ago as now.

What are those hours?—Eleven hours per day and two over-hours: over-hours are working after six in the evening till eight. The regular hours are from six in the morning to six in the evening, and two others are two over-hours: about fifty years ago they began working over-hours....

Why, then, are those employed in them said to be in such a wretched condition?—In the first place, the great number of hands congregated together, in some rooms forty, in some fifty, in some sixty, and I have known some as many as 100, which must be injurious to both health and growing. In the second place, the privy is in the factory, which frequently emits an unwholesome smell; and it would be worth while to notice in the future erection of mills, that there be betwixt the privy door and the factory wall a kind of a lobby of cage work. 3rdly, The tediousness and the everlasting sameness in the first process preys much on the spirits, and makes the hands spiritless. 4thly, The extravagant number of hours a child is compelled to labor and confinement, which for one week is seventy-six hours.... 5thly, About six months in the year we are obliged to use either gas, candles, or lamps, for the longest portion of that time, nearly six hours a day, being obliged to work amid the smoke and soot of the same; and also a large portion of oil and grease is used in the mills.

What are the effects of the present system of labour?—From my earliest recollections, I have found the effects to be awfully detrimental to the well-being of the operative; I have observed frequently children carried to factories, unable to walk, and that entirely owing to excessive labour and confinement. The degradation of the workpeople baffles all description: frequently have two of my sisters been obliged to be assisted to the factory and home again, until by-and-by they could go no longer, being totally crippled in their legs. And in the next place, I remember some ten or twelve years ago working in one of the largest firms in Macclesfield, (Messrs. Baker and Pearson,) with about twenty-five men, where they were scarce one half fit for His Majesty’s service. Those that are straight in their limbs are stunted in their growth; much inferior to their fathers in point of strength. 3dly, Through excessive labour and confinement there is often a total loss of appetite; a kind of languor steals over the whole frame—enters to the very core—saps the foundation of the best constitution—and lays our strength prostrate in the dust. In the 4th place, by protracted labour there is an alarming increase of cripples in various parts of this town, which ahs come under my own observation and knowledge

Are all these cripples made in the silk factories?—Yes, they are, I believe...

TESTIMONY OF WILLIAM HARTER (a silk manufacturer)

What effect would it have on your manufacture to reduce the hours of labor to ten?—It would instantly much reduce the value of my mill and machinery, and consequently of far prejudice my manufacture.

How so?—They are calculated to produce a certain quantity of work in a given time. Every machine is valuable in proportion to the quantity of work which it will turn off in a given time. It is impossible that the machinery could produce as much work in ten hours as in twelve. If the tending of the machines were a laborious occupation, the difference in the quantity of work might not always be in exact proportion to the difference of working time; but in my mill, and silk-mills in general, the work requires the least imaginable labor; therefore it is perfectly impossible that the machines could produce as much work in ten hours as in twelve. The produce would vary in about the same ratio as the working time.

SOURCE 4: Agricultural Labor Described by Vauban, about 1700

Background information: This document describes the state of agricultural labor prior to the Industrial Revolution. Sébastien Le Pestre de Vauban (1633-1707) was a brilliant military engineer whose skill in designing fortifications and conducting sieges for the army of Louis XIV of France propelled him to the highest rank in the army, Marshal of France. But Vauban's interests were not narrowly military in scope. This highly intelligent and observant man wrote extensively on a variety of problems; he was the author of treatises on agriculture, construction, and the need for religious toleration in an age of widespread persecution of religious minorities. The selection here is drawn from one of his last works, a proposal for reforming the tax system of early-eighteenth-century France with the goals of both greater equity in assessing the tax burden and increased revenues to balance the royal budget. To adequately present his ideas, Vauban undertook a description of the economic situations of his fellow Frenchmen in this work, which gives the student of the eighteenth century a number of insights into the lot of common people who left little other record of their activities. This group owned little property, but instead worked the lands of others. Lacking land of their own, this group of workers possessed a certain mobility, which would lead many of their number to factory employment a century after Vauban's analysis of their situation.

