

THE SHORTER WORKING DAY.

by

Robert A. Paterson

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## Preface

I would, at the outset, like to explain some of the peculiarities of this subject. In the first place, it is very broad and touches too many phases of modern life for theory to come to any other conclusion than to tangle itself hopelessly with ethics, religion, sociology, and economics. Secondly, since it deals with man, it therefore becomes directly associated with man's variability, which of course changes the character of the study from definite to indefinite. Finally, it is only too true that a critical judgement may arise from one source--individual practical experiments.

And so I leave you with, a conflict of theories, too few industrial cases, and too indefinite a conclusion. I must add that these and other deficiencies would be exceedingly more numerous if it had not been for the patience and guidance of my teachers, Professor H. Michell, Professor K. W. Taylor, and Professor W. B. Hard. To these I feel a deep obligation, as I do to Mr. F. A. Sherman, and Mr. F. A. Looseley who have so kindly assisted me in the research work done at the Dominion Foundries and Steel Company.

R. A. P.

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## Chapter One

Amid all the discordant clamour of social reforms, there is and has been, one persistent cry. It has not been one to elicit universal response, nor even universal controversy. It is but a great plea for justice to the poorer neighbour and has created little widespread interest until recently.

The gloomy, tyrannical factories of the Industrial Revolution gave rise to a few timid questions begging for a shorter day and these cumulatively grew until all labour took up the cry under the leadership of the much abused and restricted Trade Unions. However, as long as money could be made from the injustice of people chained to the bench for sixteen hours a day, factory wheels and factory men worked together from dawn till dusk until the weaker of the two gave out and were replaced by a few more of the eager, waiting multitude.

And so labour was trampled upon by capital for nearly a century with only stifled protestations from the Trade Unions, a revolutionary idea of Robert Owen's; and a few fearful bleatings from shocked clergymen. The government being an autocracy paid no heed to the "sturdy beggars" nor their Union representatives. It was not until the turn of the century that any national government passed a law regulating hours of labour for male workers.

To-day the picture is brighter. The eight hour day is practically universal, a forty to forty-four<sup>now</sup> week is common, and a few plants are permanently running on one of thirty hours. But there seems to be a resistance point in this reduction. The eight hour day is generally recognized by the competing groups, the workers, the employers, and the public, as being ideal. The questions of public welfare and industrial productivity appear to be satisfactorily answered.

But are they? Have adequate experiments been undertaken to prove the relationship between hours of labour and productivity? If so, have the results been adjusted to the demands of the various phases of social life, religion, politics, advances in the arts and sciences? Answers to these questions must be in the negative. Perhaps the world has been too busy perfecting machines and industrial processes to remember the human factors. It is high time to begin to study seriously the various connections between the human element and production.

The content of this most summary treatise is concerned with the possible relationships between social and industrial improvement and hours of labour. There is no point to be proved, nor definite conclusion to be drawn. Its purpose is to sweep away many misunderstandings so that all classes, especially those directly affected, the workers, employers, and governments, will more fully realize what the length of the working day has meant in the past, what it does mean today, and what it will mean tomorrow.

It is hoped that at the close of these few chapters there will be a better understanding of the relation between the working day and such economic phenomena as, purchasing power, unemployment, the distribution of wealth, labour turnover, and industrial profits. It is also hoped, though this is of necessity and economic study, that some will realize the affinity of this and some greater science--the science of humanity.

## Chapter Two

Mechanical improvements, the use of coal gas as an illuminant, and the unchecked rapacity of the employers, were the main causes of excessive hours of labour. Reforms in England began with the Factory Acts, the first being passed in 1802. Until 1844 all acts passed were concerned only with children. In that year women were also included by the adoption of a twelve hour day. By 1847 as a result of the "Ten Hour Act" young people and women worked only ten hours, and children were employed half-time. The mining industry was reformed in 1842 by the exclusion of all women and children from underground labour

It can thus be seen that by the middle of the century hours of labour were in a much better state for women and children than for men. Though hard to believe this condition continued until the turn of the century. Women and children's hours of labour were successively reduced by legislation and yet the first restrictive law passed for men came in 1908. Up till then reduction of hours for male workers had been effected only by individual employers who were social reformers, or by the pressure put upon them by the Trade Unions. The example shown by Robert Owen at New Lanark in proving that shorter working hours and better working conditions increased production, focused international interest on the matter. However Owen's exceptional demonstration came too early in the new industrial scheme and his torch was taken up by the Trade Unions. Hours were reduced by collective agreements between employers and unions, with the courts sometimes settling the disputes. Whenever the legal position of Trade Unions was in question, as often occurred, union bargaining power was reduced and hours were lengthened. But in the waves of union strength such as in the years from 1830 to 1840, 1874 and in the early 1900's all the lost ground was recovered and in many cases

further victories won.

In 1878 and 1901 the "Factory and workshop consolidation Acts" filled many pages of the statute books. They were consolidations of all legislation hitherto regulating industrial working conditions. Yet still these applied only to women and children--men as yet were outside the pale of law. The first law restricting hours of labour for men came in 1908 with the passing of the "Coal Mines Regulation Act." Following were the "Navy Acts", "Shops Acts", and the "Employment and Closing Order Act." With the war, 1914-18 came a cessation of laws regulating hours. Today the statutes are still as they were prior to this period. To sum up it is found that hours of labour in Great Britain are only legally restricted in government jobs, in public utilities, and in hazardous industries such as mining.

The federal government in Canada has imposed even less regulation, though a notable attempt was made by the Hon. R. B. Bennett in 1935 when he actually passed a federal eight hour bill applicable to the whole nation. Unfortunately the provinces objected and carried their objections through every court in the land until finally it was thrown out by the Privy Council in London England as "Ultra Vires." The laws at present only apply to women and children and government employees. The provinces are left to look after their own working conditions; British Columbia having gone farthest in the limiting of hours while most of the others legislate only for government contracts, mining and women and children. The same applies to other parts of the British Empire except Australasia where legislation is much broader in scope. It may be interesting to note that New Zealand passed a national eight hour law in 1901.

Present day Europe, because of dictatorships has many laws

regulating hours of labour. The United States federal laws regulate hours in government activities, (1) public utilities, and mines. The acts passed concerning these occupations and those of women and children are the "Federal Eight Hour Act", the "Adamson Law", and the "Navy Appropriation Act", while the "Clayton Act" gives the court wider functions in labour disputes. The separate states have innumerable laws and regulations. Laws are, however, of little influence in the United States. The condition is the same as in Great Britain where unions and public opinion are the great limiting forces.

An international movement for shorter hours started at the close of the war in the form of the International Labour Organization. The eight hour day and forty-eight week were set up as world standards. Success lay in the hands of Great Britain--if she gave her ratification then all would follow. However, in the three successive conferences England has refused. World agreement is consequently but an airy proposal. The results of some sittings of international committees on hours of labour will help to show the different attitudes to the problem.

The International Labour Conference proposed a forty hour week with no reduction in pay. Twenty-one countries were in favour, thirty-two were opposed, and seventeen were absent from voting. It may be concluded that the measure was regarded with apathy and perhaps disfavour. Italy and Sweden were the only strong supporters and even they were hesitant in voting, for fear of criticism from their respective leaders of industry. On January 10th, 1933, a Tripartite Preparatory Conference on industrial problems was held in Switzerland. The governments, workers and employers were represented. A forty hour week without reduction in pay was proposed once more. The governments

(1) Federal employees limited to eight hours since 1868.



voted 15 to 3 for it, the workers were in favour 18 to 0, and the employers made the whole scheme worthless by voting solidly against it--18 to 0. The employers it can be clearly seen comprise the chief obstacle to any international movement for a shorter work week. Their chief objection is that costs will rise, especially overhead costs.

Figures rather than historical statements might give a better illustration of the growth and present status of the working day movement. In round figures the working day throughout the world has been reduced from sixty to fifty hours from 1900 to 1935. The same is true in varying degrees for specific countries. In Great Britain the drop of ten hours has resulted in a forty-eight hour week. The Ministry of Labour Gazette records the total reductions of hours of labour of insured persons in Great Britain and from these the present level of the work week may be obtained. In 1919 over six million workers had their hours reduced, or the total number of working hours per week was cut by forty million hours. However, up to 1933 there has been no further reduction, in fact for the years 1920 to 1933 there has been a slight increase of 250,000 hours per week. The United States have reached an average work week of somewhere between the forty-eight and fifty mark. The estimate for Canada is rather meaningless since the provinces have great differences in average hours of labour. Quebec keeps the longest hours, the Maritimes the next longest, and Ontario strikes a half-way mark between East and West--the West having the shortest working day. The figures are; fifty hours per week in the Maritimes, fifty to fifty-five in Quebec, in Ontario 73% of the workers work forty-eight hours or less, (1) 22% between forty-nine and fifty-four hours, and 4% work longer than

(1) The Survey of Industrial Welfare in Ontario.

fifty-four hours, and finally there is to be found a rigid forty-four hour week in the Prairie Provinces, British Columbia (1) is the most advanced province, having established legislatively an all-embracing forty-four hour week. Australia has a national average of about forty-five hours.

All the preceding figures are contrary to most estimates and are set so as to eliminate such influences as arise from the use of Trade Union figures as bases for calculations of lengths of work weeks. These lead to misrepresentation since the number of unionists constitutes roughly 15% of all the workmen in Canada and the United States, and about 25% in Great Britain. The following table shows the variance between union and non-union working hours as found by the National Industrial Conference Board in the U. S. A,

TABLE NO. 1

Hours of Labour per week under union and non-union regulations  
in U. S. A.

	Union (Hrs. P. Wk.)	Non-Union
1914	48.9	55
1927	45.2	49.6

The prevalent omission of over-time in these averages leads to inaccuracy, as does the impossibility of making an exhaustive survey of industry. The stage of the business cycle has also an effect on the length of the working day or week. The work-week is, therefore, much longer than is at first believed when looking at some composite Trade Union table. Industries with Union labour have of course made

(1) Wages and Hours of Labour in Canada, "Bureau of Labour Statistics  
1901-1936"

splendid progress. They have completely won the forty-hour week and seem content to rest upon their laurels until the remainder of industry catches up. Yet even their figures on hours of labour are misleading. In 1935 their average weekly time was very close to forty hours while in 1929 it was fifty--a drop of ten hours per week in six years. Again the figures must be investigated. In 1935 industry was fast recovering. Men were being taken back to work after a long lay-off. Most of them were former employees, whom the companies were employing in greater numbers than necessary just for the sake of fairness and perhaps to allay the four years growth of discontent. To spread the work around meant a shortening of the work day. In many cases the working time was shortened not because of philanthropic reasons but simply because the demand for goods determined such.

A study of the following tables referring to Canada may bear out some of the above statements.

Hours of labour per week in selected  
industries in Canada 1920-35.

TABLE NO. 2

INDUSTRY	Hrs. per Week 1920	Hrs. per Week 1929	Hrs. Per Week 1935
Building Trades	44	44	44
Laborers of Bldg. Trades	49	50	50.1
Printing Trades	48	46	46
Metal Trades (1)	50	47	44
Flour Milling	55		51
Lumbering (2)	55	58	59
Metal Mining--Under	50	48	48
Metal Mining--Surface			51.46

(1)--Blacksmiths, Machinists, Boiler makers, Moulders (iron, brass, steel).  
(2)-- Logging and Saw-milling.

TABLE NO. 3

OCCUPATION	Hrs.pr.wk. 1920	Hrs.pr.wk. 1925	Hrs.pr.wk. 1929	Hrs.pr.wk. 1935
Common Factory Lab.	53	52	52	47.75

In Table 2 the influence of Trade Unionism can be clearly seen. The hours of the building trades are much lower for the organized skilled workers. Noting the printing trades the figures are found to be high since they are unduly influenced by the pressmen's long hours, yet they are, along with those of the building trades still less than the hours of the metal trades which are not organized to such a degree. Flour milling and lumbering are industries with comparatively unorganized labour and as the tales bear out their hours are much longer. Lumbering also brings out the fact that outdoor healthy occupations are not as open to restriction. The mining figures illustrate the effect of legislation, and when underground hours are compared with surface labour the influence of hazard is seen in hours of labour.

