#### **OPINIONS OF THE PRESS-continued**

"It should be useful in creating interest in the problems with which it deals, and in making the workers think, if they read it, of the possibilities in the organisation of society. The study of such books is to be recommended strongly to working men, and indeed to all those whose special education has not been naturally in the line of economics, in order that they should realise that the state of society in which they happen to live is neither the best possible, nor yet is it unalterable by human will; that it is very different from what it was a hundred years ago, and that it may be different again and far better if men will but resolve to have it so."—Labour Copartnership.

"A clear picture of the enormous social change which has come over England in the last one hundred and fifty years. It gives in small space the most picturesque and informing account of the passage of a people from agriculture to industry."—Outlook.

"This volume, though small, contains a compact epitome of the social tendencies of the last century—political reform, the organisation of industry, the growth of education, and the co-operative movement. The author emphasizes the wastefulness of our present industrial organisation, and points out the line upon which reorganisation is desirable."—Literary World.

"For simplicity of language and excellent arrangement of facts, we have not seen a better book of its size for many years. It is just the book to place in the hands of a young man, for if he is at all interested in the subject, he will be so fascinated with the romance of industry that he will desire to study it fully, and discuss the problems arising from it with the first authorities."--Leeds Mercury.

## THE INDUSTRIAL REVOLUTION



# THE INDUSTRIAL REVOLUTION

BY

CHARLES BEARD

#### WITH A PREFACE

By F. YORK POWELL

Regius Professor of Mediaval and Modern History in the University of Oxford

.

### LONDON: GEORGE ALLEN & UNWIN LTD. RUSKIN HOUSE 40 MUSEUM STREET, W.C.

FIRST EDI Reprinter		Corr	ection	ы),	J <b>anu</b> ary March	1901 1902
	•	٠.	•		August	1906
17		•		•	June	1911
33			•		March	1918
.,	•	•		•	December	1919
		•			May	1941
	•	•	•	•	February	1927

•

.

All Rights Reserved

.

PRINTED BY THE RIVERSIDE PRESS LIMITED, EDINEURGH GREAT BRITAIN

# CONTENTS

CHAP.	PAGE
PREFATORY NOTE	• vii
I. ENGLAND IN 1760-AGRICULTURE, MA	NUFAC-
TURE, POLITICS	· . I
II. THE MECHANICAL REVOLUTION AN	D ITS
ECONOMIC EFFECTS	. 22
III. THE BREAKING UP OF THE OLD ORDI	.R. 45
IV. REVOLT AGAINST LAISSEZ FAIRE AND BEG	INNING
OF ORGANISATION	. 67
v. THE INDUSTRIAL PROBLEM FROM	THE
STANDPOINT OF MECHANICS AND	SOCIAL
Needs	. 86

My friend Mr. Beard asks me to put a few words of preface to his little book. I do not know that it needs any such introduction, and I remember what Mandeville has wisely and wittily said about prefaces, but I cannot refuse to do as he wishes, for I think that what he has written will be useful to the working people for whom he has written, and I am grateful to him for giving me the opportunity of saying, and desiring me to say here some things to them I have wished to say for some time.

The classes that labour with their hands for weekly wages have now entrusted to them much of the power possessed by the Government of this country. The future of this country, and the parts of the world dependent on it must be largely settled by the use, wise or foolish, good or evil, they will be making of this power. Their own future depends on it. If they refuse to think, if they choose to listen to fools' advice, if they do not take advantage of the opportunities they have for making themselves better, morally, physically, and intellectually, the world will pass them by speedily and inevitably. Goodwill is no excuse in face of facts; only good deeds will count.

Knowledge and the will to use it, and the courage and perseverance required to use it rightly, these are the necessities of progress and of well-being of any kind. Ignorance that may be felt (but that may by honest effort be destroyed) is the cause of many more of our troubles than we like to admit. Science, not Creed, is the Deliverer, if we will only take the trouble to follow it. There will be plenty of mistakes on the way, but if a man means to learn by his former mistakes, he nearly always has the chance, and the advance, though slow, will be continuous.

