# READING FOR SOIL SCIENTISTS, TOGETHER WITH A LIBRARY

(Revised)

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### **FOREWORD**

This essay and book list for students of general soil science developed gradually between 1930 and 1940, when it was first published in permanent form in the Journal of the American Society of Agronomy (32: 867-876), November 1940. Since the list appeared to be useful, I was persuaded to revise it in 1956. This issue is a further revision.

The suggestions of books and authors are most useful to those who first glance at the essay on reading.

# 1. READING

General reading is almost wholly a matter of habit. Some get the habit as children; some develop it later; and others never get it. Like other habits, those for reading can be changed with a little effort.

Reading is the only practical way open to most of us to enlarge our experience about the things, the people, and the ideas of the world we live in - and especially, perhaps, to learn about ourselves in relation to this world. But, one may ask: Why do we need to know? Why not simply take life as it comes and enjoy it? Reading to find out current stock prices or ballgame scores, and how to do a job, may be fine - but why go beyond that? Our kind of open society gives each of us, at least each adult, both the freedom and the responsibility to answer for himself. Perhaps some do have little concern about other people, either past or present, or for their ideas. Some depend on others for guidance on issues both small and great. Yet those who did care and who tried to learn built the open society we now enjoy together.

The person who has an urge to learn something new, to expand his present universe, has the first requisite of a general reader. This "something new" could be about Persian art, smokeless powder, or the soils of Attu. It probably matters little where the serious reader begins. Knowledge is all one whole. Truth is a great jewel with many facets. Even if one begins with a narrow objective, continuing inquiry leads to other fields. Some people find it helpful to begin with the "great books" because the scholars and artists of each age build partly with older ideas. Yet the general reader can start with either today's authors or the early ones. If he continues his inquiry he will get to both anyway.

As an inquiry begins from an internal urge, however stimulated, it tends to grow in several directions. The more one reads, the more he finds that he must read. Our facts and ideas about the world and the people in it interact in complex ways. This great design of facts and ideas is three dimensional: it extends over the world and back in time before the first family of man. Only from it can we hope to acquire the skill of foresight.

Thus does the search for truth - the truth that sets men free of myth and fear and hate and slogan - urge the general reader on. He continually extends his inquiries; he continually finds new reading before him. The general reader always has an irksome feeling of being behind with his reading.

The general reader seeks knowledge of relationships, not facts alone. Certainly he wants facts. But even an encyclopedic mind, with neatly classified facts in separate compartments, does not help a person to understand his relationship to the world he lives in; nor do purely imaginary theories that ignore the great body of facts and experience.

Like other experiences, reading progresses in stages. Any author assumes that his reader already has some knowledge and understanding. Most skillful authors feel the obligation to present their material as clearly and simply as possible. But many ideas of the greatest interest to us are based upon a large number of facts and other ideas; no one may be able to state them both briefly and in the known terms of those readers who up to now have had only limited cultural experience.

No one can deny our present need for simple writing about those things and ideas that can be explained simply. But some of the recent trends go too far. We are given "condensations" and "popular" books that hopelessly oversimplify the ideas they pretend to explain. Reading such books may lead us to assume that we know about ideas when in fact we do not. They confuse us rather than help us. The acceptance of false concepts or figures as true ones defeats our very purpose because our understanding of relationships comes from many combinations of concepts within the mind. A single false concept can spoil a combination. This process of developing new combinations within the mind is basic to the formulation of new ideas and principles and to our own personal adjustments to the world we live in.

Thus inaccurate books can be worse than a waste of time. Yet no one has found a satisfactory way to eliminate them that would not lead to far worse handicaps to free inquiry.

Among scientific and technical books one can usually avoid the sensational without missing anything of importance. As a rough test of an author dealing with scientific or technical subjects, let us try to find the answers to four questions: Has the author followed the scientific method and considered other explanations besides the ones he advances? Is the writer free to tell the truth as he sees it? Has his work been tested by the free criticism of competent scholars of the same field? Do other competent scholars in the author's field respect him, even though they may disagree with him, or dislike him personally?