TABLE NO.4 (1)

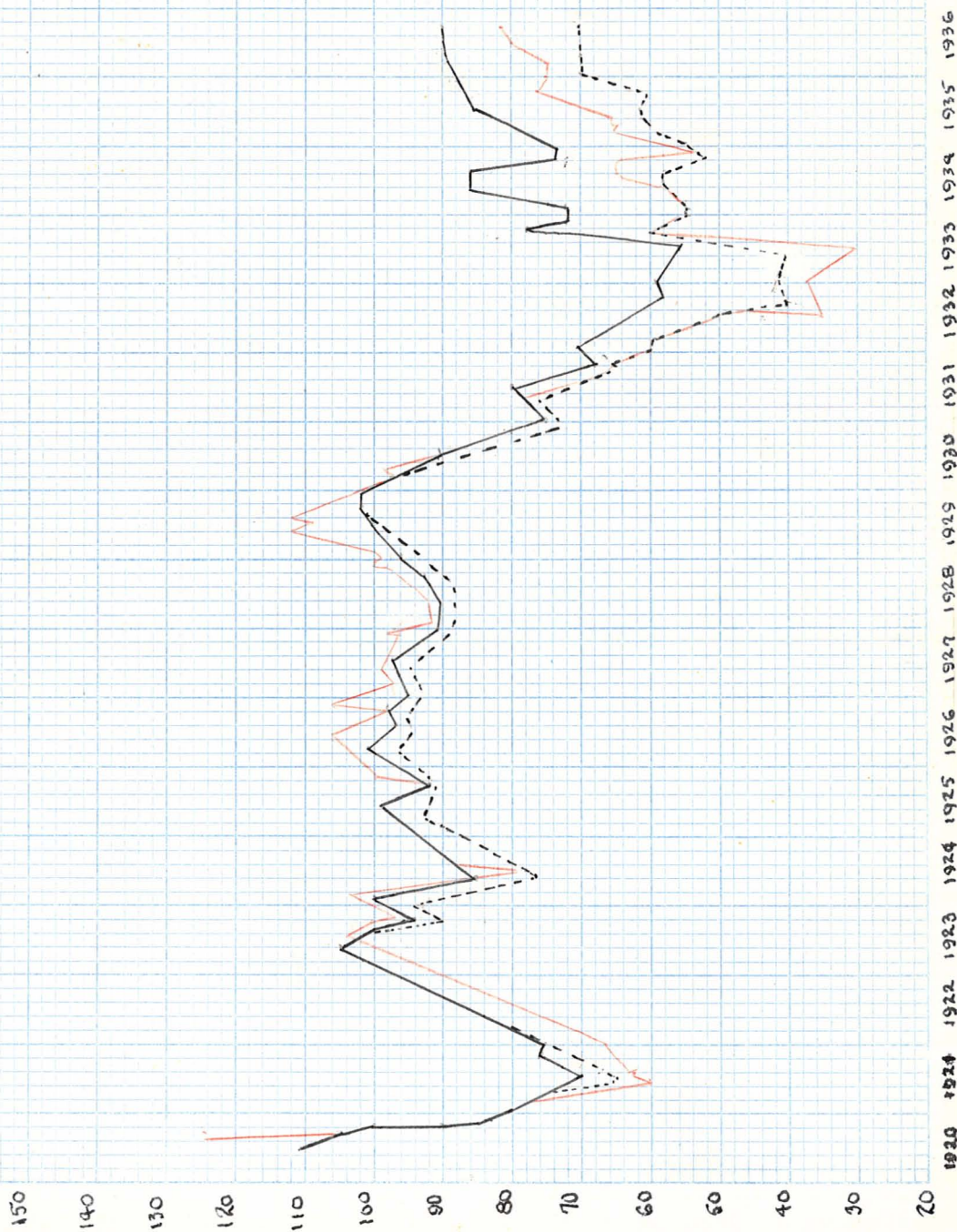
The relation between hours of labour and a growing depression in U.S.A.

Year	Hours
1929	48-4
1930	43.9
1931	40.4
1932	34.9

- 1) International Labour Review, #28, 1933, P. 365 (per The Shorter Work Week, H. M. Vernon, P. 12. George Routledge and Sons, London, 1934)

Tables number 3 and 4 are included to show how business cycles influence hours of labour, and estimates derived from them. The

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common factory labourer is chosen in Table 3 because his is the greatest of all industrial classes, the most influenced by business conditions, and finally, the least organized. If the figures compiled are at all representative there is proof of the cyclical influence. The labourer is seen working from fifty-two to fifty-three hours a week during the upswing of the cycle. Then in 1935 when the depression is just lifting he is found working five hours less. With a reasonable degree of certainty it can be said that the common labourer's hours of labour follow the swings of business--he works longer in booms and shorter in depressions. Disregarding the business cycle, Table 1 shows that prosperity in any single industry will lengthen the working time. The demand for pulp and paper has been so great that the industry as a whole has long been running over 100% of capacity, and what is of more interest, the working week in the tables has risen to fifty-nine hours.

Diagram 5 (1) is included to show the remarkably close relationships between hours of labour, wages, and employment. It also illustrates the effect of the business cycle on hours.

Despite this lengthy inquiry into statistical reliability, it must be agreed that the working week in general is shorter than ever before, that it has been a steady long-run process, that it is influenced by many factors such as business conditions, and Trade Union strength, and that industries with the shortest hours are calling a halt and are marking time at an eight hour day waiting for the rest of laggards.

.) Wages Hours and Employment in the U. S. A. 1914-36, Compiled by Mada Beney, published by the National Industrial Conference Board in 1936.

### Chapter Three

The problem of the shorter working day is at present a battleground of theory, not of practical experiments. Theorists have written a great deal on the subject and yet have provided little enlightenment. There is propaganda, there is religion, there are social motives, there is extreme abstractness, and sometimes there is a small particle of truth to shed a patch of light over this heap of useless, senseless arguments. But truth there is and it is with this the present chapter is concerned.

Before even beginning a theoretical investigation, a definition of the scheme must be given, the limits of its influence determined, and all its aims outlined. It is a proposal the like of which has been seen time and time again. One that wishes to help mankind, to try to cure terrible recurrent ills, to spread happiness, and to allow certain classes to live and not endure. It does not desire to crush the rich and raise the poor, nor to alter that great drive of industry the profit motive. Its primary aim is to allow one out of every four workers to earn his own livelihood, free from the evils of charity and relief. In theory it also proposes to strike at many phases of our economic system and by bettering such to raise every member of that system to a better and in many cases, a higher plane of living. It will attack and change the present unemployment situation, the productivity of labour in industry, the business cycle, and finally that which is the greatest economic sore, the present methods of distribution. Naturally the arguments attempting to justify the above proposals are open to controversy, but in most cases they are at least reasonable, and at times seem to be in close contact with the real solution of our economic dilemma.

Everybody realizes that the world is in a sad state; and few realize that no single man, or group of men, can effect changes to alter this situation. Too many horizons have been broadened. Men were once satisfied with food and shelter. Today wants have increased a millionfold over those of the past, and there is still a cry for more. Life's tempo and necessities are only sustained by a system so complex, so huge, that most individuals appear but dull senseless cogs in a gigantic machine destined to rumble and growl forward along the road of progress, sometimes haltingly, and sometimes smoothly, according to the whims of those in control. Through time and experience the road should become easier to travel through the cumulative betterments in understanding and manipulation, and ought to continue to become so until Utopia. It is only then, in the perfect age, that the world will have, by adding every improvement in direction and mechanism together a solution to the modern economic problem. There will be found in this final analysis the inclusion of a shorter working day. Whether it will be a cause or an effect of other changes is hard to say, its coming alone is a certainty. Present theories claim it will be a cause for the betterment of all but this belief rests upon pure theory and insufficient practical applications. Whichever the scheme is, cause or effect, it is best to discuss first of all the existent theories, taking it, as said before, as a cause.

The following will be theoretical discussions of the effects of a shorter working day on social welfare, employment, distribution of wealth, and productivity of labour. These four phenomena broadly constitute the limits of the influences of such a proposal.

The first and most obvious result of a shorter day would be a



betterment of the worker in all respects. He would, if the day were permanently shortened, become a better citizen. Of course this result rests upon the assumption that all other factors, such as wages, remain constant. History has shown that a shorter day has paid handsome dividends to social welfare and incidentally to public coffers. The large cost of a demoralized working class (see Table No. 6) has been greatly reduced. The death rate from industrial diseases has been found to vary inversely to the length of the working day. The better education resulting from increased leisure adds materially to an effective working of the political machine as well as stimulating a furtherance in the arts and sciences,

The Lessening Demoralization from Alcohol over  
Recent Years of Cumulatively Shorter Hours of Labour.

TABLE NO. 6. (1)

YEAR	Convictions for Drunkenness	Deaths from Cerrhosis	Deaths of reputed Alcoholics	Millions of gallons of liquor.
1913	153,112	2264	1,112	84.5
1918	21,853	1121	222	
1929	43,536	1174	401	50.5
YEAR	Mean of index nos. of beer and spirits	Relative expenditure on alcohol		
1912-13	100	100		
1918	42	78		
YEAR	Mean of consumption of beer and spirits	Relative expenditure on Alcohol		
1920	72	112		
1922	55	114		
1929	49	109		

A study of the working class today reveals the great deal that

(1) The Shorter Working Week, H. M. Vernon, P. 173 and 175, George Routledge and Sons, London, 1934.

has been done. And yet relatively speaking, are these advances proportionate to those in other fields? True, men, women and children no longer work half-naked under inhuman conditions for fifteen hours a day in mines. But comparing our methods of production and our standards of living with those of, say the 1850's, the improvement in the worker's condition is not so startling. In truth there is still much to be done for the human elements in production--there has been progress but it has been relatively smaller than generally supposed. The recent government investigations into prices, and labour conditions, come to one definite conclusion--that the industrial worker is in need of a great deal more help. He is beset by a great many evils, those of a dull monotonous task, of unemployment caused by rapid labour turnover, or seasonal and cyclical business conditions, relief measures, slums, and countless others. If jobs continue to be a speed up process wherein the maxims are, "This shall be done in one way and no other", or "Fill the unforgiving minute with sixty seconds worth of distance run", then two alternatives must be faced, more leisure, or an everlasting fate of suppressed self-expression. The former seems more likely since the workers have gradually come to realize that politically they are the ruling class. They will press through the democratic state either for more leisure, or for other changes making such possible, and by this leisure they will be recompensed for the drudgery of their daily toil. They will develop their personalities; make themselves individuals who contribute something or are something in this world. Given leisure they could naturally, just as the newly rich, begin by spending their time recklessly and unprofitably, but in time their rough edges would be worn smooth and a decent useful scheme of living be the order of the day. To say that every great cultural nation or civilization

was built upon leisure is a strong statement yet it is a historical fact. Leisure itself is the real basis for the expression of the individual, (1) as well as for the state.

The above suppositions as to the outcome of additional leisure may be better judged if some of the records of the use of leisure time by modern labour are presented. The following two tables (Numbers 7 and 8) are analyses of how time is spent by 1500 Liverpool workers. The results are similar to inquiries into the lives of American workers.

TABLE NO. 7

The Use of A Week's Time (2)

Occupation	Men (hrs)	Women(hrs)
At work	48	48
In transit to and from work	9	9
Meals and personal matters	21	21
Sleep	55	60
Balance of Leisure	35	30
Total hrs in week	168	168

(1) Elliot Dunlap Smith. Professor of Industrial Engineering, Yale.

(2) Tables 7 and 8 are from The Shorter Work Week, H.M. Vernon, P169 and P 170

The next table Number 8 illustrates the use made of these thirty-five hours of leisure.

TABLE NO. 8

The Use Made of Thirty-five Hours Leisure

Occupation	Percentage of persons so engaged	Average hrs spent by persons so engaged	Average hrs over whole group
Amusements	77	5.5	4.3
Recreations	97	11.0	10.7
Hobbies	29	5.7	1.4
Educational	40	4.2	1.7
Helping in Homes	33	3.3	1.1
Social Visits	41	3.5	1.5
Religious	72	3.3	2.4
Social Work	26	3.1	.8
Unaccounted			<u>11.1</u>
Total Hours of Leisure			35.0

The tables may not give an exact picture of the use of leisure since the people who answered the questionnaire were probably just those who led a normal, respectable life. Yet it might be said that out of thirty-five hours leisure, three were spent at cinemas, three at public houses, and six minutes or 3% at educational establishments. This lack of the search for self-improvement, and education is also apparent in some American figures.

TABLE NO. 9 (1)

"The Use of Leisure as Seen from a United States Survey."