Democracy is no heaven-born institution. There is

no right divine about it. Darwin has dismissed the fatal poisonous absurdities of Rousseau to the limbo of lost rubbish. If democracy cannot do its work, it will, and must, go as other political methods and expedients have gone. If this country is not healthier, stronger, wiser, happier, and better off in the highest sense under a democracy than it was under an oligarchy, democracy will have failed, and some other plan of government will be tried, whether people like it or not. Democracy is on its trial. If it is worked by wise men and honest men, it may do well; if it is worked by ignorant, prejudiced, gullible, and selfish persons, it will not do well. The greatest enemy of the democracy is the lie-maker, the flatterer, and the person who tries to persuade the voter that dishonesty is not always the worst policy, and that a bit of boodle for himself cannot hurt him or anyone else. A democracy, of all governments, is the least able to afford to listen to lies, or to grow corrupt, or to remain self-indulgent or ignorant. Its stability depends upon the persons it trusts; if it trusts the wrong persons, it falls sooner or later-generally sooner.

These are commonplaces, but they are not sufficiently attended to. Democracy is a good or bad thing as they are remembered and attended to or not. It is worse and more unpleasant and more dangerous to be ruled by many fools than by one fool or a few fools. The tyranny of an ignorant and cowardly mob is a worse tyranny than the tyranny of an ignorant and cowardly clique or individual. Rulers are not wise by reason of their number or their poverty, or their reception of a weekly wage instead of a monthly salary or yearly income.

Again, workers are not respectable or to be considered because they work more with their hands or feet than with their brains, but because the work they do is good. If it is not good work they do, they are

as unprofitable as any other wasters. A plumber is not a useful or admirable creature because he plumbs (if he plumbs ignorantly or dishonestly he is often either a manslayer or a murderer), but because he plumbs well, and saves the community from danger and damp, disease, and fire and water. Makers of useless machinemade ornaments are, however "horny-handed," really "anti-social persons," baneful to the community as far as their bad work goes; more baneful, possibly, than the consumers of these bad articles, quite as baneful as the entrepreneurs who employ them. We " practical English" spend millions on machine-made ornaments, and so-called art which is not art. Every furniture-maker's shop is crowded with badly-made. badly-ornamented stuff which ought never to have been made, and would never be sold if people only took the trouble to try and understand the difference between real art and sham art; if they only knew so much as that a machine can only copy, it cannot make or create a beautiful thing at all. The hand of man, worked by the brain of man, is needed for that. A Windsor chair is an honest piece of work, acceptable: the pieces of the wretched " drawing-room suite" the women are so proud to put in their front parlours are vile to look at, and degrading to live with. The wax flowers you see in the front windows of "respectable artisans'" houses, and the detestable "painted vases" they set on their chimney-pieces. " mantels" they call them, are horrible to look at, and pure waste to make. They do not please the eye: they merely puff up a silly and anti-social conceit. They are symbols of snobbery. The dreadful waste on sham art and bad ornament is bad and anti-progressive. People who cheat themselves into liking. or pretending to like, bad art are blind to good art, blind to natural beauty, and cannot understand what true art is. This is a degrading state to be in for any person or set of persons.

We must not be deceived by words. We talk of "doing well" when we only mean "getting rich," which is a very different thing in many cases. The only good institutions are those that do good work : the only good work done is that which produces good results, whether they be direct, as the ploughman's, or navyy's. or sailor's; or indirect, as the policeman, or the schoolmaster, or the teacher of good art, or the writer of books that are worth reading. A man is no better or wiser than others by reason of his position or lack of position. but by reason of his stronger body, wiser head, better skill, greater endurance, keener courage. Knowledge teaches a community to breed better children, to bring them up better, to employ them better, to encourage them to behave better, and work better, and play better. and in their turn breed children who shall have better chances than themselves-not necessarily better chances to grow rich or to become idle, but better chances to become honourable, wise, strongbodied and strong-brained able men and women. No system of government, no set of formulas, can save a state unless the people who work the system or formulas are wise, and honest, and healthy. A nation with too large a proportion of stunted, unhealthy, besotted, irritable, excitable, ignorant, vain, self-indulgent persons cannot endure in the world-It must and ought to be swept away, and struggle. the sooner the better. What we call Nature does not indulge in sentimental pity; she puts her failures out of their pain as quickly as she can. She does not keep idiot asylums.