... It only remains to take stock of two million men¹ all of whom I supposed to be day-laborers or simple artisans scattered throughout the towns, *bourgs*² and villages of the realm.

What I have to say about all these workers ... deserves serious attention, for although this sector may consist of what are unfairly called the dregs of the people, they are nonetheless worthy of high consideration in view of the services which they render to the State. For it is they who undertake all the great tasks in town and country without which neither themselves nor others could live. It is they who provide all the soldiers and sailors and all the serving women; in a word, without them the State could not survive. It is for this reason that they ought to be spared in the matter of taxes, in order not to burden them beyond their strength....

Among the smaller fry, particularly in the countryside, there are any number of people who, while they lay no claim to any special craft, are continually plying several which are most necessary and indispensable. Of such a kind are those we call *manoeuvriers*, who, owning for the most part nothing but their strong arms or very little more, do day- or piece-work for whoever wants to employ them. It is they who do all the major jobs such as mowing, harvesting, threshing, woodcutting, working the soil and the vineyards, clearing land, ditching, carrying soil to vineyards or elsewhere, laboring for builders and several other tasks which are all hard and laborious. These men may well find this kind of unemployment for part of the year, and it is true that they can usually earn a fair day's wages at haymaking, harvesting and grape-picking time, but the rest of the year is a different story....

It will not be inappropriate [to give] some particulars about what the country day-laborer can earn.

I shall assume that of the three-hundred and sixty-five days in the year, he may be gainfully employed for one hundred and eighty, and earn nine *sols*,³ a day. This is a high figure, and it is certain that except at harvest and grape-picking time most earn not more than eight *sols* a day on average, but supposing we allow the nine *sols*, that would amount to eighty-five *livres* and ten *sols*, call it ninety *livres*, from which we have to deduct his liabilities (taxes plus salt⁴ for a family of four, say 14l. 16s.) ... leaving seventy-five *livres* four *sols*.

Since I am assuming that his family ... consists of four people, it requires not less than ten *septiers*⁵ of grain, Paris measure, to feed them. This grain, half wheat, half rye ... commonly selling at six *livres* per *septier* ... will come to sixty *livres*, which leaves fifteen *livres* 4 *sols* out of seventy-five *livres* four *sols*, out of which the laborer has to find the price of rent and upkeep for his house, a few chattels, if only some earthenware bowls, clothing and linen, and the needs of his entire family for one year.

But these fifteen *livres* four *sols* will not take him very far unless his industry⁶ or some particular business supervenes and his wife contributes to their income by means of her distaff,⁷ sewing, knitting hose or making small quantities of lace ... also by keeping a small garden or rearing poultry and perhaps a calf, a pig or a goat for the better-off ... ; by which means he might buy a piece of larding bacon and a little butter or oil for making soup. And if he does not additionally cultivate some small allotment, he will be hard pressed to subsist, or at

least he will be reduced, together with his family, to the most wretched fare. And if instead of two children he has four, that will be worse still until they are old enough to earn their own living. Thus however we come at the matter, it is certain that he will always have the greatest difficulty in seeing the year out....

Footnotes:

¹ Vauban wrote in an age that had no modern census data for accurately assessing the size of a population. His figures here, at best, are an estimate. Indeed, modern demographic historians generally find Vauban's population data highly inaccurate.

² ***bourgs***: market towns

³ ***sol***: sou.

⁴ Salt was subject to a form of tax in France before 1789. Tax farmers purchased the exclusive right to sell this dietary necessity to the public. The public was required by law to buy a certain amount of salt per year from these monopolists; in paying the price of the salt, buyers also paid a salt tax, the *gabelle*, to the tax farmers, who turned the proceeds of this over to the government. This form of taxation kept salt prices artificially high in much of France and was deeply resented by many taxpayers.