If the answer to any one of these questions is "no" let us beware. But, we have no infallible rules. Some great writers have gone long unappreciated and some have produced great books in bigoted, restraining environments. As readers, we should favor authors who write clearly and as simply as their subject permits. But let us be careful not to reject authors who have written as simply as possible about subjects that can be dealt with accurately only in advanced scientific and cultural terms.

Also, some subjects can be discussed satisfactorily only in a big book, or even several big books. Personally, I do not care for condensations except those made by the author himself. The relation between an author and his reader is a personal one. I should rather select the parts to skip myself than to have someone else do it.

Taste in reading is a highly personal matter. One can avoid the "hard" book wherein the author assumes that his reader has a background of familiarity with the classics of science and literature. But the general reader cannot do so entirely. And after he gets experience in reading he will not avoid them - in fact he will seek out some of them, partly for what he hopes to learn and partly because of the delight such reviews of his earlier reading give him. The growing mansion of memories is one of the greatest compensations from reading. The general reader is rarely lonesome. Even apart from books, he has his memories.

We read for pleasure and beauty as well as for knowledge. Often beauty and knowledge join together. To me a poem or novel appeals if I reflect at the end: "Yes, this is right - this is the way the world is." Then too, most of us like to read partly just for fun, to relax, or to escape from the world around us for a little while. For such reading many enjoy the simple intricacies of a detective story. Yet others who detest detective fiction enjoy books like Spengler's Decline of the West, are scarcely able to lay them down. Some of my friends relax before the fire with Horace or Pliny in the original. Most of us don't.

Some want to learn about distant places. Others want to know about our past and why men and nations developed as they did. A lot of us want to know more about what is going on now and even to try to forecast future events. Some readers find pleasure in the very music of word combinations and the alternate focusing and blending of images. Sooner or later most of us read to find out how to do something. We may want to learn a new skill, perhaps as a part of our job, for a hobby, to improve our living space, or on how to educate our children. The general reader has these and other purposes.

Every reader makes selections. No one can read all the useful books. The urge from within is the best guide. Except for the critic who must, few general readers attempt to read or even to be familiar with all the current books. Certainly no soil scientist could read all the "best sellers" and become a general reader too. Fortunately, no one needs to worry about "missing" a good book. The good ones stay with us. They are the classics.

Yet even among the classics are books that may not interest us. A few great authors simply do not appeal to us. It is best to pass them by. But before doing so finally one should give the classics he hated as a child a fair trial as an adult.

What crimes against literature have been committed in the sight and hearing of the innocents! Commonly - all too commonly - great masterpieces, written for adults to read as a whole, are dished up to young people in indigestible pieces garnished with footnotes and gushiness. Of course they don't understand them. And far worse, the youngster may develop a thorough hatred of the classics - a feeling that can remain with him for life. Names like Thackeray, Shakespeare, Dickens, and Emerson strike terror to his heart. And what a pity! For regardless of the purpose of reading - for education, as an escape, for amusement, or just to kill time - the classics are the best for it. This is why they are classics.

They include the best poetry, the best drama, the best novels, the best history, the best detective fiction, the funniest verse, and even the warmest tales of affection.

As a reader becomes a general reader he also becomes a rapid one - or rather perhaps if he becomes a general reader he has learned to read rapidly. He must to cover the ground he lays out for himself. The slow reader finds reading too painful; he prefers to do something else. And in this period of modern gadgetry our merchants and our ad-stuffed magazines offer many alternatives. Then the non-reader tells us with all seriousness, even with pathos: "Oh, I should like to read more but I have no time for it." In not one instance of the hundreds of conversations in which this has been said in my presence was it even approximately true for more than a very short time. Although rarely more probable, bad eyes offer a better excuse. At least the possibility exists. My busiest friends read a lot.