In the competition for trade that is upon us, nay, in the very "struggle for life," we can only hold our own by greater physical and intellectual power. We must put ourselves in training; we must throw off the "anti-social" habits that hinder our efficiency; we must beware of the quack mixtures of the demagogue and the superstition-monger, and accept only what satisfies trained reason. We must put off Sentimentality, which means the wholesome feeling for humanity gone rancid and turbid and unwholesome, and is an expensive and dangerous folly. We must take deliberate and calm judgments, and we must look ahead.

The record of progress in this little book is largely the record of the success of men who with honest material objects worked in many ways wisely and prosperously, and made England the richest place on earth: but this is not all, it is the record also of a great sacrifice, a sacrifice of health and happiness and vitality-a needless sacrifice offered up to Mammon. The English people, never by any plague, or famine, or war, suffered such a deadly blow at its vitality as by he establishment of the factory system without the proper safeguards. Napoleon's wars crippled France (though not as badly as his legislation), but the factory system threatened to sap the very existence of our people, because those who could have helped it (both employers and employed) at that time were too greedy, too ignorant, and too callous to understand the full evil they were doing, and the governing classes above them too foolish to see that the remedy must be swiftly applied.

Ignorance and the blindness caused by greed are deadly enemies that we can only meet by knowledge and by honesty. And it must be remembered, though it is often forgotten, that the acquisition of knowledge does not mean book-learning, which is only a very little part of it. It is no good reading a book without understanding it, and no good understanding it unless one profits by it, and makes the principle or the piece of wisdom or fact a part of our mental store, ready for use when the proper times comes. A man may be book-learned and very ignorant.

Mr. Beard's book should make his readers think ; that is what he wants them to do. The good teacher does not teach things, he tries to make his pupils teach themselves by honest thinking. No one really knows a thing that he has not mastered for himself. Here in this little volume is matter for thought, for further inquiry, for bringing a man into touch with big and important branches of knowledge. Such primers are useful; they help one through the hard beginnings of the subjects; they show one how to go on and master the thing by one's self. They give one admitted results, and show one the consequences suspected or ascertained. They work the mind.

There is a time, perhaps, when ignorance may be tolerated, but this is emphatically not the time. We have to set our house in order, as everyone knows who has a grain of sense left, but it cannot be done unless we choose the right men to do our political and economic work, trust them wisely, back them wisely. and resolve not only that the nation, but every town, every village, every workshop, and every house be made healthier, be better managed, and the causes that check progress and security be done away with. We cannot afford to sit down and rub our bellies and think how fat we are. Disease and crime can be tackled, and would be if we were in earnest. It requires probably less effort to keep ourselves and our children healthy and out of the dock than to save money and leave it to fools, or buy an annuity, and it is a great deal more necessary to the nation. It is not a sin to break some old Hebrew tabu that has no utility left in it, but it is a sin to be diseased when you can be healthy, to be ignorant when you can, at a little trouble, learn the truth of a matter, to be dishonest when you can, at the cost of a little effort, speak and act truly. Adulteration, again, is criminal and vile in all its aspects and results, and honest men will have nothing to do with it. It is one of the worst symptoms in the body social when adulterations and shams are tolerated. Adulteration

is simply a low and vile form of larceny practised treacherously by persons who pretend to be respectable (like the bakers and brewers who poison their customers by the careless use of adulterants) upon persons who are often unable to detect or avoid the deceit and injury.