⁵ ***septier***: a unit of measure in use in France prior to the Revolution of 1789. Its precise size varied from one district to another; hence here Vauban must specify that he is using the Parisian *septier*. Ten Parisian *septiers* would have equaled about 15.5 hectoliters or 43 bushels.

⁶ Many rural workers would have been employed in some phase of textile production, such as weaving.

⁷ ***distaff***: a staff that holds unspun flax or wool during the process of spinning such material into thread. The word can also refer to women's work or interests, because spinning was women's work.

SOURCE 5: Apprenticeship Contract for Young Women Employed in the Silk Mills of Tarare, France, 1850s

Background information: The apprenticeship agreement for girls as silk workers in rural Tarare, France, retains the terminology of the old labor in designating new workers as apprentices, but it lays down industrial-age work rules for the young women.

MILLING, REELING, AND WARP-PREPARATION OF SILKS

Conditions of Apprenticeship

Art. 1. To be admitted, young women must be between the ages of thirteen and fifteen, of good character and in good health, intelligent and industrious, and must have been vaccinated. They must present their birth certificate, a certificate of vaccination, and a trousseau.

Art. 2. Girls who are accepted by the establishment will be placed in milling, reeling, or warp¹ preparation by the director, according to the needs of the establishment and their intelligence.

Art. 3. During the apprenticeship period, the pupil will be paid wages, fed, lodged, given heat and light, and laundry *for her body linen only*; she will also be furnished with aprons.

Art. 4. The pupil promises to be obedient and submissive to the mistresses charged with her conduct and instruction, as well as to conform to the rules of the establishment.

Art. 5. In case of illness the director will notify the father or guardian of the sick apprentice, and if her state necessitates a leave, it will be granted until her recovery.

Art. 6. If the sick pupil remains in the establishment, every care necessitated by her condition will be given to her.

Art. 7. In case of illness or any other serious cause that warrants her leaving, the apprentice who must absent herself from the establishment will be obligated to prolong her apprenticeship during a time equal to that of her absence.

Art. 8. The director alone has the right to authorize or refuse leaves. They will be granted only on the request of

the father or guardian of the pupil.

Art. 9. Apprenticeship is for three consecutive years, *not including an obligatory trial month*. In order to encourage the pupil, she will be paid:

- 1st year: a wage of 40 to 50 francs
- 2nd year: a wage of 60 to 75 francs
- 3rd year: a wage of 80 to 100 francs

After the apprenticeship the wage will be established according to merit.

At the end of the apprenticeship, a gratuity of 20 francs will be given to the apprentice to reward her for her exactitude in fulfilling her engagements.

Art. 10. The effective work time is twelve hours. Summer and winter, the day begins at 5 o'clock and ends at 7:15.

Breakfast is from 7:30 to 8:15; lunch is from 12:00 to 1:00; snack is from 5:00 to 5:30; supper is at 7:15.

After the second year, pupils will receive lessons in reading, writing, and arithmetic. They will be taught to sew and do a little cooking.

Art. 11. As a measure of encouragement and with no obligation, it is established that at the end of each month the young people will be graded as follows:

- 1st class, gift for the month 1 fr. 50 c.
- 2nd class 1 fr.
- 3rd class 50 c.
- 4th class ---²

Each month a new classification will take place, and the young person will rise or fall according to her merit. This classification will be based on an overall evaluation of conduct, quantity and quality of work, docility and diligence, etc.

Art. 12. Wages are not due until the end of the year. They will be paid during the month following their due date. Gifts, incentive pay, and compensation for extra work will be paid each month.

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Footnotes:

¹ **warp:** in the weaving process, threads placed lengthwise in the loom. They were woven with threads called the *wef* or *woof* placed perpendicularly to them.

² Abbreviations for French currency. fr. = franc. c. = centime; 100 centimes to 1 franc.