Because of early environment perhaps, many children and young college students read little besides their textbooks. One tends to read slowly books on which he expects to be examined. Where such reading establishes the habit of slow reading, the pace must be changed before a reader can become a general one. As a teacher, I learned from an old professor of psychology at the University of Chicago, whose name I have forgotten, to

recommend to my students books of special interest to them (not necessarily to me). I did this individually. The book, or his progress with it, was never mentioned to a student unless he asked a question. Most asked for another suggestion, and then another, and so on. Many learned to read more rapidly and became general readers.

Now to get down more specifically to a soil scientist. What should he read?

Let us assume that he wants to know more about soil science - about the relationships among soils, water, plants, farming, ranching, forestry, and resource conservation throughout the world - and how he, as a soil scientist, can contribute to human welfare. In the critical need for more food and for rural improvement in the newly developing countries he sees the great direct challenge to soil science and, perhaps, to himself.

He can start there. But as he progresses he senses three great classes of relationships that he needs to understand: (1) The relationship of facts to facts, the field of science; (2) the relationship of man to the facts, the field of art; and (3) the relationship of man to man, the field of justice and morals. He strives to make his knowledge symmetrical as a citizen of the world as well as a soil scientist per se. He finally sees knowledge as a great whole, not really split into departments. He finds that truth is what we said it was earlier - one gorgeous jewel with many facets.

Such a soil scientist must of course inform himself in his own field and keep abreast of current research and development. This immediately leads him into the other natural and social sciences. He doubtless reads regularly the publications of the Soil Science Society of America and of the International Society of Soil Science, including its congresses and commissions. He goes through the periodicals and bulletins of the outstanding soil research institutes, both here and abroad. He reads both the new and the old books and monographs by the outstanding masters in his field.

He looks also at the most important books and monographs in closely related fields - chemistry, biology, geology, economics, and the like. He keeps abreast of the principal publications of the American Association for the Advancement of Science. He keeps aware of what is going on in the practical world of farming, forestry, engineering, and land-use planning, both here and overseas. His general reading includes a good newspaper and some of the current magazines.

From these points of departure, he goes where he must to accomplish his purpose. Again and again he discovers the need for more background from current books on science and from the classics. He may use the following reading list or a better one as a general guide.

Thus our soil scientist becomes a general reader!

### II. A LIBRARY

The important books that have expressed our cultural ideas or that have contributed to our understanding of science, art, justice, and morals have been written by many kinds of people and in all sorts of forms - in stories, poems, plays, and novels as well as in essays. The authors wrote at different times and in many places. Some were professionals, writing for money or as a part of the job they lived by. Many were not and wrote mainly for other reasons. The writers of the classics came from many social backgrounds. They include artists, philosophers, teachers, poets, scientists, administrators, soldiers, workmen, secretaries, lawyers, explorers, housewives, farmers, merchants, politicians, and priests. Some defy classification.

No one person or group can pretend to make an entirely satisfactory reading list for any other person or group. No one has been able to read all the good books, and each of us reads many mediocre ones for each book that appeals to us as exceptional, or even good. The list that follows includes books that I have found to be especially helpful. Some are omitted that others would include simply because they did not appeal to me. More important, there are great numbers of good books that I have not read or even heard of.

A few books were left out of the list because of their scarcity, and some for other reasons. Many excellent collections of letters and books of literary criticism have been omitted. Then too, I have omitted books that I enjoyed very much just as good fun or to relax, including comic verse and detective fiction, except for one. And the list omits some one hundred personal favorites about James Joyce!

The titles are arranged in groups to separate roughly the technical books from those of more general interest. Of special importance to the beginner in science are those in group 5, dealing with the basic method and philosophy of science. The list in group 2 is shorter than it should be simply because I have not read enough of the current textbooks in geology, ecology, botany, chemistry, and geography, to make proper selections. Increasingly, background books in current science and mathematics are becoming available in paperbacks.

