

Machines and Human Machines

BY F. W. MOORE.

ONE would hardly think so but yet it is a positive fact that the vast majority of commodity-producing machines in the world today are human. Others of course are made from wood or metal but the most complicated as well as the most perfect the world has ever known, is the human being, which ever since the time that marks the beginning of exploitation of man by man, has been infinitely more in vogue as a means of producing value for an actual or virtual owner than his metal or wooden analogue, that competes with him victoriously for the possession of his job.

Myriad millions of these human machines were used in the ages of the past to produce the vast wealth and misery-tainted magnificence of the ancient world.

In those days of Freedom's agonized existence the mental organism of humanity had little encouragement to concentrate on invention. The need of making labour-saving machinery did not exist, since the supply of labourers could easily be replenished. In the case of Rome this was accomplished by following the auctioneer that attended the battlefields with the intention of disposing of the prisoners to the highest bidder. This custom was the vogue until her frontiers were so widely extended that she found them impossible to defend any longer; in other words Rome, as we are told in Wells' Outline of History, p. 521: "was no longer an invading but invaded power, consequently her supply of slaves had fallen off." It was meet therefore that Constantine, The Great, in the fourth century after Christ—"should try to make a caste of the peasants, and small cultivators and to restrict them from moving from their holdings: in fact he sought to make them serfs." On these serfs it was intended that the Roman exploiters should depend in the future for their supply of labour-power.

In the feudal days, the human machine, all over Europe, was still paramount. It became a sort of fixture on the demesne of the Lord of the Manor, but later still, the practise of retaining help perennially was found to be less profitable than wage-slavery, a system, in the nature of which was inherent an extension of the bounds of liberty, slight indeed, yet embodying the privilege of seeking a master, who would exploit him on terms he considered more favourable.

Yet insignificant as this privilege appeared to those who held higher concepts of manhood's dignity, the modicum of freedom so acquired proved to be the fairy's wand that brought about a world-wide industrial revolution, for now in contrast with the gloom of the long night of the period of chattel slavery, the faintest gleam of the dawn of a better day, typified by the almost imperceptible measure of liberty that had accrued with the genesis of the wage-worker, awakened the power of invention and discovery in the immeasurable potentiality of human capacity—a power incidental to a series of marvellous machines that must eventually bring about the total destruction of the social fabric through the competitive struggles for markets for their products—struggles of which the Great World War may be taken as a mild example of what we may expect in the near future—or be the means of bringing those leisure hours that are essential for the awakening of those mental powers that are latent in all classes of men; powers that if once given universal expression would produce results in all the arts and sciences to which those of today are but as a single drop of water compared to the oceans of the world: powers that at the present time have opportunities to develop in a small percentage of the population only, and even in them in the crude manner peculiar to the restrictions imposed by the rules of economically interested convention; powers that if given stimulation to growth—stimulation born of suitable environment, would in a very short time be the means

of converting the territories of the great nations that are at the present moment virtually threatening war against each other in the covert terms of diplomacy, into a federation of world states that would involve the nearest approach possible to a veritable heaven upon earth.

One or other of these results is inevitable as a consequence of the effects of the development of machinery, which is gradually and of necessity supplanting its less profitable human rival. The idiotic conception that Capitalism functions with such equity that everlasting life must be its portion, arises from a most absurd sophistry embodied in the statement that 100 per cent. of the discarded human machines are used again under conditions of full labor-time in the extra factories called into being at the instance of luxury; indeed, there are men who appear to be otherwise in the full possession of their senses who hold the mathematically impossible tenet that the continued development of machinery, far from causing unemployment, actually provides additional employment by virtue of the necessities of certain new trades such as those that sprang up incidentally to the needs of automobilists. They seem to be completely unconscious of the fact that most of the old trades have been socialized, and that the work done by such a man as a skilled carpenter is now accomplished by a boy, a woman or an unskilled laborer who knows enough to turn a wheel or to do similar service in a sash and door factory.