The reading of good books without thinking things out is a mere debauching amusement, and reading for pastime is not a respectable thing, when it is pushed to extremes, at all, any more than over-eating or overdrinking. The "habit of reading" is no better than the "habit of snuffing," unless thereading which the habitué does is good reading—reading that gives noble pleasure or that helps directly to progress, mental or physical, or trains one to practical ends. Waste of time is not only folly, but it is anti-progressive and means degeneration, just as waste of money over bad or foolish things, or waste of work over ugly shams or false ornaments or dishonest productions of any kind.

One of the most useful things a teacher can do is to help beginners to the right books. There is no use, but much weary, useless toil, in the reading of the wrong books. Every scholar knows the fearful count of hours spent in looking through foolish books in the hope of finding something pertinent. All books about books, and the miserable compilations made at second-hand by second-rate men, should be avoided. Read Adam Smith himself: it will take a little time. Don't be persuaded to use an "analysis" or "epitome" of Adam Smith instead, it is only waste of time: it will not do instead of Adam Smith himself. And if you come to fancy it will, you are in the wrong groove. Never be afraid of big books by big men. One can remember and assimilate them far better and easier than any analysis.

This little book seems to me to have in its plain pages and its straightforward substance a good deal of food for thought, a good deal that is worth remembering, a good deal that is of the nature of guidance and warning. For instance, we learn from it how the civilised world has been changed, and our duties, morals, habits, habitations, and connections all altered by the discoveries of a few dozen able men. The world is "full of a number of things," as R. L. Stevenson says, and we have only learnt to make use of a few of these. There seem almost endless possibilities open, but they are only open to those who mean to take advantage of them, who mean to make themselves and do make themselves able to see the things that the ignorant and the lazy miss and always will miss. Our trade rivals have learnt all they knew till a few years ago from us, we can surely afford to take a lesson from our own ancestors. but we must be prepared to strip off prejudice and renounce hollow formulæ. Even if such a sacred institution as a trades-union stands in the way of real progress, it must change or go.

Good work, not sham work ; good art, not bad nor even mediocre art; good food, not the bad bread (one of the worst disgraces of this country) and the bad beer, but good bread and good beer; plain, good clothes, not " fashionably cut " shoddy ; good news, not party lies and foolish flattery and idle or malicious gossip; real information (which need not be cheap, and cannot be easy, for knowledge is not an easy thing to get. but a hard thing both to win and hold), not chopped-up rubbish and dirtygarbage; as much fresh air, and clean water, and out-of-door exercise as we can do with. These are things within our grasp, and we have not got them yet, though we have thousands of things we do not want, or really enjoy at all, but which we are fooled, or fool ourselves, into paying for through the nose. The end of work is to produce useful things, beautiful things, necessary things; but the end of life is not merely work, nor what people look for in exchange for work-riches. Riches without health or security, or the

xiv

knowledge of how to use them, are merely a danger, and a daily reproach to an individual. They are also a danger and a daily reproach when unused, ill-used, or wasted to a nation. Health and wisdom are not incompatible with wealth, but worn-out vitality and blind ignorance quite certainly are. Only the strong man armed and healthy of brain can keep his house.

Healthy people look to the future, sick people are content to linger through the day, or ready to sink into oblivion; the mark of a healthy nation is that it looks forward, prepares for the future, learns from the past, gets rid of its parasites, shakes off its social diseases, and walks resolutely in the service of her whom Defoe celebrated as that "Most Serene, Most Invincible, Most Illustrious Princess, REASON," and whom, long before him, Solomon, and the son of Sirach, lauded as the Chief of Things, the very emanation and breath of their God Himself. IN issuing a second edition of this little book without a thorough revision, I am by no means unconscious of its defects. However, I believe it will continue to serve my original purpose, which was to supply a concise and inexpensive outline of the Industrial Revolution as a guide to students seeking for the first time the historical basis of modern social and economic problems.