Titles are arranged in approximate alphabetical order of the authors' names. Dates and other brief notes are given only where necessary to identify a particular edition or translation. Apart from the obvious accusation of conceit against anyone who prepares such a list, I am fully aware that this list is open to criticism on the grounds of personal taste and prejudice and of narrowness of scope. Better lists could exclude some titles and include many more. I hope only that it may help a few soil scientists to become general readers. The general reader makes his own list as he reads, better for him than the one that follows.

Many of the books in the list are available as paperbacks or in other cheap editions. Every year additional titles on the list become available in such cheap formats. In a few instances, different translators give slightly varying titles to the same book. Both prose and metrical translations are available for some poetical works.

Using this and other lists one can have a fine personal library at low cost. It need not weigh much nor require much shelf room. Selections can be made from current lists of inexpensive editions. Examples of hard-cover books include the American Modern Library and the British Everyman's Library and Oxford World Classics. A great many can be had in paperback from several American and British publishers, including the low-cost paperbacks of the Penquin Books published in Britain.

## 1. SOIL SCIENCE.

Introduction to soil microbiology. Martin Alexander. Wiley. 1961.

Soil physics. 3rd. ed. L. D. Baver. 1956. (New edition in preparation).

The nature and properties of soils. H. O. Buckman and N. C. Brady. 6th. ed. 1960.

A study of the soils of the United States. G. N. Coffey. U. S. Dept. of Agric. Bur. of Soils Bul. 85. 1912.

The soils of the Netherlands. C. H. Edelman. Amsterdam. 1950.

The great soil groups of the world and their development. C. F. Marbut's translation of Die Typen der Bodenbildung by K. D. Glinka. (Berlin. 1914.) Ann Arbor, Michigan. 1927.

The soil. 5th. ed. Sir A. D. Hall. Murray. 1945.

Soils. E. W. Hilgard. Macmillan. Department. Lansing. 1960. 1906.

Soil fertility and permanent agriculture. C. G. Hopkins. Ginn. 1910.

Efficient use of fertilizers. 2nd. ed, V. Ignatieff and H. J. Page. editors. FAO. Rome. 1958. (Also available in French and Spanish.) International Congresses of Soil Science. Proceedings. 1st. Washington, 1927, 4v; 2nd. Moscow, 1930, 6v; 3rd. London, 1935, 3v; 4th. Amsterdam, 1950, 3v; 5th. Leopoldville, 1954, 4v; 6th. Paris, 1956, 5v; 7th. Madison, 1960,4v.

Second Inter-African Soils Conference (Leopoldville, 1954). Proceedings, 2v. Brussels.

Factors of soil formation. H. Jenny.

Pedology. J. S. Joffee. Rutgers.

The soil: its nature, relations, and fundamental principles of management. F. H. King. Macmillan. 1916.

Soils of the United States. C. F. Marbut. <u>In</u> Atlas of American Agric. U. S. Dept. of Agric. 1935.

Soils:their genesis and classification. C.F. Marbut. Soil Science Society of America. 1951.

Field manual of soil engineering. 4th. ed. Michigan State Highway Department. Lansing. 1960.

The soil under shifting cultivation. P. H. Nye and D. J. Greenland. Commonwealth Bur. Soils. Technical Com. No. 51. 1960.

The evolution and classification of soils. E. Ramann. Translation by C. L. Whittles. Heffer. 1928.

Soils: their origin, constitution, and classification. 3rd. ed. G.W. Robinson. Murby. 1949.

Mother earth. G.W. Robinson. Murby. 1937.

Soil conditions and plant growth. 8th. or 9th. ed. Sir. E. J. Russell. Longmans. 1950-1961. (See earlier editions for bibliography of classical papers.)

The group of papers covering the development of pedology in Russia prepared for the First International Congress of Soil Science. Leningrad. 1925. (In English).

Soil physical conditions and plant growth. B. T. Shaw, ed. Academic Press. 1952.

Life and work of C. F. Marbut. Soil Science Soc. of America. 1942.

Soil Survey Manual. U.S. Dept. of Agric. Handbook No. 18. Washington. 1951.