PURSUITS	NO. OF WORKERS
Physical Recreations	2280
Indoor Social Relations	1174
Useful Indoor Pursuits (Handicrafts etc.)	635
Education or Altruistic	<u>328</u>
Total	5017

Thus it is seen that one half of the people wanted outdoor physical recreation, while only six percent sought educational or altruistic pursuits.

The intellectual side of life seems to be sadly neglected during off-time. Physical recreations and the mild mental pleasures of social contacts and theatres are the predominant consumers of leisure time. Both these are transitory and have no ultimate benefit for the workers. Physical exercise may build a fine body, but in our machine age the fine body is of little use--men are not advanced because of muscles. The modern use of leisure helps to rest the tired minds and bodies, it promotes bodily health, and indirectly lends complacency to an already dulled mind. A beneficial use of leisure by the masses has not as yet arisen. This is the goal of the shorter working day. Added leisure must be used constructively so that the mind, which today exerts almost complete control over man's destiny may be cultivated. The day is long past when it was advantageous for rulers to have a healthy, strong, and stupid populace who were efficient on the farm and battlefield, and docile in matters of

government. Now the government is in the hands of these masses and modern developments in international politics make it only too clear that lack of education will lead any country dangerously near to chaos.

It has been shown that thirty-five hours of leisure are not being used in a very effective manner. They easily could be, for educational facilities are adequate for any probable demand. The present demand must be stimulated. How? Perhaps by a higher school leaving age, by radio programmes, or by popular advertisement of libraries. The problem of leisure is very serious. If it is not going to be used correctly then there is absolutely no use in shortening the day--industry finds it a nuisance anyway. A compulsory scheme cannot be undertaken to force a better use of spare time since any approach to regimentation would rob the whole value of leisure. All hope for more advantageous use of this period must lie in the fact that these thirty-five hours are a fairly new innovation brought into existence in the last quarter of a century, and in the belief that, given time the workers will learn to make the most of the time between the five o'clock and eight o'clock whistles.

And so, to sum up, the present day observer of industrial conditions notices a great improvement in the bodily health of the labourers. (i. e., those who work under normal conditions of wages and employment). They seem well fed, fairly well housed, and at first glance contented. The perceptions are correct in one sense, that, materially speaking, the people (disregarding the unemployed) are enjoying a life which holds a comfortable margin above the subsistence level. In short labour is regarded as a mass of greatly improved animals, stronger in industry, less expensive for the medical

clinics, and happier in the home. It is in this inhuman conception of the fellow-man that much of the strength of the shorter day movement lies. Leisure it claims, will forever mark the common worker off from animal use and animal classification. This claim is right. Bodily fatigue in industry has been greatly lessened, but mental fatigue, which as Hobson says, "ranks as a main determinant of the character of the working classes," has been neglected. Leisure cannot be denied when viewed in the light of any but the basest of motives nor can it be denied with the knowledge that the masses will in a short time be the real leaders of the state. Among the great basic forces of human nature there is one that alone forges the tools of progress, and that is the will, inherent in all mankind, to do and be better. Today, and in the todays that are to come this will can only find expression in a shortened day of labour.

The great fields of politics, ethics, religion, and sociology have been verged upon, but it has been a necessity. In order to estimate the social effects of a shorter day one must go far beyond the borders of economics.

Leaving the broad field of social welfare, unemployment is found to occupy the next position in the working day controversy. The reasons for its existence are carefully analyzed and solved in each case by the adoption of a shorter working day. It is claimed that seasonal and cyclical unemployment would disappear, and the permanent reserve army of jobless be put to work.

A focus point for the attack against modern employment is the great increase in productivity resulting from rationalization. This term is all inclusive and has been defined by various governmental

inquiries as, "The methods of technique and organization designed to secure the minimum waste of effort or material. It includes the scientific organization of labour, standardization both of material and of products, simplification of processes and improvements in the system of transport and marketing." The significance of rationalization is generally understood by the one word machines. Some tables might be of some help in the presentation of increasing productivity in industry.

TABLE NO. 10

Employment and Productivity in England. (1)

Industry	Number of Workers		Percentage of Increase	
	1919	1927	1927(output)	Output per worker.
Agriculture	11,300,000	10,400,000	19%	29.5%
Mining	1,050,000	1,050,000	40%	40.5%
Manufacturing	10,686,000	9,868,000	30.5%	42.5%
Railroad and Transportation	<u>1,913,000</u>	<u>1,737,000</u>	<u>2.5%</u>	<u>12.5%</u>
	24,949,000	23,055,000	24.5%(average)	35% (average)



TABLE NO. 11

Man Hour Productivity in England (1)

<u>Year</u>	<u>Index No. of Productivity</u>
1909	59
1904	69
1909	100
1914	100
1919	100
1921	87
1923	131
1924	130
1925	153
1926	157
1927	155

TABLE NO. 12

Output per Worker (2)

Compared with Number of Workers in U. S. A. (Federal Reserve Bd.)

<u>Year</u>	<u>Mfd. Products</u>	<u>Number of Workers</u>	<u>Output per Worker</u>
1919	100	100	100
1920	104	101	103
1921	80	77	104
1922	104	84	124
1923	120	97	124
1924	112	90	124
1925	125	93	134

(1) P. 15 Vernon, op. cit.

(2) P. 16 ibid.

TABLE NO. 12 (Continued)

Year	Mfd. Products	Number of Workers	Output per Worker
1926	129	94	137
1927	126	92	137
1928	132	91	145
1929	142	94	151

From the above tabulations (Tables 10,11,12) it is seen that productivity is fast increasing while the actual number of workers is remaining stable or falling off. All the three tables correspond in that the index numbers of productivity have increased approximately, 36% between 1919 and 1929. Tables 10 and 12 show that the amount of workers has declined roughly 6%. The situation seems serious and might easily lead one to believe that, even under the best of business conditions there would still be many unemployed. It is also possible to believe in an ever increasing number of permanently jobless men. H. M. Vernon (1) is strongly of the opinion that increasing productivity is the real cause for unemployment and that even prosperity would not alleviate the situation. He states that given 1929 conditions only one-half of the present unemployed in England would go back to work. The Americans have said that all wants would be satisfied if the adult population worked four hours a day and four days a week. In the light of the foregoing tables such a statement does not seem amiss. If productivity continues to increase, as it reasonably should, what of the growing amount of unemployment? Surely men can't face the prospects of being permanent-

(1) The Shorter Work Week, H.M. Vernon, Geo. Routledge and Sons, London, 1934

ly idle. It has been seen that just such a situation might arise.

There are two ways of getting around this impending evil, either wants must be extended to create employment or the working day be shortened. The first solution cannot be judged from an economic standpoint, yet there are good grounds to believe that our modern wants are adequate in the ethical sense. Also rationalization might probably take care of newer wants and thus offset to a large degree any call for added employment. This seems a more logical argument since from the period 1919 to 1929 new wants were created such as radios, and many other electrical appliances, and yet the number of workers fell off 6%.

The only solution then, reasoning as the exponents, must be a shorter working day. Industry has continually improved its productive capacities so that today none are starving in the United States while one-quarter of the labour force remains unused. This means that machines (rationalization) have taken away from labour one-quarter of its strength and effectiveness, or that industry has progressed so that three men can do the work of four. Industry's progress has been misdirected. Instead of three men doing the work of four, four men should be doing the work in three-quarters of the time. The advance made is evident not in a shortened day but in ten million unemployed. W. J. Cameron of the Ford Motor Company said in a Sunday evening broadcast that machines created employment. He may be right; but the history of productivity and employment over the past thirty-five years seem to tell a different story.

This discussion of the relation between the working day and productivity has reached a point where the plain theoretic al arguments for and against a shorter day must be given. A logical

and oft-mentioned cause of unemployment has been given as well as a solution. There remains the task of outlining and discussing the various arguments concerning the probable effects, both good and bad, of a shorter working day, on employment.

Increased employment is supposedly a condition arising from a shorter day. The belief rests partly on the "lump of labour theory" and therefore is open to much question. The plain fact that there is so much work to do and so long to do it in, however fallacious, certainly is an excellent basis for the argument. It is so easy to say that if the one variable, that of hours, was changed, then the other variable, the number of workers, would change also. In ordinary language the reasoning goes thus: to keep a stable volume of production under shorter hours of labour more men must be put to work. It must be remembered that this proposal is only based in part on the lump of labour theory, there are other considerations. But whether there is just so much to be turned out or not, unemployment would be lessened if hours were shortened, perhaps not in mathematical proportion but still to a considerable degree. There is another important basis for a belief in reduced employment and that is that steady employment resulting from a shorter day would afford an assurance of a steady amount of purchasing power. The two conditions are introactive, or work to maintain each other. This situation depends on the maintenance of present wage rates despite shorter hours and means in the last analysis larger pay-rolls. To those in favour of the scheme this added cost would be offset by the elimination of all wastes arising from the miscalculations between supply and demand, and also by the greatly increased demand which would tend to stimulate production. Leisure is also supposed to

create new wants which would further expand production.

The A. F. of L., chief exponent of the thirty hour week states that the amount of wealth lost through unemployment from 1920 to 1934 in the U. S. A. was \$134,578,000,000. This is a bit staggering but it does illustrate that if employment was 100%, much more would be produced, and if the system of distribution was a little better much more would be created and enjoyed. But here lies the dividing point between practice and theory. Theory wishes, perhaps only hopes, that the system of distribution will spread the added wealth evenly into more purchasing power for the masses and so make up the loss of larger pay rolls. Practice disregards any more equitable system of distribution and strictly follows the economic consequences of a higher cost of production. These consequences are naturally, higher prices, higher cost of living, the squeezing out of the small establishment which could not absorb the higher wage cost, and finally the loss through the inefficiencies of the new workers. The result would be, wages remaining constant, not better, and in the opinion of many, much worse. In any case the standard of living would not rise.

The only workable scheme of production under shorter hours according to the more practical views, is to lower wages, use more manpower in production and less capital. (1) Some of the more technical theorists believe in a shorter day if it is followed by less intensive use of capital together with lower wages. But this situation is still unsatisfactory since (disregarding the supposed increase in productivity from a shorter day) there would be a reduced output, though not in proportion to the reduced output per unit of capital since wages are lower. Capital costs would thus rise and would of

(1) The Theory of the Shortened Work Week, T.N.Carver, Am. Econ. Rev.  
Sept, 1936

course cause higher prices.

Most opponents of the scheme are practical business men, and they agree that the burden of reduced unemployment, if it resulted from fewer hours of work, would of necessity have to be borne by the working class in a twofold manner. The same wage roll would have to be divided up among the swollen labour ranks, and what is more the cost of living would rise because of higher costs of production. To establish this rather limited view are reports from Canadian and American Manufacturing Associations. The members of the C. M. A. (1) when approached by questionnaire were unanimous in opposing the compulsory forty hour week in the steel, building and civil engineering industries. They said that unemployment would be greater since the forty hour week would increase costs, raise prices, and reduce sales. A similar dictum was given by the National Association of Manufacturers in the U. S. A. They reported that the A. F. of L's thirty hour week would cause an annual deficit of \$986,831,144 in industry and still fail to solve the unemployment problem. They gave the following reasons for their attitude; that a thirty hour week would favour large, well-financed establishments rather than small ones, it would lead to international disadvantages, that the rise in prices in durable goods would retard employment in the very place where it was needed most, that seasonal demands and emergencies would be overlooked, that no comprehensive set of laws or regulations could be set up to cope with the above mentioned seasonal demands and emergencies, that agriculture would be at a further disadvantage, and finally as a result of all these consequences, the standard of living would be lowered.

(1) Hamilton Spectator, January 2nd, 1938.

The practical side, or the opposition, including the eminent Brookings's Institute, (1) agree, though by various lines of reasoning that the ultimate effect of reemployment, even if accompanied by an unchanged wage rate, would be higher prices. Therefore since a higher standard of living is the ultimate national economic aim, the scheme can be denounced as unprogressive.

If, however, there could be proved, either by theory, or what is more preferable, by practical experiments, that there would be benefits arising from the adoption of a shorter day, then opposing theories would not be at such loggerheads. The question is seen as one of two sides, each extensible "ad infinitum", and each equally inconclusive. This condition is due to the advocates of the proposal. They have not shown by industrial experiments or surveys the possible or actual effect of the length of the working day on productivity. This is the crux of the whole problem. Such phenomena as unemployment and purchasing power are secondary considerations. But strange to say the greater part of the literature on this subject is concerned with such insoluble problems as that of distribution which could never be changed by any alteration in hours of labour.