The last chapter, which contains nearly all the controversial matter in the book, has been severely criticised in certain quarters. On one hand, I have been accused of materialism, and on the other of want of knowledge of the real character of the industrial problem.

Now, it is quite easy for comfortable persons with good incomes to decry as materialistic all attempts to secure better wages, better homes, and better conditions of life and labour generally. Recently we have heard the bitter cry of the impoverished clergy for higher salaries; and were one-third of the parsons of England compelled to support their families on a guinea a week and less, as about one-third of the working-men of London and other great cities are, there would be a substantial addition to the ranks of the "materialists." It is true that a man may have plenty to eat, and still be a danger and disgrace to the community; but it is equally true that he cannot be a help and a credit to the community unless he does have plenty to eat. When the spiritually-minded rich discover the dangers of materialism arising from comfortable circumstances, they may not spend so much of their time trying to prevent a decrease of their share of the national The researches of Mr. Booth for London income.

and Mr. Rowntree for York demonstrate beyond all doubt the fallacies of favourite panaceas of thrift and temperance which are preached without danger to the supremacy of those who possess the earth and its fulness.<sup>1</sup>

The second criticism of Chapter V. is based upon the statement quoted by Mill, that "the deepest root of the evils and iniquities which fill the industrial world is not competition, but the subjection of labour to capital, and the enormous share which the possessors of the instruments of industry are able to take from the produce." In defence of my position, I may say that in Chapter V. I only attempted an analysis of industrial society as it exists, without going into the historic and economic causes of the maladjustments pointed out. The publication of Mr. Hobson's book on "The Social Problem," shortly after this little work appeared, leads me to believe that the line of research indicated in the last chapter is indeed an important one, and I am glad that Mr. Hobson has given us his clear and vigorous contribution to the subject. While admitting that our present maladjustments are the outcome of the "social form of production and the individual form of appropriation and exchange," I contend that this system wastes more wealth than it contributes to landlords, capitalists, and money-lenders. The statistics are not at present forthcoming to prove this statement, but a few figures will illustrate my point, Mr. Edson Bradley, Vice-President of the Distilling Company of America, recently estimated that between producer and consumer \$40,000,000 were annually lost mostly in competitive attempts to secure trade. Upon the combination of the competitors in the distilling business 300 travelling salesmen were discharged, and

> <sup>1</sup> See also Robertson, "The Fallacy of Saving." Sonnenschein,

#### xviii NOTE TO SECOND EDITION

a saving of \$1,000,000 effected in this one department of "enterprise." The American Wire and Steel Company, formed of competing concerns, dismissed 200 salesmen who had been engaged in "heckling" customers. It is stated that 3,000 salesmen lost their positions through the formation of the American Tobacco Company, and that the Continental Tobacco Company discharged 350 travellers in one day. The (1900) Report of the Executive of the American Travellers' Protective Association stated that probably 350,000 travelling men had lost their positions through the workings of monopolies and trusts, and estimated that the latter saved \$6,000,000 daily by limiting advertising and concentrating industries. The recent American Combination of Laundry Machine-Makers discharged 30 per cent of the employes as unnecessary to the production of all the machines demanded in the market, and effected a saving of \$780,000 annually in working expenses. Mr. Gates, of the Wire and Steel Company, stated that his concern saved \$500,000 yearly in "cross freights" through combination and organisation of shipping. A prominent railway manager in the United States estimates that \$200,000,000 would be saved annually if all railways were worked from one centre. Professor Elv savs: "It is useless to attempt any precise estimate, but it may not be an extravagant estimate if we claim that the loss due to competition in the railway business in the United States from the beginning of our railway history to the present time has been sufficient to furnish all the people of the United States with comfortable dwellings, provided all the houses now in the United States should be destroyed." To read this statement along with the recent Report on Tenement Conditions in Chicago, is enough to arouse the most indifferent. The annual waste on railways, advertising, and telegraphs in the United States is estimated at \$698,000,000, while the waste