Mineral nutrition of plants. E. Truog. ed. University of Wisconsin Press. 1951.

Diagnosis and improvement of saline and alkali soils. U. S. Dept. Agric. Handbook No. 60. Washington. 1954.

Soils and men. 1938 Yearbook of Agriculture. U. S. Dept. of Agriculture.

Soil. 1957 Yearbook of Agriculture. U. S. Dept. of Agric. (Mainly on soil management.)

The diagnosis of mineral deficiencies in plants by visual symptoms. 2nd. ed. J. Wallace. HMSO. London. 1951.

Soil and civilization. Milton Whitney. D. van Nostrand. 1925.

Principles of agriculture. W. R. Williams. (Trans. by G. V. Jacks). Chem. Pub. Company. New York. 1952.

Soil Science. Vol. 1 et.seq. 1916 to present.

Soil Science Society of America, Proceedings. Vol. 1 et seq. 1936 to present.

The Journal of Soil Science. Vol. 1 et seq. 1950 to present.

Soviet Soil Science. (A translation of Pochvovedeniye) AIBS. Washington. 1956 to present.

## 2. RELATED SCIENCES.

Introduction to economics for agriculture. John D. Black. 1953.

Farm management. Black. Clawson, Sayre, and Wilcox.

Economics for agriculture: selected writings of John D. Black. J. P. Cavin, ed. 1959.

The determination of hydrogen ions. W. M. Clark. Williams and Wilkins.

The data of geochemistry. F. W. Clarke. U. S. Geol. Survey Bul. 770.

Landscape as developed by the processes of normal erosion. C. A. Cotton.

Climatic accidents in landscape-making. C. A. Cotton. Outlines of physical chemistry. Daniels.

The formation of vegetable mould, through the action of worms with observations on their habits.

C. Darwin.

Glacial geology and the Pleistocene Epoch. R. F. Flint.

Fundamentals of fruit production. Gardner, Bradford, and Hooker. McGraw-Hill.

Sahara, the great desert. E. F. Gautier.

Sourcebook on atomic energy. Samuel Glasstone.

Elements of the differential and integral calculus. Granville.

Economics of agricultural production and resource use. Earl O. Heady.

Crop Production. Hughes and Henson. Macmillan.

Climate; and The climates of the continents. W. G. Kendrew. Oxford.

Geomorphology. A. K. Lobeck.

Outlines of geology. Longwell, Knopf, Flint, Schuchert, and Dunbar.

Race, sex, and environment; a study of mineral deficiency in human evolution. J. R. de la H. Marett. Hutchinson. London. 1936.

Principles of economics. Alfred Marshall.

Plant physiology. N. A. Maximov. McGraw-Hill.

Rocks, rock-weathering, and soils. G. P. Merrill. Macmillan.

Plant physiology. E. C. Miller. McGraw-Hill.

Guidebooks of the Western United States. U. S. Geol. Survey Buls. 611, 612, 613, 614, 707, 845.

Geomorphology. Von Engeln.

Principles of soil microbiology. S. Waksman. Baltimore.

3. EARLY SOIL SCIENCE AND AGRICULTURE.

Le livre de l'agriculture. Ibn-al-Awam. Trans. Arabic to French. Paris. 1864. (A pity it is not in English).

Mirror for Americans. Ralph H. Brown.

Roman farm management: A translation of Cato and Varro. "A Virginia Farmer." Macmillan. 1913.

Cato the Censor on farming. Trans. by Ernest Brehaut. Columbia Univ. Press. 1933.

Husbandry (De re rustica).
L. J. M. Columella. (Written about 60 A.D.) English
Translation. 1745.

Letters from an American Farmer. J. Hector St. John Crevecoeur.

Terra, a philosophical discourse of earth; Sylva, or a discourse on forest trees; and Directions for the gardener at Says-Court. John Evelyn.

The movement of soil material by the wind. E. E. Free. Bur. of Soils Bul. 68. 1911.

Vegetable staticks. Stephen Hales. London. 1731-33.