The theoretical presentation of productivity as it may be affected by shorter hours will be given later in this chapter. At present it is best to follow the argument on employment by its associate, the problem of distribution.

As is well known wealth is distributed in a highly unsatisfactory manner. In the United States the 38,000 people having \$50,000 incomes received more money in 1929 from dividends alone than all the earnings of the 3,012,000 tax payers with annual incomes under

(1) The Thirty Hour Week by Harold G. Moulton and Maurice Leven, published by the Brookings's Institute, Washington, D.C.

\$5000. (1) Wealth has been increased by labour's growing productivity, the percentage of which rose 36.7% from 1921-29 and yet through wages labour received in return only 11.3%. It seems paradoxical when estimates are seen showing that the labourer was receiving in 1929, 7.5% less of the value added by manufacture than in 1921. To bring this maladjustment closer to the problem of the shorter day it is necessary to discover whether industry has grown large enough and efficient enough to adopt such a scheme. The A. F. of L. provides an affirmative answer. It has found that increased productivity over the past years has warranted a thirty hour week. The proof is simple. (2) From 1899 to 1914 the average yearly increase in productivity per worker was 1.7%, while from 1923-29 this increase was 8.3%, meaning that machines were substituted for men. But hours were not reduced accordingly. The working day has been shortened by 2½ hours from 1911-29, where it should have been, on the preceding basis, fourfold this amount. From 1919 to 1933 the power to produce increased 71% and figuring thus, together with the above conclusion with regard to hours, as much can be turned out today in thirty hours as in fifty-two and a quarter hours in 1919. Today our production is not very much greater than in 1919. To go further productive equipment has never been utilized to capacity, and with the return of 25% of the workers and their additional purchasing power, any possible change in price would be minimized by the larger profits of increased production. Another claim to justify the plea is that the worker is doubly hurt by machines--they throw him out of work and then force him to pay for their installation. In 1849 he received

(1) The Shorter Work Week and Work Day. H. L Black, Annals of American Academy, March 1936.

(2) The Thirty Hour Week, William Green, Published by A. F. of L, Washington, D.C. 1935



\$1 for every \$4.30 value of the commodity, in 1929 he receives the same amount for \$6.06 of the value. The argument is clearly summed up by the figures for employment and production in March 1933 over the previous depression low. It is seen that production reached 100% from the low of 60% while employment made the disproportionate advance from 57% to 73%. Therefore, according to the A. F. of L., there is a serious disparagement between hours of labour and productivity. Omitting all the above estimates(1) the whole argument is included in the one statement, that the absolutely necessary purchasing power of the working class has been diverted by some means or other away from labour, and that labour has earned for itself, by increased productivity, and by paying for the new equipment of production, shorter hours and larger pay. This is a justifiable argument, but whether the A. F. of L.'s proposal can create less of this diversion is open to question. Can industry stand the strain of a shorter day. Once again the A. F. of L. brings forth evidence in the affirmative. It takes the iron and steel and automotive industries as representative. The wage bill constituted 16.7% of the value of the product. A thirty hour week, plus the cost of reemployment would amount to a 3.3% advance in the price. But considering that the resultant purchasing power would be six times greater than before, the advance in price appears slight, and might appear more so since the per unit cost of production in manufacturing generally shows a sharp decline when volume increases. It is thus asserted that since wages constitute such a small percentage of the value of most products (see Table 13), any increase in the wage bill arising

(1) A. F. of L. figures.

from the shorter work week plan would result in an almost negligible rise in selling prices, and furthermore if prices did rise the larger purchasing power of labour would be an equalizing factor.

TABLE NO. 13

Labour Cost in Various Industries  
(U. S. A. Census of Manufacturing 1919-33)

1933	
INDUSTRY	WAGES AS A PERCENTAGE OF VALUE OF PRODUCT
Automotive and Parts	13.56
Boots and Shoes	25.69
Iron and Steel	19.19
Lumber and Timber	27.92
Men's Clothing	20.72
Paper and Pulp	14.25
Petroleum Refining	6.51
Shipbuilding and Repair	36.56

How would profits of the industries be affected. From 1923-29 labour cost decreased 10% while overheads and profits increased 10% even in the face of declining prices. The following table, Number 14, shows among other things that from 1927-29 when prices were falling profits increased 33%.

TABLE NO. 14  
Profit per Unit of Products Sold in 1231 Corporations  
in 45 Manufacturing Industries.

1922	100%
1923	103.8%
1924	93.4%
1925	112.7%
1926	113.3%
1927	87.2%
1928	105.3%
1929	120.5%

According to Standard Statistics survey of 418 firms the profits in 1932 were \$49,000,000, in 1933, \$605,000,000, and in 1934, \$911,000,000. A 1000% increase for 1933 over 1932 and a 50% increase for 1934 over 1933. The National City Bank states profits for 190 industrial concerns were \$182,000,000 in 1932 and \$320,000,000 in 1934--an increase of 76%. These latter businesses were subjected to the N.R.A., and yet had wiped out depression deficits and had a considerable profit. It appears that industry though in a severe depression could easily afford a shorter working day.

Quoting the effects of the President's recovery programme, the A. F. of L. finds the proof of the pudding. From July to October 1933 1,000,000 and a half workers went back to work under a five hour reduction, and pay rolls increased 11.3%. This cooperation lifted production 19% by the following spring. The unions believe this is certain evidence of the worth and practicality of their scheme.

But the N. R. A. fell through and today ten million workers have no jobs and still production is 91% (1) of the average from 1923-25. There is something stopping these men from their work. The most logical cause is the present system of distribution.

The Brookings Institute (2) deny that a shorter day will remove this barrier to employment, to production, and distribution. Their first premise is that the country is not producing enough. The year 1929 saw the greatest production in the history of the U. S. A., and was accomplished under a fifty hour week. Even then 74% of the families did not have adequate diets. To furnish this a 75% increase in production would be necessary. The shorter day would, they say, be a hindrance rather than an aid in the attaining of this objective. The Institute always comes back to their main contention that any reduction in hours would lead to a higher price level and thus counter-balance any increase in employment and purchasing power. There would be other drawbacks also. The new workers would be ineffecient, small establishments couldn't stand a larger pay roll, the expense of patrolling and policing industry would be great, and finally there would be no spur to invention such as arises from the fear of unemployment, and recurrent slumps. This last statement is borne out by the fact that productive efficiency increased 25% from 1929-34, a period when fear of losing one's job was strong.

Up to this point the discussions have omitted to propose definite limits to the working day on the grounds of maximum productivity under the best possible working conditions. The question must wait until the latter part of this chapter and the whole of the next. The

(1) The Shorter Work Week and Work Day, H. L. Black, Annals of American Academy, March 1936.

(2) In Defence of Longer Work Week, H. G. Moulton.

theories of employment, social welfare, and distribution need further investigation.

That the worker needs more leisure to improve his mind and body, to find self-expression, to be able to contribute something to society, is self evident. It is a postulate of humanity. The arguments about employment and distribution on the contrary are confused and misleading. A shorter working day is proposed by organized labour as a corrective to our serious economic condition wherein the two greatest evils are that 25% of the workers are unemployed and that the greater part of the purchasing power necessary to sustain a proper functioning of that system is laid up in the hands of the few who use it, not for necessities, but for oversaving and overinvestment. But can a shorter day be a corrective? The proposal seems merely a mask with which to hoodwink industry and business into giving labour more purchasing power. They use the proposal so that more room can be made for the additional workers. Their real objective is found in their secondary desire for stable wage rates. Why shorten the day at all? If more pay is distributed, then labour's chief aim is satisfied, and it is to be doubted very much if a long day would cause much disturbance. Under an average day, with larger pay-rolls, and more men at work, additional capital equipment would have to be pressed into service to accommodate the extra workers and thus capital costs would rise. This, however, would not lead to any significant price change since there would be a larger demand from the swollen pay envelopes which would facilitate greater and smoother production. Labour's whole attitude is towards redistribution of wealth--a shorter day merely softens the straightforwardness of such a demand. According to the Brookings Institute there is not enough being



produced, which labour does not realize. The Institute goes on to tell why the country is suffering from want. The old rule of supply and demand is the cause. Demand determines supply. There is only so much demand because there is only a certain amount of purchasing power, and this in turn depends a great deal on wages. The solution to large production lies in taking from those who have, industry and commerce, the necessary amount to raise wages so as to reemploy 25% of the workers. Further increases in purchasing power will come from the same source. Enough is being produced to satisfy the present demand but not enough to satisfy the present need. If this need can be turned into effective demand then more will be produced. Organized labour has not given a full analysis of the question--it clouds the real issue of more equal distribution of wealth, with the proposal of the shorter working day.

Strict economists have come closer to the truth of the proposal. They do take into account the most important point in the whole scheme--that of productivity. If a shorter day increases productivity then costs will be lowered, prices fall, more demand satisfied, and standards of living raised. They also believe that if employment is to be increased and yet prices remain unchanged, labour must divide the same pay-roll among the greater number of workers and thus bear the burden of the jobless itself. This is worse than the present scheme of relief where the burden is spread over all classes, and not only the workers. If a shorter day has the above result then it is worthless.

All the arguments, but the one of increased productivity, amount to a camouflaged demand for larger pay-rolls. It may be good tactics to conceal the real issue, but when the concealment is as poor as in this

case, it might have been just as well to ask plainly for a 25% increase in total wages so that the jobless could be reabsorbed. The one word redistribution might adequately sum up all but one of the arguments for a shorter day.

But the one argument, that of productivity, is important. If proved, the standard of living would immediately jump to a higher level, and would do so without any forcible shift in the present economic scheme. It would be a self-contained process. But the problem, theoretically and practically is beset by a tremendous difficulty, which is the variability of the human factor. Man is of infinite variety. Besides this, is the difficulty of dissociating him from his machine and from the technical and managerial processes of his particular plant or industry. If he could be reduced to a constant and tested as to the length of time in which he could produce the most under conditions best suited to health, to demands of the state, and humanity, then a policy could be outlined. At present there are no means for this exhaustive investigation, and yet an attempt might throw some light on the important question as to whether production might rise or fall.

The proposal has many positive benefits which might possibly lead one to believe production would rise. History has shown that a shorter day is attended by fewer accidents, by a reduced labour turnover, and by less tardiness or absenteeism. These are all factors tending to further production. The shift system arising from a shorter day brings the advantages of doing away with the expenses of organized overtime, and reducing the burden on idle machinery, (since it is now running full time). Production costs are therefore materially lowered. International conferences on hours of labour have

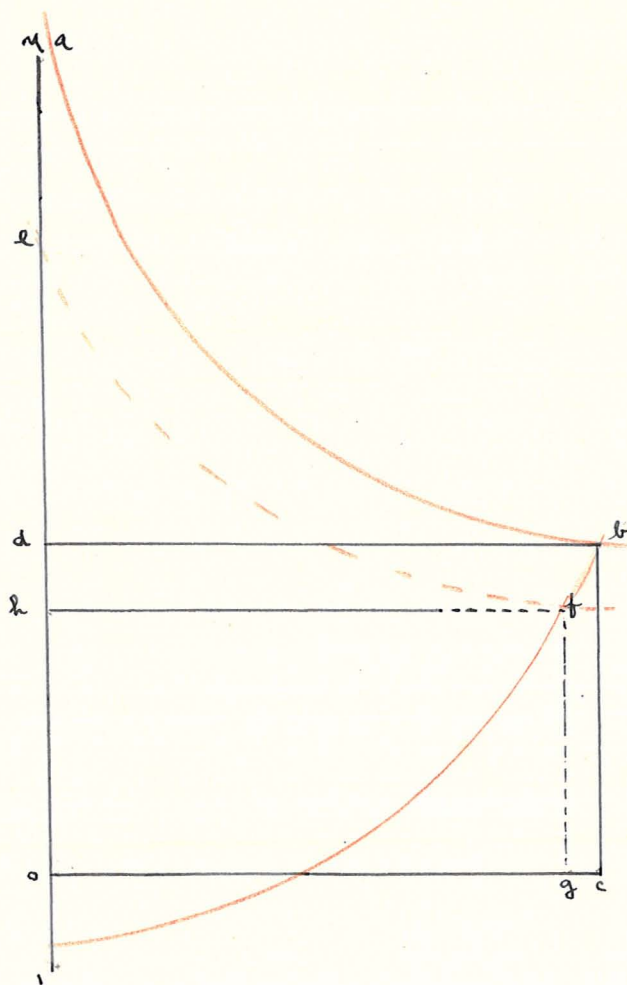
something to say in this matter. They threw out the forty hour week proposal because the employers clearly showed how overhead costs would mount rapidly under such a scheme. However they realized that the dead weight of these costs could be lightened by a shift system.