on separate railway management in England is set at  $\pounds$  30,000,000 yearly. It is calculated that there are in London two and a half times as many shops as are necessary for convenient and efficient distribution. Business men struggling with one another waste an enormous amount of wealth, and capitalists and workmen fighting each other waste a great deal in addition. For example, in 1897-98, 25,636,001 working days were lost in England through labour disputes arising out of the inevitable antagonism existing in the modern industrial system. To quote Professor Ely again : "The losses in a single year of industrial crises, and consequent industrial stagnation, amount to hundreds of millions of dollars, and involve untold misery to millions of human beings. Capital is idle; labour is unemployed; production of wealth ceases; want and even starvation come to thousands ; separations, divorces, and prostitution increase in alarming proportions - and all this happens because the machinery of the industrial system has been thrown out of gear by the operation of some force or another. which, so far as we can judge by experience, is an essential part of the order of competition."

On page 104, I say: "The charge of inefficiency, weakness, and crudity need not be based upon sentiment about rich and poor, or class jealousy." At the same time, I do not doubt that the reorganisation of industrial society upon a democratic basis will be brought about by a political and social movement depending for its numerical strength upon the working classes, CHARLES BEARD.

٩.

MANCHESTER, January 22, 1902.

# BIBLIOGRAPHY

BAINES : History of Cotton Manufacture in Great Britain.

Babbage : Economy of Machinery.

Bentham : Essay on Fallacies. Bischoff : Comprehensive Hinteres. Bischoff : Comprehensive History of the Woollen and Worsted Manufactures. Bosanquet (Mrs.): The Standard of Life. Burnley : Wool and Wool Combing. Campbell : Political Survey of Great Britain. Carlyle : Chartism. Past and Present. Cunningham : Growth of English Industry and Commerce. Co-operative Wholesale Society's Annual, 1900. Daly: The Dawn of Radicalism. Draper : Intellectual Development of Europe. Conflict between Science and Religion. Ellison : History of Cotton Trade. Engels : State of Working Classes in England in 1844. Fabian Essays. Falini Alistory of Machine-Wrought Hosiery. Gaskell: Manufacturing Population of England. (1833.) George: Progress and Poverty. Science of Political Economy. Gibbins : Industrial History of England. Hobson: Evolution of Modern Capitalism. Hobhouse ; The Labour Movement. Hyndman : Commercial Crises of the Nineteenth Century. Joly : Man before Metals. Joly : Man before Metals. Jones Lloyd : Life, Times, and Labours of Robert Owen. Kropotkin : Fields, Factories and Workshops. Langlois and Seignobes : Introduction to the Study of History. In this helpful little volume there are "a few pages devoted to the question of evidence which will be an aid to every one desirous of getting any series of facts," as well as valuable suggestions for the selection and classification of relevant materials. Lloyd: Wealth against Commonwealth. Labour Co-partnership, Marsden : Cotton Spinning, Marshall : Economics. Namyth : Archivelta Namyth : The Student's Cotton Spinning. Nordas : Conventional Lies. Degeneration. Rogers : Six Centuries of Work and Wages. Economic Interpretation of History. Radcliff: Origin of the New System of Manufactures. Rose : Modern Democracy. Ruskin : Unto this Last. Scrivener : History of the Iron Trade. Smiles : Lives of the Engineers. Smith: Wealth of Nations. Social England, Vols. v. and vi. Spancer: The Study of Sociology. Principles of Sociology, vol. iff. Taylor: The Modern Factory System. The Decker of Insertion Tesla: Century Magazine for June, 2900. The Problem of Increasing Human Energy. Thuraton: The Steam Engine. Toynbee: The Industrial Revolution. Normee: Ine Industrial According Ure: History of Cotton Manufacture. Philosophy of Manufacture. Walsaley: Electricity in the Service of Man. . Webb (Bastrice): The Co-operative Movement. Webb (Sydney and Bastrice): Trade Unionism. Industrial Democracy. Worthington: Dwellings of the People. Young: Tours and Miscellaneous Writings.