Report on the geology and agriculture of the State of Mississippi, 1860; Alkali lands, irrigation, and drainage in their mutual relations, Sacramento, 1892; and Report on cotton production in the United States, Tenth Census, 1880. Vols. V and VI. E. W. Hilgard.

E. W. Hilgard and the birth of modern soil science. Hans Jenny.

The natural laws of husbandry. Justus von Liebig. 1863.

Soil Erosion. W J McGee. Bur. Soils Bul. 71, 1911.

The cotton kingdom. F. W. Olmsted.

The admirable discourses of Bernard Palissy. (In English). Univ. Illinois Press. 1957.

An essay on calcareous manures. Edmund Ruffin. (The first edition was reprinted by the Harvard University Press in 1961).

The origin and nature of soils. N. S. Shaler. From 10th Annual Report, U. S. Geol. Survey 1891.

The horse hoeing husbandry. Jethro Tull. London. 1731.

Agricultural reports. U. S. Patent Office. (Forerunners of U. S. Dept. of Agric. Yearbooks). 1849 et seq.

Washed soils: How to prevent and reclaim them. U. S. Dept. Agric. Farmers Bul. 20. 1894.

The soils of Tennessee. C. F. Vanderford. Tenn. Agric. Exp. Station Bul. 10. 1897.

The Georgics. Vergil.

The Kington of
Travels in France. Arthur Young.

4. GENERAL AGRICULTURE AND PLANNING.

The politics of agriculture: Soil conservation and the struggle for power in rural America. Charles M. Hardin.

Notes on the State of Virginia and other essays. Thomas Jefferson.

Problems and policies of American agriculture; and subsequent volumes from the Iowa State University Center for Agricultural Adjustment. Iowa State University Press.

TVA-Democracy on the march. David E. Lilienthal.

The decline of agrarian democracy. Grant McConnell.

The agriculture act, 1947.
J. F. Phillips. London. 1948.

World population and world food supplies. Sir E. John Russell. Allen and Unwin. London. 1954.

Food for the world. T. W. Schultz, editor. 1945.

Economic analyses and policy in underdeveloped countries.
(Routledge and Kegan Paul, London. 1965.

Fiction and truth about 'The decade of development'. M.W. J.M.,
Brockmeizer. 1966 ###

& Economie planning: the French experience. Pierra Bauchet

Science and Technology for Development: Report on the United Nations Conference on the Application of Science and Technology for the Benefit of the Less Developed Areas. Volume III. Agriculture. 309 pp. United Nations. New York. 1963.

reimer.

Resources for freedom.
President's Materials Policy
Commission. 5 v. Washington
1952.

The groundnut affair. A. Wood. Bodley. London. 1950.

5. SCIENCE: HISTORY, MEANING, METHOD, AND PHILOSOPHY.

The advancement of learning. Francis Bacon.

An introduction to logic and scientific method. Cohen and Nagel.

On understanding science.

James B. Conant.

The discourse on the method. Descartes.

Physical forces of nature; and The chemical history of the candle. Faraday.

Conservation of force and other essays. Helmholtz.

The order of nature. L. J. Henderson.

Civilization and climate. Ellsworth Huntington.

The biological basis of human nature. H. S. Jennings.

The nature of things. Lucretius. (Translation by Munro, Latham, or Leonard).

A system of logic. J. S. Mill. (8th or subsequent edition).

The grammar of science. Karl Pearson.

The universe in the light of modern physics. Planck.

Introduction to mathematical philosophy; The analysis of matter; The scientific outlook; and An inquiry into meaning and truth. Bertrand Russell.

Science and government. C. P. Snow.

Foibles of insects and men. W. M. Wheeler.

History of the inductive sciences. William Whewell.

6. PHILOSOPHY, CONDUCT OF LIFE, HISTORY, ETC.

History of the United States; and the degradation of the democratic dogma. Henry Adams.

The City of God. St. Augustine.

The rise of American civilization; and America in midpassage. Beard and Beard.