The shorter day is of great significance to a company whose ratio of overhead to direct costs are high. The company would lose heavily unless a shift system were adopted. So it is with industry as a whole. It is tending to become increasingly mechanized and hence employers are more interested in cutting overhead than any other single cost of production. Capital equipment is replacing man, and man has to bend his will to suit the varying costs of this equipment. The shift system is the only way overhead costs can be cut if a shorter day is to be worked. It is a profitable scheme in some ways. More hours can be worked per day, and it is very elastic and adaptable to all industry.

It has disadvantages as well. The two-shift system in England for women and children brings to light some very serious differences of opinion as to its worth. The workers are divided in their views. The half in favour say that it gives them more free time, that they are less tired, and that they like the variety arising from the change from one shift to another. Those in favour of day-work (no shifts), wish all their evenings free, they want to get up later, to have regular hours especially concerning meal times, and finally the better health under the old day. It is thus seen that the workers are far from unanimous in their opinion of a short day under a shift system. Of course the English people are rather prejudiced against novel changes, and are apt to be more so if those changes affect their daily routine of living. Another drawback arises from the fact that



TABLE NUMBER FIFTEEN  
THE EFFECT OF A LESSEND DEMAND FOR CAPITAL ON INTEREST RATES



LET  $ab$  REPRESENT THE DEMAND CURVE FOR CAPITAL UNDER THE SINGLE SHIFT,  $ib$  THE SUPPLY CURVE, AND,  $db$ , THE EQUILIBRIUM RATE OF INTEREST, CHANGING TO THE DOUBLE SHIFT,  $ef$  IS THE DEMAND CURVE AND, THE SUPPLY CURVE  $ib$  REMAINING THE SAME, THERE RESULTS THE LOWER RATE OF INTEREST REPRESENTED BY  $hf$  OR  $og$

1. MUCH OF THE THEORY ON THE PRECEDING PAGES, AS WELL AS DIAGRAM #15, TAKEN FROM "A THEORY OF THE SHORTENED WORK WEEK BY TN CARVER, AMERICAN ECONOMIC REVIEW, SEPT. 1936

Turning back to industry as a whole, and the more logical theories regarding the connection between workers' hours and their productive capacities, there is to be found a wide-spread belief that, if the day was shortened by law, or otherwise, employers would through technological advances find more than adequate compensation for the actual loss in working time. Industry has, it is well known, many inefficiencies, some within its own borders in the form of poor productive methods and some without such as the constant tendency to misjudge the market. If these could be removed then there would be an opportunity for a shorter day. But, as is usual, such improvement is left to time and not to any immediate industrial policy. As for strictly technological advances, those of research and invention the case seems very weak, and is contrary to actual experience. It has been found that during depressions greatest advances of this sort have been made. The lure of cost cutting devices, the spectre of unemployment and poverty have forced men to intensify their quest for invention. In the present (1) depression period, 1929-33 according to the National Bureau of Economic Research in the U. S. A., efficiency both human and mechanical had increased 15%, an amount unequalled in any similar recent period. This establishes a strong position for depressions as stimuli to inventions. The shorter work week has proposed to end unemployment, and if so, reasoning from above, what of invention? The argument must, if it wishes to be at all sound, confine itself to improvements in the managerial departments. It might even champion industrial planning and so by eliminating such wastes as those of duplication of services and goods, make room for its time cutting.

(1) Christian Science Monitor, October 30, 1935.

The modern theoretical case of productivity is not sound because it does not, as the early pioneers in the matter did, confine itself solely to the one point of finding the best average length of day wherein man would produce the maximum of goods and services without damaging his health and socially contributive powers. Ernst Abbe of the Zeiss works had the right idea. He isolated man from the machine and proved that more could be produced in eight than in ten hours, under constant working conditions. Lipmann another early investigator, proved mathematically that hours of labour and productivity vary far less directly than was commonly thought and he correctly concluded that the optimum working day was different in individual countries and industries.

TABLE NO. 15

Ernst Abbe's Attempt at Proving the Relationship between  
Hours and Productivity in Zeiss Works.

Age of Worker	No. of Workers	Prod. 9 hr. Day <sup>(1)</sup>	Prod. 8 hr. Day <sup>(2)</sup>	% Increase
22-25	34	55.3	65.2	17.9
26-30	69	62.2	72.6	16.7
31-35	69	65.1	74.8	14.9
34-40	40	60.6	70.2	15.8
Over	21	63.3	74.3	17.4
All	233	61.9	71.9	16.2

(1) Index Numbers of Production

(2) Same.

Before turning to the practical side of the question, let the preceding theoretical maze be cleared, and reduced to some final order.

It has been found that from the social welfare standpoint, the shorter day is a need which cannot be denied, and that on the present serious condition of unemployment, it would at least have a moderating effect. As for distribution, theory has proved little, and will probably continue in this capacity because it is a problem far beyond the effects of varying hours of labour. Theory could not, and did not, set up a case either for increased or decreased productivity-- this is left for industry, whose experience will be given in the next chapter.

## Chapter Four

Theory having been stated it is now necessary to turn to the practical side of the question. There are many phases of the shorter day that industry could explain such as; the reaction arising from shorter hours in industry as a whole, in industries or plants individually, and the effect on productivity. It can also afford the practical outlook of both employer and employee.

It is unfortunate that until recently a comparatively small number of statistics and records had been kept to illustrate the relationship between industry and hours of labour. Therefore it is very difficult to establish a sound practical case rigidly setting forth certain well defined influences of a shorter day on the economic system. There are however several examples of industries working below normal hours, and there also exists evidence as to the effects of national schemes of reduced hours.

The first trial at a nation-wide alteration of hours of labour came in England during the Great War. Munitions and other war materials were in such great demand that long hours were immediately enforced. After two weeks of this, production began to fall off rapidly, and sickness, tardiness and absenteeism became prevalent. The cause of this serious condition was finally pinned down to excessive hours of labour. The day was reduced to eight hours and in a very short time production reached nearly double the figure of the long day. Evidently the worth of the short day should have been established once and for all. The reason that this war-time experience was not conclusive is that the speed of production was terrific, far beyond that under normal times. The tempo of work was so great that a short day was an absolute necessity whereas under

ordinary conditions a ten-hour day might not be out of place. To get a truer picture of a national scheme of shorter hours one must turn to this continent.

A few years ago the United States government undertook a plan greatly influencing, if not controlling all industry. This plan was the "National Recovery Act", and because it included as one of its main points a definite and universal reduction in hours of labour it is now possible, for the first time in history, to discover in the true light of facts exactly what such a nation-wide scheme means to industry, business conditions, unemployment, and many other vital economic problems. What is of further significance to our study is that the National Recovery Act was nullified in May 1935 and so by a subsequent industrial survey of the United States there can be revealed the extent to which industry was favourable to a shorter working day.

The United States Department of Labour has made a careful analysis of the national effects of the hours of labour stipulated under the N. R. A. To follow this wide, authentic survey will solve the first problem--that of illustrating the effect of the shorter working day on industry as a whole.

Sixteen industries were carefully chosen so as to represent all the varied and important aspects of manufacturing. They were well distributed regionally and gave representation to all sizes of establishments. To begin with, a table showing hours of labour before and after nullification of the N. R. A. will illustrate the compatibility between industry and the hours set up under the code.



TABLE NO. 16 (1)

The Percent of Total Employees, and Total Man Hours,  
above Code Stipulations in U.S.A.

INDUSTRY	Percent of Total Employees		Percent of Total Man-Hours	
	MAY 1935	MAY 1936	MAY 1935	MAY 1936
Blast furnaces, steel works, and rolling mills	3.1	67.7	3.7	69.9
Hardware	7.8	60.7	9.7	64.4
Stores	27.1	46.0	30.8	51.6
Structural and ornamental metal work	9.6	59.8	12.1	64.9
Electrical Machinery, apparatus and supplies	20.3	87.3	22.8	89.1
Foundry and machine-shop products	19.1	65.2	22.2	69.3
Machine tools	44.3	91.5	48.1	92.7
Furniture	25.4	50.8	28.5	56.2
Millwork	24.4	74.0	27.8	77.9
Sawmills	23.4	59.7	27.7	65.6
Brick, tile and terra cotta	37.1	85.7	44.0	89.2
Cotton Goods	1.7	10.1	2.2	12.2
Silk and rayon goods	2.8	9.2	3.5	11.5
Cotton garments	4.1	41.2	4.8	46.5
Paper boxes	18.8	44.2	21.3	49.8
Paper and pulp	26.0	63.6	28.8	67.2

The above Table shows the percent of Employees and Man-hours in establishments with average weekly employee-hours above code hours in May 1935 and 1936.

(1) E. 17--Hours and Earnings Before and After N. R. A. Monthly Labour Review, January, 1938

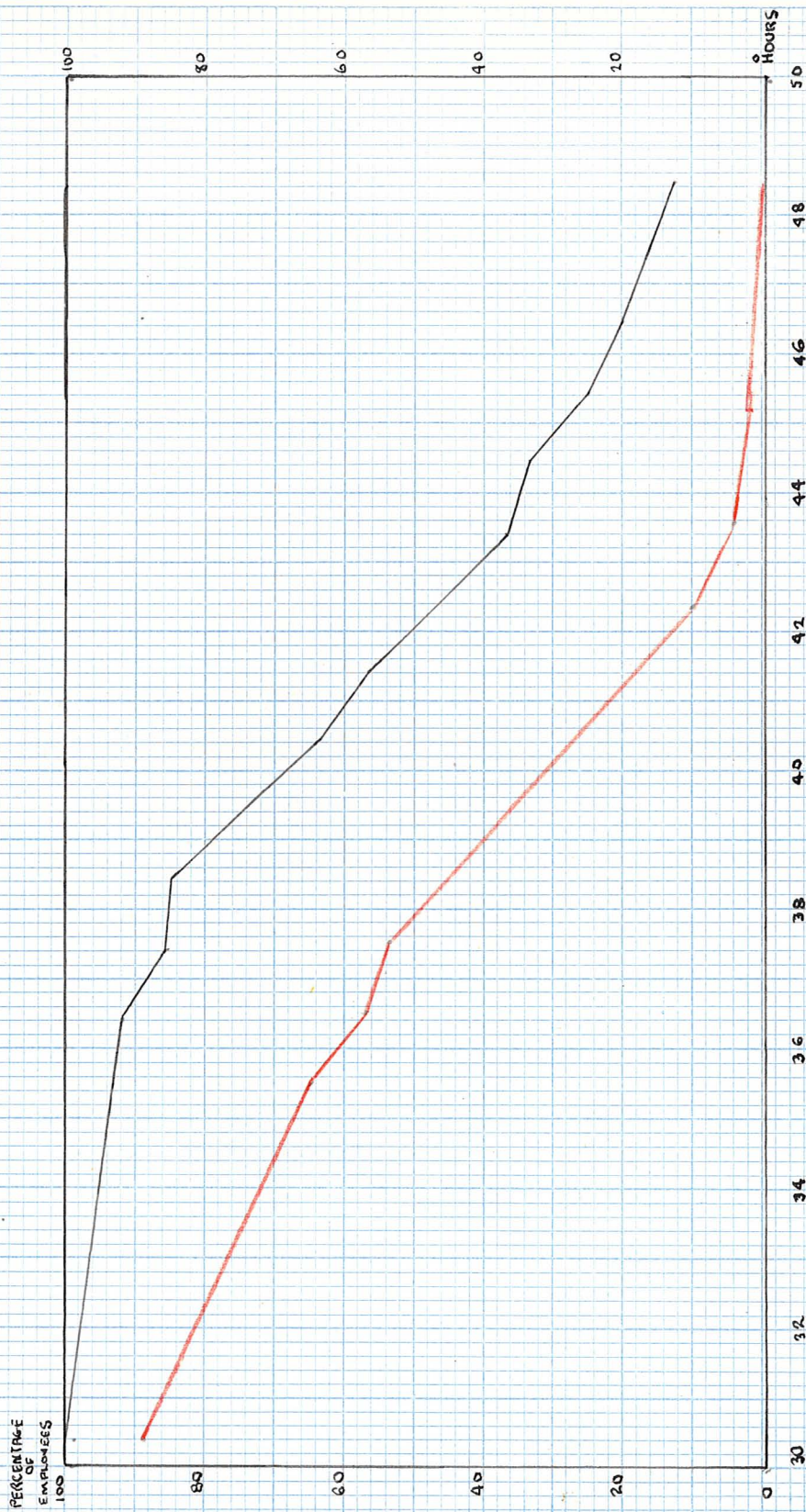
A few explanatory remarks will lead to a better understanding of the table. Code hours were for all but three industries, forty hours per week with added hours up to forty-eight in the case of emergencies. The three industries of different hours were, electrical machinery, apparatus, and supplies having an average week of thirty-seven hours, the cotton garment industry with one of thirty-six hours, and the brick, tile and terra-cotta industry operating under a thirty-eight hour week. The column under the title "Percent of Total Man-Hours" is computed from the figures for average weekly hours. These are influenced by part time, labour turnover, and other factors and are therefore much less than maximum working hours. The months and years under survey are chosen for obvious reasons, namely that the N. R. A. was nullified in May 27th, 1935 and that that month rather than any other was one of minimum disturbing influences such as strikes. May 1936 was taken for the simple reason that industry, given a year would have almost wholly reverted to its natural tendencies.