Watchmakers who used to make by hand the parts needed for time-pieces, can now buy them factory-made at a very low price, and the same may be said of most, if not of all the other skilled trades; as a matter of fact when men are re-employed they do not lose their inventive genius by reason of the change of work. Inventions are bound to have as much vogue in the new factories as in the old, and we might add that when new inventions are introduced into a factory the great object in view is the cutting down of expenses by using cheaper labor-power than that produced by so many "hands," and this is as it should be. We want to see machinery developed to the pitch where it will take the place of man in production. With the infinite quantity of power involved in the use of machinery at his disposal, man ought to be able to give 90 per cent. of his time to self-culture, mental, physical and ethical, but this he can never do until he learns how to make machinery in the aggregate pay for his education and for the environment that must be created if he would have a sufficient quantity of his fellows interested in the same.

Machinery to day is gradually bringing about the destruction of the old social order. It must necessarily create more and more unemployment until eventually we change the conditions under which this state of affairs exists, or deliberately commit evolutionary suicide.

Here is a passage taken from Syms and Wrong's "Public School" history concerning the power of machinery, not only to produce goods, but to cause, if necessary, the substitution of one boy for one hundred workers. On page 254 there is the following reference to James Hargreaves' Spinning-Jenny—"A child could manage the new spinning machine and it did the work which formerly required one hundred spinners." This meant that approximately 99 per cent. of the spinners were thrown out of work wherever this machine was introduced, and, of course, on pain of commercial death it was found necessary to introduce it everywhere. Most, if not all other industries, are affected more or less in the same way.

The following excerpt from the "Vancouver Province" of February 13th, 1923 (and published in "Clarion" 910) will throw further light upon the subject:—

"In the steel industry one or two men with unloaders replace twelve to twenty men unloading by hand.

In furnace charging by use of the skip hoist, larry car and automatic weigher, two men replace fourteen.

In pig casting, seven men with a casting machine replace sixty.

In open hearth operations, one operator with a charging machine replaces forty hand chargers.

With travelling cranes, twelve men pouring, replace thirty-seven.

Two men unloading pig-iron with an electric magnet and crane replace one hundred and twenty-eight.

In the clothing industry, six men operating two boarding machines replace twenty-eight. One girl operating a rib cutting machine produces twenty-five times more than by hand. In men's clothing in various processes, machines with a single operator replace six and eight workers.

In the shoe industry, one lasting machine produces the equivalent of six to ten hand workers.

In the glass industry, one type bottle machine replaces fifty-four workers.

In the window glass industry, production with a machine blower increases thirty to fifty times.

In coal mines an automatic conveyor for pier loading with twelve men replaces one hundred and fifty men.

In cigar making, four operators with machines, produce the equivalent of fifteen by hand.

In wrapping machinery for bread, tobacco, chewing gum, cigarettes, soap, sugar and razor blades, one wrapping machine with one operator replaces as high as forty hand workers.

The tendency to replace hand workers by machinery is spreading to every branch of industry and business. Even in offices, adding machines, book-keeping machines, and other devices are gradually replacing the old clerk of other days."

An analysis of these figures will show that roughly speaking, out of six hundred and thirty-three men employed in various industries, only fifty-two or about 8.15th per cent. retained their jobs after the introduction of the new machines.

Is it possible, in the face of these figures, to imagine that all the hands are re-employed on the old terms? This might have been the case at the beginning of the industrial revolution, but to-day conditions are different. An examination of statistics concerning unemployment for the last few years will prove that it has now reached the chronic stage all over the civilized world: obviously it is here not only to stay, but to grow worse. That is predicated by the conditions that cause it.

Indeed we can further deduce that it has developed into a disease. We don't say it is incurable, since common sense would indicate that a judicious transformation of those social institutions, that are responsible for it would be bound to effect cure.

What we need today is an industrial government based on the public ownership of the means of life. That, and that alone can divert the forces that are now working inexorably towards a future condition of anarchy into the channels opening on further development. It may be that we are not quite fitted for such a super-institution: but it should be our business; indeed it should be our religion, to prepare ourselves as soon as we possibly can by taking into consideration the economic laws that inexorably influence the whole course of our lives

"Till each man find his own in all men's good
And all men work in noble brotherhood,
Breaking their mailed fleets and armed towers,
And ruling by obeying Nature's powers
And gathering all the fruits of earth and crown'd
with all her flowers."

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