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# Studies in the Evolution of Industrial Society

BY

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"MONOPOLIES AND TRUSTS," ETC.

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POLITICAL SCIENCE, UNIVERSITY OF  
WISCONSIN

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STUDIES IN THE EVOLUTION OF  
INDUSTRIAL SOCIETY

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## PREFACE

THE following words were used in the "Editor's Preface" to the Citizen's Library of Economics, Politics, and Sociology: "It is the conviction of the Editor that scientific work in the field of the humanities may generally be made interesting to intelligent citizens through cultivation of clearness in statement and literary style. . . . It is desired to lay emphasis on the fact that while the sciences of Economics, Politics, and Sociology are of concern to the citizen and make appropriate the title 'Citizen's Library,' in no case will the interests of science be sacrificed to popularity. The aim will be to bring every volume in the Library up to the present standard of science, and it is hoped that the Library will in more than one instance push forward the boundaries of knowledge." These words express the ideal which the author has kept before him in the preparation of the present volume. This statement is made, not because the author ventures to hope that he has fully attained his ideal, but because the statement of the purpose which has constantly been kept in view may prove

## PREFACE

helpful to the reader. Many difficult topics are discussed in these pages, and an immense field is traversed. This field belongs largely to that general borderland where economics, ethics, biology, and sociology meet. At the same time, in its preparation the writer has never forgotten that he is writing as an economist. This borderland will surely prove scientifically fruitful territory, and it must be worked by men who approach it from the viewpoint of the different sciences mentioned. If the work is well done in each case, the scientific products will vary, but will constitute an harmonious whole.

A list is appended of the author's articles and published addresses which have been used to a greater or less extent in this volume, and the author makes his acknowledgments with thanks to the publishers for permission to reprint. Notwithstanding the fact that the list is a rather long one, the book is essentially new. A large part of it has never appeared in print before, and even when previous articles have been used, they have generally been greatly altered and enlarged. The style of a speaker addressing an audience is preserved in the papers on "Competition; its Nature, its Permanency, and its Beneficence" and "Industrial Liberty," which the author delivered as presi-

## PREFACE

dent of the American Economic Association in the years 1900 and 1901 respectively. Although elsewhere the author speaks in the third person, there seemed to him more to be gained than lost by so doing.

The general plan of the book is probably made sufficiently obvious by a perusal of the Table of Contents. Part I gives a general survey of the evolution of industrial society; Part II treats specific problems which are problems of industrial evolution. These problems are all suggested in Part I, and they are distinctively problems which have been the outcome of industrial evolution. This thought of industrial evolution has been constantly kept in mind, and gives unity to the book.

The author is well aware that there is scarcely a chapter in the book which could not be expanded into a volume. He hopes, however, that he has been able to keep a due proportion between the various topics discussed, and that by following this method he has been able to lay a foundation for future work.

Acknowledgments for valuable suggestions are due to Professors J. Mark Baldwin, Charles J. Bullock, Thomas N. Carver, Frank A. Fetter, Franklin H. Giddings, E. A. Ross, and to Dr. G. R. Wicker.



## PREFACE

The author's acknowledgments are due to Mr. Solomon Huebner, Graduate Scholar in Economics, for permission to use the excellent tables of inheritance tax legislation in foreign countries, which he has prepared as part of a thorough monographic treatment of modern inheritance taxation. Finally, it is the author's duty and pleasure to express his appreciation for the varied assistance given him by his colleague, Mr. Max O. Lorenz, Assistant in Economics. The untiring and very efficient efforts of Mr. Lorenz have lightened his labors and added to the value of this book.

RICHARD T. ELY.

MADISON, WISCONSIN,  
March, 1903.

## LIST OF THE AUTHOR'S PUBLICATIONS

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COMPETITION; ITS NATURE, ITS PERMANENCY, AND ITS BENEFICENCE. Address delivered as President of the American Economic Association, in Detroit, Michigan, Dec. 27, 1900. Printed in Publications of the American Economic Association, 1901.

MONOPOLIES AND TRUSTS. *International Journal of Ethics*, April, 1900.

AN ANALYSIS OF THE STEEL TRUST. *The Cosmopolitan*, August, 1901.

MUNICIPAL OWNERSHIP OF NATURAL MONOPOLIES. *North American Review*, March, 1901.

INHERITANCE OF PROPERTY. *North American Review*, July, 1891.

UNITED STATES INDUSTRIAL COMMISSION'S REPORT ON LABOR. *Yale Review*, November, 1902.

HOW TO AVERT STRIKES. *Boston Evening Transcript*, Aug. 3, 1901; also elsewhere.

INDUSTRIAL LIBERTY. Address delivered as President of the American Economic Association, Washington, D.C., Dec. 27, 1901. Printed in Publications of the American Economic Association, 1902.

REVIEW OF PROFESSOR J. MARK BALDWIN'S "SOCIAL AND ETHICAL INTERPRETATIONS." *The Expositor*, March, 1898.

OUR NEIGHBORS. Chapter VII, in "Social Law of Service." New York, 1896.

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