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PRO . . .

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THE development of mass production methods and of labor saving equipment has resulted in an enormously increased output per man-hour compared with any previous time in our civilization. The increased productivity, this ability of man to produce more in a given time, can be taken care of in two distinct ways or in a combination of these. Either the worker must be given a larger and larger amount of goods (wage) in proportion to his increased productivity or, if he wishes to retain a certain fixed standard of living, he must decrease the number of hours worked in proportion to his increased productivity.

Technocracy is a group of individuals who are calling attention to this trend in individual productivity and who have made an attempt, are now working, to assign definite values to the progress made in a large number of fields of economic endeavor. Contrary to general opinion, the recognition of this trend is not new—Adam Smith in 1776 gave definite numerical examples and economists since Smith have discussed it freely. It is a natural trend, it has been the aim since the beginning of time, it has always been associated with the word “Progress.” Had it not been for this ability of man to increase his productivity by specialization and transference of skill into the machine, we would still be rather a primitive people from the economic standpoint. The writer assumes that the majority of people prefer an automobile to an ox cart, an electric lamp to a candle, a decent home to a cave, possibly an electric chair to a pyre.

Not only is the development natural, but it is unidirectional. Progress is made only by increasing productivity and not by decreasing it. No engineer expects to be lauded, to earn a living, by having invented or devised a less efficient machine, a more costly product, a more roundabout method to displace present machines, products and methods. It would be considered unnatural to desire this. Yet when a group of people call attention to the natural result of the trend, to increased productivity, then they

are branded as heretics, lunatics, scoundrels and with other derogatory names still fit for print.

Attacks on Technocracy are two-fold. The popular attack deals with its personnel; the scientific attack deals with the facts presented. As to personnel: The question arises whether or not a man must be a graduate of a first-class engineering school ere he can have an opinion, a sane opinion, on any engineering question. The writer doubts this, for in his opinion a college may impart knowledge, discipline, but it can not guarantee that the man will be capable of using this knowledge, nor can it prevent a man from obtaining this knowledge from other sources. Henry Ford never went to college nor did, for that matter, Christ of Nazareth. Neither of them is or was incompetent in his field.

Let us look at the scientific attack. Technocracy claims from its preliminary calculations that the number of man-hours per automobile has decreased from 1291 man hours per car in 1904 to 380 in 1919 and further to 92 in 1929. In other words, one man could produce in 92 hours in 1929 what he produced in 1291 hours in 1904. He could produce 14 times as much in this industry in any given hour as compared to what he produced in 1904. This assumes, of course, that the man is highly specialized, that he does only a small operation—does not make the entire car himself—and that he uses the best equipment available to its full capacity. The scientific critic will compile the data necessary and conclusively prove that from his assumptions and exact calculations it is clear that Technocracy is wrong. Instead of 92 man hours in 1929 he finds that there are, say, 120 man hours required. And in 1919 the number of man hours required for the production of one car was 500 and not 380. This having been proved, Technocracy is defeated.

Let us examine here two factors: direction and speed. Speed may be a highly important factor in the life, daily life, of any one individual but it is relatively of little importance in the history of man. Thus it makes little difference whether man reaches the mass production stage in 1910 or 1920 or in 3920 A. D. The fact that is important is that he will eventually reach it, that he is traveling in that direction. Thus when the scientific critics deplore the fact that, with their assumptions, the number of man hours per car is 120 instead of the alleged 92, they are criticising speed and not direction. What difference does it make whether the number is 92 or 120 or 300? The fact remains that it is falling, that there is a definite

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trend and that no amount of criticism can stop this trend. The problem will have to be faced sooner or later. The sooner, the better for posterity.

The problem that interests most people deals with the adaptation of society to the trend. Technocracy is asked to offer a solution. Technocracy has no solution. No solution can be drawn up until all the elements that enter into it are known and measured with a reasonable amount of accuracy. Technocracy is trying to measure these elements now.

In the meanwhile some individuals are speculating on the methods of procedure in a new system which is entirely imaginative. Some wish to have an electric dollar, other proves that it can not be changed into pennies, others dislike such a form of currency, etc., etc. They determine their like or dislike for the new house by the shape of the door knob on the basement door. It is erroneous to assume that the trend forces us into the arms of any particular political system. The problem deals with the adjustment of the wages and of the working hours of the individual. Any system that is willing to cooperate in this matter, perhaps through a central planing body, can handle the problem. Nor is it necessary that private property be abolished as some seem to think. Let a certain temporary standard of living be set, let the number of hours required to attain this, considering average productivity, be computed. Let us then properly apportion our industries, their output, and do away with unemployment. This, in the opinion of the writer, could best be done by a powerful central planning group, probably of engineers, who could dictate the policy of the various industries just as Judge Landis dictates baseball.

To assume that Technocracy, this group of individuals at Columbia University, would be the ideal governing group in a new economic set-up is rather far fetched. This group admits that they are purely a research group with very limited means and do not claim to be the nucleus of a new party or, for that matter, of a new system. To assume further that Technocracy, this group of individuals, is either the cause of or the cure for our depression is equally fallacious. The Depression was intensified by the Trend but Technocracy had nothing to do with it. Depressions are due to our social set-up, to the system we operate under and not to the Trend. The Trend is natural; our system is artificial. Our problem is to fit our social system to the Trend and this can be done only by scientific planning so that the least friction will result. A worthy problem for the engineer if he be willing to take the responsibility.