From the table it is found that, with the exception of Machine Tools (1) and brick, tile and terra-cotta industries, one-fourth of all employers in May 1935 were in establishments with average weekly hours in excess of code hours. In May 1936 however, at least half of the employees were in establishments with average hours in excess of Code hours. The cotton goods and silk and rayon industries offered unrepresentative figures. Both industries were characterized by a large amount of part-time, labour turnover, and what bears more influence on the figures, a general decrease in the total number of employees. Table 7 represents the degree of change to longer hours.

(1) Machine Tool industry was extremely depressed, then in 1935 it had an extreme increase in demand. Terra cotta is influenced greatly by local business activity.



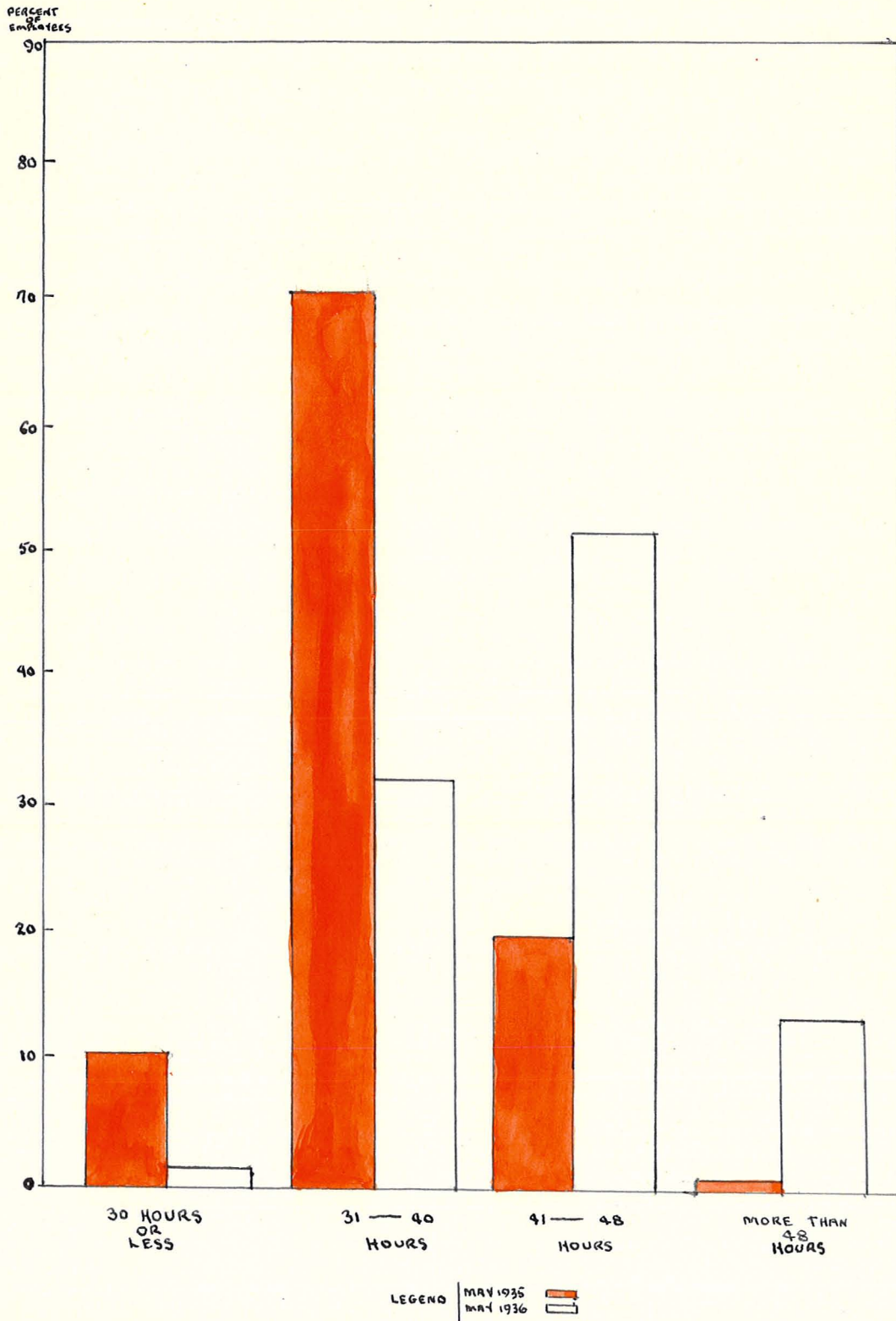
TABLE NO. 17



THE UNIVERSITY OF TORONTO PRESS

DISTRIBUTION OF EMPLOYEES BY WEEKLY HOURS IN THE FOUNDRY AND MACHINE SHOP PRODUCTS INDUSTRY

# HOURS WORKED IN FOUNDRY AND MACHINE-SHOP PRODUCTS INDUSTRY IN MAY 1935 AND 1936





A study of the dispersion of employment between thirty and forty-eight hours as shown in Table 18 (1) is illuminating. It will be seen that in May 1935 there was a comparatively large concentration of employment in establishments with hours slightly under code limits while a year later the situation revealed that the points of concentration have moved above the code point, in some cases close to the forty-eight hour limit. In all industries there was a shift in concentration point to the upper limits. Blast furnaces, steel works, rolling mills, and hardward industries' points moved least, while the mill-work industry moved to the other extreme. In most of the sixteen industries before nullification, concentration points equal to or less than the thirty hour limit were frequent while those above the forty-eight hour mark were few. In 1936 the situation was reversed.

The Foundry and Machine-Shop products chart is selected since it shows better than any of the other fifteen industries the average shift in the concentration points.

From the preceding it can be concluded that in all the industries, weekly hours increased substantially from 1935-36 and that the number of employees with hours in excess of code hours was much larger. e.g. In blast furnaces, steel works, and rolling mills the number of employees in establishments with greater than code hours was only 3.1 percent of the total in 1935; in 1936 the percent jumped to 67.7%. There was also an increase in the proportion of employees with average hours in excess of the code peak of forty-eight hours--in structural and ornamental metal-work only 1.3% of all employees were in plants working more than forty-eight hours, yet one year later the percent was 18.3.

(1) Monthly Labour Review, January, 1937, P 29

Though business conditions were improving, it can be said with assurance that industry in every case increased the hours of labour to above those of the compulsory short week. The theoretical capitalist tendency toward long hours is therefore justified.

The relationship between a shorter work week and employment is clearly seen by this survey. It is apparent that longer hours result in fewer employees, or in this case, if the industries had remained on code hours more men would have been employed. Table No. 1<sup>9</sup> reveals among other things, that in the establishments of the thirteen industries working above code hours there would have been room for 50,000 (1) additional employees if these plants had operated under hours equal to or less than code stipulations. On the same basis of computation (the manner and merits of such being discussed later) the increased employment in all establishments of the thirteen industries would amount to 120,000. An estimate based on the aggregate change in average weekly hours would reveal a much larger number. Average weekly hours in these industries rose in a year from 35.5 (2) to 40.6 and in manufacturing as a whole from 35.8 (3) to 39.2. If the average hours of work had not changed then there would have been an increase in employment of 700,000 (4) workers instead of the conservative increase of 120,000. This smaller figure makes allowance for factors which lead to serious misrepresentation. The increase in business activity reduced the amount of part-time and did not therefore affect the average weekly hours solely by an increase

(1) P. 26 M. L. R. January, 1937

(2) Footnote No. 3

(3) *ibid*

(4) *ibid*

in scheduled hours. But business revival was an important factor in reducing the mathematical figure of 700,000 additional workers. Its larger volume accounted in part for a rise in average weekly hours and a reduction of part-time, plant shut-downs and increase in overtime. In fourteen of the sixteen industries surveyed the number of employees materially increased despite the existence of long hours. All these influences of economic recovery tend to overcloud and minimize the possible effect that a rigid adherence to code hours would have on employment. There is, however, a factor to offset these disturbing business influences and that is, to state once more, that average weekly hours are normally much lower than full-time hours. The issue is now clear, industrial recovery having been partly counteracted, it can be concluded that a general shorter working week would increase employment to a considerable degree. In the present survey an increase of (1) six-percent was indicated and this was recognized as an underestimate since, once more, average weekly hours are lower than full-time hours.

Finding the effect of longer hours on average hourly earnings is a question which is solved by experience under the N. R. A. Certain well defined relationships between these two conditions have been uncovered despite the insignificant change from 57.1 in 1935 to 57.4 cents in 1936 (2) in hourly earnings for manufacturing as a whole. The tendency was for establishments who made the largest increase in weekly hours to fall below the general average of hourly earnings and thus force employees to depend on longer hours rather than on rates of pay, to maintain stable weekly earnings. To elaborate; it was found that in May 1936 factories with hours in

(1) P. 13 American Economic Review, January, 1937

(2) P. 33 " " " " "

TABLE NO. 19 1.

EMPLOYMENT IN 13 SELECTED INDUSTRIES IN RELATION TO AVERAGE  
WEEKLY HOURS IN EXCESS OF CODE HOURS MAY 1936

INDUSTRY	ESTABLISHMENTS WITH AVERAGE WEEKLY HOURS ABOVE CODE HOURS (40)		ADDITIONAL EMPLOYEES IF AVERAGE WEEKLY HOURS HAD EQUALLED CODE HOURS (40)	PERCENTAGE OF INDUSTRY COVERED BY SAMPLE	ESTIMATED ADDITIONAL EMPLOYMENT IN ALL INDUSTRIES
	TOTAL MAN HOURS	NUMBER OF EMPLOYEES			
BLAST FURNACES, STEELWORKS, ROLLING MILLS	7,153,091	166,391	12,436	61.4	20,254
HARDWARE	673,383	15,342	1,493	79.2	1,885
STOVES	469,549	10,153	1,586	47.6	3,332
STRUCTURAL, ORNAMENTAL, METAL WORK	527,570	11,326	1,863	58.9	3,163
FOUNDRY AND MACHINE SHOP PRODUCTS	2,113,142	46,942	6,387	20.1	31,776
MACHINE TOOLS	1,259,295	27,886	3,646	94.4	3,862
FURNITURE	1,057,466	23,727	2,960	37.9	7,810
MILLWORK	647,350	13,759	2,425	36.5	6,644
SAW MILLS	1,654,433	35,332	6,029	29.4	24,709
COTTON GOODS	1,015,425	22,822	2,564	57.6	4,451
SILK AND RAYON GOODS	137,347	3,096	338	35.1	963
PAPER BOXES	511,422	11,526	1,260	50.5	2,495
PAPER AND PULP	2,781,141	62,918	6611	75.4	8,768
TOTAL	— —	— —	49,598	— —	120,112

efficient plants have discarded in most instances such a policy as unprofitable. Can it be said that the large firms are right and that given time, all industry will follow suit? Such an assertion seems logical.

From this rather extensive survey of the results of the N. R. A., it may briefly be concluded that in all of the industries covered, a substantial increase in average weekly hours was recorded after nullification, that unemployment would have materially decreased had the shorter working week been maintained, and finally that the smaller plants constituted the greatest amount of reversion to longer hours and lower hourly pay.