The modern corporation and private property. Berle and Means.

The Bible, especially the Reader's Bible, Oxford and Cambridge. 1951.

The flowering of New England. Van Wyck Brooks.

The history of civilization in England. Buckle.

The anatomy of melancholy. Robert Burton.

Alice in wonderland; and Through the looking glass. Carroll.

The second world war. Winston Churchill.

The caravan. Carlton S. Coon.

Aesthetic. Benedetto Croce.

Freedom and culture. John Dewey.

Essays; and Journal. Emerson.

Holmes-Laski letters:Correspondence of Mr. Justice Holmes and Harold J. Laski. 1916-1935.

Russia and the West under Lenin and Stalin. George F. Kennan. 1960.

The Koran.

Studies in classic American literature. D. H. Lawrence.

A history of English literature. Legouis and Cazamian (One volume edition, Dent, London. 1950).

Knowledge for what? R. S. Lynd.

The prince. Machiavelli.

Democratic ideals and reality. H. J. MacKinder.

Naval warfare. Mahan.

The golden sayings of Epictetus.Le morte d'Arthur. Sir Thomas Malory.

In praise of folly. Erasmus.

The golden bough. Fraser.

American capitalism: the concept supplements. H. L. Mencken. 3 of countervailing power. J. K. vols. 1936, 1945, and 1948. Galbraith.

A short history of the English people. J. R. Green.

The worldly philosophers: the lives, times, and ideas of the great economic thinkers. R. L. Heilbroner.

The fable of the bees. (es-History of art. Elie Faure. pecially as edited by F. B. the Art of mamory Frances Yake Kaye, 2v.) Bernard Mandeville.

The American language, including

On liberty. J. S. Mill.

Essays. Montaigne.

The growth of the American Republic. (1950 or later). S. E. Morison and H. S. Commager.

Conant, James Bryant The education of American teachers. A 275 pp. McGraw-Hill New York 1963.

McLuhan Marshall The Gutenberg galaxy . 194 pp. Routledge and Kegan Paul, London, 1962, (Also Univ. of Toronto Press)

(McLuhan Marshall) Understanding media: the extension of man. 364 pp. Raper McCom Milli New York. 1905

Thus spake Zarathustra. Nietzsche.

The eulogies; etc. Ovid.

The mind and society. V. Pareto.

The last time I saw Paris. Elliot Paul.

The dialogues. Plato.

Letters. Pliny the Younger.

Medieval people. Eileen Power.

The Savoyard vicar. Rousseau.

The history of western philosophy. Bertrand Russell.

The age of Roosevelt: The crisis of the old order (1957); The coming of the New Deal (1959); and The politics of upheaval (1960). Arthur M. Schlesinger, Jr.

Counsels and maxims. Schopenhauer.

The rise and fall of the Third Reich, and a night. Burton transla-1960. William L. Shirer.

Two cultures. C. P. Snow.

The decline of the West. Oswald Spengler. Knopf.

The development of the understanding. Spinoza.

The twelve Caesars. Suetonius.

The tale of a tub. Jonathan Swift.

Walden. Thoreau.

Democracy in America. Alexis C. H. C. de Tocqueville.

The engineers and the price system; and The theory of the leisure class. Veblen.

Micromegas. Voltaire.

The Great Plains: a study in institutions and environment. Walter Prescott Webb.

From ritual to romance. Jessie L. Weston.

To the Finland Station. Edmund Wilson.

The Persian expedition. Xenophon.

7. NOVELS AND STORIES.

Rashomon and other stories. Ryunosuke Akutagawa.

The Diplomat. James Aldridge.

Stories. Andreyev.

The book of the thousand nights tion of the Arabian Nights.

Breaking point. Artzibashef.

Pride and prejudice. Jane Austen.

Lavengro. George Barrow.

The monk and the hangman's daughter. Bierce.

Lorna Doone. Blackmore.

Jane Eyre. C. Brontë

The way of all flesh. Butler.

Messer Marco Polo. Byrne.