Experiments with a short day by single plants are rarely advertised and rarely investigated. The Kellogg plant at Battle Creek, (1) Michigan is found to provide the most advanced example. Their shift system was changed from eight to six hours--the week, therefore, being reduced from forty-eight to thirty-six hours. This scheme, however, contained a longer continuous stretch of work than two four hour periods broken by lunch-time, and thus it may be reasoned that fatigue would not be lessened, though hours were. There are two factors which tend to minimize the supposed tiring over this continuous employment. The psychological factor involved in the realization that the six-hour stretch constitutes the entire day's work is one, and the other is that the men are allowed eighteen minutes and the women thirty minutes per shift for rest and personal care. Proof that fatigue is not as great, is found in a careful survey of accidents showing that the number of days lost through such under the six hour shift is one-half the number under the eight-hour period.

(1) Christian Science Monitor, April 8, 1936

The company also proves that there is higher efficiency per worker. This is reflected in the decline in direct labour costs of 10% per unit of product, or in other words the workers have been found to produce more in a given time. Apparently the new system similarly affects overhead costs. They have declined 25% per unit of product. But what may seem unbelievable to the majority of businesses, all these benefits have been enjoyed under a stable amount of total wages; there has been no saving from wage reductions, in fact in October 1935 an increase was made. The company believes and acts in accordance with their published statement that, (1)"the wider spread of employment through shorter hours can achieve maximum benefits only when it is accomplished without a decrease in the employees' purchasing power." And so there is to be seen in the Kellogg Company the maintenance of the daily wage minimum of \$4.00 (increased as stated above to \$4.50 in October 1935) and what is of equal or greater importance, there are today at least 39% more employees than in 1929, the year before the adoption of the six hour plan.

Such a shining example of the shorter day ought to be almost conclusive evidence of its universal worth. Yet it is not. A plan of this nature depends upon the type of industry, its methods of production and management, and in great part on the nature of the product. The firms of the greatest efficiency can afford to try, if not adopt a shorter day and the same applies to firms whose product has a selling price in which the wage cost does not constitute a high percentage. A company that handles both production and distribution is also very suited to a shorter day.

The significance of this experiment which has been working to

(1) Kellogg Cereal Mills, Battle Creek, Michigan, Survey 71:369,  
Dec. 1935



the benefit of both employers and employees for five years, must not be underemphasized. It gives proof that many other industries of a similar set-up may reduce hours profitably, and, to go further, it affords industry in general a highly successful working example of a supposedly theoretical advocacy.

The Boots Pure Drug Company, Limited, shows the effect of a shorter work week in an English factory. The week was reduced by cutting off Saturday work, which in this case meant a clear gain of five hours leisure for 85% of the employees. The scheme was given twenty-two weeks trial and at the end of that time the results were found to be very satisfactory. Output, taking all departments together was greater, although in the highly skillful drugs and chemical department it dropped 1.6%, but as intimated above this drop was counteracted by advances in other parts of the plant. Skillful work has more diversity and affords mental stimulation, hence, long hours have a lesser effect on production than in monotonous physical toil. Absenteeism and tardiness became almost negligible, when before it was highly prevalent. The financial position of the company was not disturbed, i.e. manufacturing costs did not rise, profits were not adversely disturbed, and there were no effects on distribution, selling price, or service to customers. It is not necessary to state that the workers were extremely pleased at this scheme.

It can be discovered from this example that Saturday was an uneconomic day. Also that a firm encompassing production and distribution, and in which wages did not constitute a very high proportion of the selling price, was suitable to an experiment of this kind.

The Solvay Process Company of Syracuse, New York, reduced their shift from twelve to eight hours. The President reported that unit

costs of the product rose at first but after a year they were absorbed by the greater efficiency of the workers, and at the end of the year the costs were one point lower. The time consumed per unit of product was also reduced so that operations can now be carried on with a smaller number of hours per unit of production.

The three preceding cases show that certain types of industries at least find a shorter day more economical. It is hoped that they will provide a spur to other industries so that they will experiment with shorter hours. There have been other companies who have tried and adopted a shorter working day, such as the Ford Motor Company, yet their results have not been as scientifically recorded as have those of the preceding three examples. Therefore it would be useless to merely set down names of companies pioneering in this field without their results. The next practical investigation is one concerning hours and production.

To prove by industrial experimentation the relationship between hours of labour and productivity is a difficult task. However such has been undertaken and the results were fairly satisfactory.

The experiment was carried out in the axle (Table 20) department of the Dominion Foundries and Steel Company Limited, Hamilton, Canada. This department was chosen since the conditions were such that labour could be isolated from any influencing factors such as; the differences of the raw material worked upon, the predominance of the machine, and the addition or withdrawal of workers. There were just a certain amount of men necessary to do the work, the machine element in production was not the ruling force, the product was homogenous, and the raw materials (steel ingots) were uniform in composition. It is also important to note that the men worked on piece rates. They worked

as hard as they could, and therefore any slacking which might have resulted from a longer day under a stable wage was done away with. The figures for production were therefore, reliable estimates of what the worker can actually accomplish in a given period of time and under conditions of maximum speed and effort. In short, the conditions were excellent for the isolation of the labour element in production. The stage was set for a fairly accurate study of the effect of hours of labour on production, providing the production of the existing eight hour day could be compared with that of some different length of working time.

Fortunately, because of a rush order the shift was changed from eight to ten hours. The only stumbling block to success lay in the possible size of the sample. Would the shop run long enough on the ten hour shift to give a representative average of production? This difficulty proved rather formidable--the ten hour shift lasted only eight days. However from the resulting production figures, as well as assurance from the workmen and foremen, the sample appeared to give a moderately true picture of average production under the ten hour day. The eight hour sample was of course adequate.

The averages of production for the two shifts illustrated that 9.93 more axles (roughly ten axles) could be produced in ten hours than in eight. Yet in per hour production the eight hour shift produced more--6.85 axles per hour as compared with 6.48 under the ten. Two general deductions can be made from these figures. In the first place more can be produced in ten than in eight hours. Secondly the productivity per hour has been reduced under the longer day. However fatigue is cumulative and if figures for a month of ten hour days could be obtained there might possibly be noted a progressive falling

off of per hour production just as in munition factories during the war. The limited sample rather modifies any judgement on the productivities per hour, yet the production figures under the ten hour day, were given assurances of being average or normal.

Since there is decreasing efficiency under the longer day it seems reasonable to believe that there may be an offset, speaking in terms of profit and loss, to the gain in production from the extra two hours of work. Capital equipment does not operate under decreasing efficiency and therefore, since labour does, there must be a maladjustment between machines and men whereby time and efficiency is lost. The men are not getting the utmost from the machines. Capital is being wasted, burden costs are mounting--in short the cost of production is becoming greater. Perhaps cost of production may not be enough entirely to counterbalance the gain of ten extra axes, yet if accurate account was taken the condition might easily be proved of consequence.

Further statistical enquiries into the figures reveal a correlation of plus .68 between production per day under the eight and ten hour shifts. This means that there is a marked relationship between the two series of production figures and that they vary positively. If the two sets of data varied completely the relationship would be expressed by a correlation factor of 1. Therefore .68 illustrates that production and hours under these shifts are associated to a degree of 68/100 or roughly as two is to three. They are related, or vary together, yet the relationship is not complete. The extra two hours work then do not give a proportionate increase in production if judged on the basis of hourly production of the eight hour day. It is easy to see that efficiency per hour is lower during the

additional time, and that production is not keeping up with hours. The curve of efficiency if such could be computed, would tend to flatten, so that if sixteen hours were worked production would probably have a very slight, almost negligible relationship to production per hour under the eight hour shift.

A more representative correlation factor can be obtained by using as data the hourly rather than the daily rate of production. The result was plus .79 (1) a higher figure than before. This may be taken as more illustrative of the connection between the productions under the two shifts, yet its interpretation is basically unchanged. It still proves that hours and production are not in complete relationship, i. e., they do not vary as 1:1, and that the hourly rate of production under the ten hour shift has fallen, and will continue to fall until it would be an absolutely losing proposition to extend the working day further. To sum up, this new figure is found to emphasize certain relationships already outlined by the correlation factor of plus .68. In this new case the hourly production of the eight hour shift is in closer relationship to that of the ten hour day, and yet it is still not complete, only as 3:4. The reason for the relationship not being unity is, drawing a general conclusion from particular premises, that production did not increase in an equal proportion to hours. Also, there has been uncovered good grounds for the belief that the relationship between hours and production is lessening, as is the hourly rate of production, and will gradually disappear altogether.

From this statistical analysis several important tendencies can be seen. In the first place, this experiment, carried on under such

(1) See Table 20



favourable working conditions, illustrates that more can be produced in ten hours than in eight. This is important to notice since it is a popular belief that a shorter working time, say six hours, will produce more than an eight hour day. In this type of industrial work the longer day is favoured. The latter statement has certain limitations. More can be produced up to a certain point, after which human fatigue is so great that production is entirely stopped. Also that industries vary in their relationships between hours and productivity. Some can be run more economically on a six hour day. Taking a general view of industry, disregarding long-run periods, and social considerations, it can be said that a day of ten hours will produce more and be more profitable in the strict economic sense than a shorter working day of eight hours.

The second tendency was one of a decreasing hourly production rate after the eight hour limit. It is needless to point out that if the working day were progressively prolonged production per hour would eventually reach zero.

Thirdly the correlation factors as well as the arithmetic averages make their own important contribution by showing that hours and production do not vary in direct proportion and also that this modified variation becomes evident between the eight and ten hour mark. This may strengthen the case for the permanent eight hour day.

From the industrial standpoint much can be said for the ten hour day. It does produce more and apparently this additional production would offset any increased burden costs on the machines, floor space, etc., which might arise from the longer working time of the capital equipment under the decreasing efficiency of the workers. In other words the loss incurred through the workers not being able

to operate the machines at their maximum speed and efficiency during the final hours of the day, might not be significant enough to counter-balance the profit from the sale of an increased amount of goods.

These observations, as to the profitability of the ten hour day, apply mainly to industries whose products contain a large proportion of labour in their manufacture. Of course over an extended period of years the long day would be definitely uneconomical to industry, just as it would inflict incalculable damages upon society. The workers' industrial and social efficiency would, in the long-run, be undeniably lowered. But industry is not concerned with long-runs in employment. It does not matter if the men are worn out in five years and are replaced by a new set, labour is plentiful, and incidentally, cheap. Industry seldom looks ahead long enough to be able to appreciate the inevitable bad effects of a long working day. It is impossible to look very far ahead in modern times. A firm is considered fortunate to exist for a quarter of a century. Competitive conditions are so strong and so changing that five year plans are looked at askance. Government policies are now a major influence in national business. In the United States they are becoming dictatorial. How can one formulate policies for long periods under a powerful government which changes every four years, as well as under all the other conditions of business metamorphosis. It can't be done. That is one of the reasons why the employers' arguments carry so much weight in the battle over a shorter working day. They can survive and operate profitably only if the workers can be used so as to give the maximum returns, and these are regulated in the most part by hours of labour. If a six hour day is best for the company's earnings, fine and well, the company will adopt it, just as the

Kellogg Company has done. The steel companies may find a ten hour day better and they will fight any proposal to reduce it. How can they exist if their profits are cut by a shorter day whose future benefits they can't possibly enjoy since they don't operate long enough. Conditions are such that it seems fair in the economic sense for industry to grab as much as it can and as quickly as it can. It is useless for anyone to think that industry should appreciate a measure such as the six hour day whose benefits it will never enjoy. In terms of profit and loss it seems much better to replace the worn out human machines (if they are worn out under the ten hour day) from the clamouring ranks outside the Time Office gate.

Passing from the narrow field of industry to the more important one of social welfare the ten hour day may not prove to be so profitable. All the theoretical arguments are again raised and force a conclusion condemning the long day. Too many great aspirations of humanity are thwarted by any possible reversion; progress lies in the other direction. When the gains to industry are balanced against the losses to society, in politics, in science and art, in social relations, the scale can but turn one way--toward the losses.

Thus there is a possibility of industry gaining from a longer day and that the gain if existent would not be proportionate to the increase in hours. Reasoning from this the shortening of the day must have been achieved by other than economic pressure, and it seems logical to conclude that public opinion and trade unions have, through democracy, successfully defeated industrial arguments and experience. From now on the controversy over hours of labour might well be one of social justice and not of economic expediency. There was a time when industry gained from a shorter day--that era has



passed. Industry would not be far wrong if it said that an eight hour day was shorter than one of maximum industrial efficiency.

In dealing with the practical side of the shorter working day question, one cannot leave the views of employers and employees out of consideration. Several interviews with prominent manufacturers, together with deductions drawn from recent labour disputes in the U. S. A., have resulted in a change of opinion. It seems that the time-old description of the employer as a cruel exploiter of human labour should be modified. The past decade reveals a new type of man, one who is attentive to the call of humanity in its varying modes of expression, through unions, through governments, through churches, and through that great democratic organ, the press. Many times he acts without outside pressure. It might be said that most employers today when faced with a substantial plea for human justice would act accordingly. There was a time, not so long ago, when they turned a deaf ear to any proposal but one leading to increased profits. The trend has changed. Plant managers are dealing more and more sympathetically with human problems. The worker is being taken care of with lessening regard to profits.

Coming closer to the problem at hand most employers believe the eight hour day to be a satisfactory limit, and that any further reduction must be accompanied by a speeding up process or by mechanical improvement. They are in general agreement that a shortening of existing hours, other working conditions remaining the same, would ultimately lead to higher prices. Their views on unions and union policy are interesting. They think that unions have not seen the reversal of the employers' outlook toward the workers. They wish to make clear to the unions that their aim is the same as organized

labour's, that is to give the working man as fair a bargain as possible. As for the reduction in unemployment through shorter hours they state that this might well be the case, yet they insist that any such scheme must be accompanied by a distribution of the same pay-roll among the larger number of workers.

In short they are not favourable to a day shorter than eight hours. They believe that a ten hour day was more profitable, yet in view of their changed attitude to the worker they admit that the shift to a shorter day was for the best. Finally, they still adhere to the belief that costs of production rise, and productivity is lowered at every reduction in hours. The employer class as a whole is quite satisfied with the eight hour day and will do little by its own initiative to shorten it.

The worker, strange to say, has very few opinions on the working day question. The unions perhaps do most of his talking. Enquiries into his most urgent wants give the following results in order of their importance. The first desire is for steady employment, the second for good pay, the third for decent working conditions, the fourth for more intelligent and humane foremen, and so on until far down the list comes the desire for shorter working hours. Thus it is seen that there are a great many more important things than a six hour day to the worker. The usual reply to the question of whether he would like shorter hours and less pay is always decided by the monetary considerations. He really appears to be interested only in the pursuit of bettering his and his families' financial position. Of course this apparent disinterest in hours of labour may be partly explained in some cases by the miserable state of the workers' home lives. These must be bettered first. In the second place, the

worker does not realize the real fruits of leisure. He has never been educated to appreciate the finer things, and he does not know that these are within his reach. His horizon is limited to making money so as to keep his family from cold and hunger and to provide them with the ordinary pleasures and comforts. He does not individually press for shorter hours because in his quest for a higher standard of living there are other matters which have to be corrected first. Why do the unions create such an issue of the shorter working day? There are two reasons. The first is that they have risen to become executives and controllers of union policy through ability, greater education and other superior talents. Therefore they can appreciate the full significance of a reduction in hours, and from an intellectual standpoint create a good case against the long day. They have forgotten how close to the subsistence level many of their one-time colleagues are living. Knowledge, and perhaps power have blinded them to the more important labour issues. Secondly, and of more significance, is that most trade unions use the appealing implications of the cry for more leisure as a mask for demands for increased wages, for steady employment, for reduced turnover, and for many other material betterments. That is, they use these arguments as aids for furthering the more imminent industrial reforms.

In conclusion, the worker is found as a by-stander in this dispute. He has many other problems he must correct first before he will be acutely conscious of any desire for a shorter working day.

## Chapter Five

There but remains to draw a conclusion to this most complicated of problems. None of the existing arguments have proved whether industry gained or not from a shorter day, and most of the practical experiments found it profitable only in their own special cases. In short neither theory nor practice has established the true worth of the proposal. Therefore a conclusion, if it is to be drawn at all, must be in part at least, indefinite.

The three forces in whose hands the fate of the movement lies are today in a dynamic condition. The Trade Unions are gaining strength daily in the United States and are making a thirty hour week a main plank in their platform. However this plank is but a sham, hiding the real issue which is concerned with larger pay-rolls and a more equitable distribution of the sale price of the manufactured goods. The only legitimate place a shorter day policy has in their demands is the belief that it would make room for the unemployed. It is a misleading adjunct to a proposal designed only to cure unemployment at industry's expense. Whether the unions are using subterfuge or not, the fact of the matter is, that their influence is broadening and as a natural consequence the movement for a shorter day is gaining strength.

The employers are the next group to exert an influence in the controversy. They are and always have been definitely opposed to any drastic reduction in hours, and it has only been the accumulated strength of years of struggling by the public, by governments, by trade unions, and by the common plea for social justice and welfare, that has gradually brought the working day to its present duration

of eight hours. Today the struggle is as bitter as it ever was. Employers associations whether they be in a local labour meeting or in an international Conference at Switzerland, will vote solidly against any compulsory shorter week. Every survey of their views on the subject gives but one opinion which condemns any alteration of the forty-eight hour week. The National Recovery Act illustrated this fact. As soon as it was nullified practically every plant in the United States immediately reverted to longer hours.

Of the two mentioned forces, one represents but a plea for larger pay-rolls and yet is gaining strength for the shorter day movement. The other is in definite, and undiminished opposition. The third force, however, is rapidly threatening to dominate the situation. Across the border President Roosevelt is seen waving his big stick over industry. At the present moment he is interfering with the United States Steel Corporation by forcing it to maintain wage rates and employment. He has tried a compulsory short week under the N. R. A., and he might probably do so again. In a recent speech he said that he was, "opposed to wage reductions because the markets of American industry depend on the purchasing power of our working population, and if we want to restore prosperity we must increase and not decrease that purchasing power." He might just as easily say that he was opposed to long hours since they deprived the unemployed from a chance to work and that, therefore, the spread of purchasing power was seriously limited. A similar situation is seen in Europe. The dictatorial governments regulate every phase of industrial life, and they could easily set up a national shorter working day. The field of government interference is broadening to a corresponding extent on this continent. If present trends continue it might not be improbable to see a compulsory short week in the

United States. If such occurred, it would not take Canada long to follow suit. The government is making a fair bid to disregard the employers unanimous vote against a shorter day.

But, is the scheme worthy of such controversy? There are many authorities who believe it is not. A critical judgement has never really been given--most writers have an axe to grind. A sufficient number of experiments from which significant conclusions can be drawn are also lacking. It certainly would be worth while if it could be proved that many plants today operating on long hours could with equal or more profit run on shorter hours. If such could be proved then a huge amount of human time and effort would be saved and as a consequence a great service to humanity rendered. Unfortunately nothing definite has been proven.

Is it a great reform movement bringing in its train blessings to the human race and palliatives to our great economic ills? Arthur H. Dahlberg believes so. In his book, "Jobs, Machines and Capitalism"(1) he gives a strong theoretical case establishing a shorter working day as a cure for all our economic evils. If the day is shortened so that industry will compete for labour then conditions will be as they were during the Great War when the greatest per capita production was reached with one quarter of the total labour force absent. If a labour shortage was created then all industry would concentrate on producing the spontaneous necessities of life, and all wastes such as the endless duplication of services and goods, styles, advertising, and middlemen would be done away with. Today when efficiency and invention oust men from their jobs they hunt about for some new wants which they can cater to and supply for. Hence in the strict sense they are creating waste. Thirteen plants make the same things and each survives on one-thirteenth the market that one plant

(1) Jobs, Machines and Capitalism, A. Dahlberg, MacMillan, 1932

could produce for. They continue to exist because they advertise so well. We the consumers are educated by advertisements, and we find them subtly creating new wants for us. A four hour day would force industry to concentrate on the necessities of life, and all the labour wasted on duplication, on advertisement, on middlemen would be brought into factories needing labour to supply the people with the so-called spontaneous wants. Long hours are worked to supply useless vain wants created by misguided business men. Tremendous wealth is dissipated on these silly desires, and a further squandering of a nation's treasures is to be found in the 100% excess plant capacity in the United States. Dahlberg cries for a shorter day so that wastes and inefficiencies can be exchanged for leisure, and so that the cost of production may be allowed to keep up to a level where it practically equals the social value of the goods and services created. He takes the four hour day (or any arbitrary shorter day) as a cause for the immediate betterment of all. None will be hungry or cold, all will be working and happy. The working girl will not do without lunch so that she can buy that bit of finery. All the wastes of the modern age will be wiped out and the savings therefrom turned into the satisfaction of the wholesome useful wants of the multitude.

His idea is wonderful and theoretically sound. But that is as far as it goes. The theory is based on the belief that these so-called wasteful and artificial wants can be done away with overnight. Can they? It is hard to believe that the ultra modern race will all drive in Fords, or all make toast on Westinghouse toasters, or all listen to programmes on Philco radios. Is it possible to picture Miss Park Avenue and Miss Waterfront wearing the same clothes? Perhaps Mr. Dahlberg is assuming too much cooperation from the sel-

fish, fickle human race. It is not probable that people would stand for a four hour day with its many consequences, but it would be a great thought, and a great hope if they could.

The shorter day must in the last analysis be taken as a result rather than a cause of the betterment of economic ills. Canada and the United States are in a position today to supply double the present demand for goods. Excess plant capacity in the United States alone is moderately estimated at 100%. And yet despite this unlimited capacity to produce, many are starving, and many more are beset by the awful consequences of long-term unemployment. When these most unfortunate circumstances are done away with, when the distribution of wealth is more equitable, when all willing men can work for a decent living, then a universal shorter working day will be a natural corollary. It has to come, and it will come, but only after a few of the more important economic maladjustments are straightened out. With little fear of contradiction it might be said that a shorter day would be a component part of any economic regime wherein there was justice in the distribution of wealth, where all men had jobs, and where there were no unnecessary duplications of goods and services.

Leaving economics for a moment, it is found that the fields of social justice and social welfare lend much strength to the movement for reduction in hours. It is undeniable that progress in human relations would be greatly furthered by the adoption of a shorter day. The case for added leisure, in any but the science of economics is overwhelmingly strong. Humanity calls for this reform, but its call will probably not be heard until the present economic chaos be changed into a system of order and balance. Its coming is inevitable, yet it will be a result of other changes and not a cause.

The fate of the movement however, is not so limited as it first



appears. Much can be done. Individual plants can start experimenting with variations in working periods. Working examples of a six hour day are fine advertisements. It would not be surprising to see hundreds of plants, especially those whose product entails a small proportion of direct labour cost, adopt a shorter day if they realized through scientific research and actual working experiments that a few hours less per week was not a losing proposition. Shift systems ought also to be encouraged and tested in various industries. The reason why the movement has not received much popularity amongst employers is because there is not definite proof of its adaptability to the different industries. If, by research, it was proved that a short day was applicable to food industries, to textile factories, and certain others, then employers of these plants would not be afraid to try their hand at the new proposal. The idea would not be nearly as frightening and revolutionary if some government committee had already performed the initial trials. If the steel industry was found to operate best under a ten hour day as indicated in the last chapter then steel men would not be bothered with pleas for a reduction in hours. Their day might be shortened, if it had to be, by other methods, perhaps by two five hour shifts.

Finally, to conclude the discussion, it might be best to state briefly the present status of the shorter working day movement and its probable future. At present the movement is gaining no ground, in fact it is slipping backward in Great Britain. Employers in national and international conferences solidly oppose any variance from the eight hour day. It appears that this standard working period is a resistance point which bids fair to be one of lasting

strength unless the employer class changes, or is forced to change its attitude.

This leads to an attempt at predicting the future of the movement. If the decrees of humanity are to be answered, even in part, it must in the long run come into existence. But by Marxian reasoning, as well as by that of most of the modern economists, it seems logical to believe that any nation-wide adoption of the scheme must of necessity follow and not precede the correction of the more fundamental economic ills. It also seems reasonable to believe that in the advent of more research and experimentation the movement might find widespread popularity and adherence amongst individual industries. Herein lies the immediate fate of the shorter working day. Up to the present little worthwhile investigation has been done to show the relationship between hours of labour and productivity in various industries. It is true that much has been spoken, but it is also true that little has been said.

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