Jurgen. Cabel.

The stranger. Albert Camus.

Don Quixote. Cervantes.

Dawn in Lyonesse. Mary Ellen Chase.

The moonstone, Wilkie Collins.

Nigger of the narcissus. Conrad.

Moll Flanders, Defoe.

Alexander-platz Berlin. Döblin.

The 42nd parallel. John Dos Passos.

Oliver Twist; A tale of two cities; etc. Dickens.

The brothers Karamazov. Dostoevsky.

An American tragedy. Theodore Dreiser and Stories. D. H. Lawrence.

The Count of Monte-Cristo. Alexandre Dumas.

Studs Lonigan. Farrell.

The hamlet; etc. William Faulkner.

Tom Jones. Fielding

The great Gatsby. F. Scott Fitzgerald. Raintree County

Madam Bovary. Flaubert.

Penquin Island. France.

Mademoiselle de Maupin. Theophile Gautier.

Dead souls; and Mirgorod. Gogol.

Loving. Henry Green.

The heart of the matter. Graham Greene.

Growth of the soil. Knut Hamsun.

Meet me on the barricades. Charles Yale Harrison.

Jude the obscure. Hardy.

For whom the bell tolls. E. Hemingway.

Maria Chapdelaine. Hemon.

A bell for Adano. John Hersey.

Green mansions. W. H. Hudson.

A portrait of the artist as a young man; Dubliners; and Ulysses. James Joyce.

Amerika; and Stories. Franz Kafka.

Sons and lovers; The boy in the bush (with M. L. Skinner);

Independent people. Halldor Laxness.

Christ stopped at Eboli. Carlo Levi.

Arrowsmith; Main Street. Sinclair Lewis.

Ross Lockridge, Jr.

Buddenbrooks. Mann.

The garden party and other stories. Katherine Mansfield.

The betrothed. Manzoni.

Of human bondage. Maugham.

Stories. De Maupassant.

Moby Dick. Melville.

Hawaii. James A. Michener.

Gone with the wind. Margaret Mitchell.

Heloise and Abelard; Esther Waters; and A storyteller's holiday. George Moore.

Easter sun. Peter Neagoe.

The octopus. Frank Norris.

At swim-two-birds. Flann O'Brien.

Train. V. F. Panova.

Stories. Poe.

Remembrance of things past. Marcel Proust.

The cloister and the hearth. Reade.

Pilgrimage. Dorothy M. Richardson. man's notebook (or similar

Giants in the earth. O. E. Rolvaag.

Stories. Damon Runyon.

The devil's pool. George Sand.

Fraulein Else. Schnitzler.

Ivanhoe. Walter Scott.

Days and nights. Konstantine Simonov.

The Grub Street nights entertainments. J. C. Squire.

The red and the black; and The charterhouse of Parma. Stendhal (Beyle).

The crock of gold. James Stephens.

The life and opinions of Tristram Shandy, gentleman. Sterne.

A many-splendoured thing. Han Suyin.

Guliver's travels. Jonathan Swift.

Vanity Fair. Thackeray.

The hobbit; and The Lord of the Rings. J. R. R. Tolkien.

War and peace; Anna Karenina. Tolstoy.

Barchester Towers, etc. Anthony Trollope.

Shiny night. Beatrice Tunstall.

Fathers and sons; and A sportsman's notebook (or similar translated title). Turgenev.

Tom Sawyer; Huckleberry Finn. Mark Twain.

Kristin Lavransdatter. Sigrid Undset.

The pleasant memoirs of the Marquis de Brandomin. Valle-Inclau.

Candide; The Princess of Babylon. Voltaire.

The world's illusion. Wasserman.

The picture of Dorian Gray. Oscar Wilde.

The pathway. Henry Williamson.

Carry on, Jeeves; etc. P. G. Wodehouse.

Look homeward, angel; Of time and the river; The web and the rock; and You can't go home again. Roosevelt and Hopkins. Robert Thomas Wolfe.

Nana. Zola.

8. BIOGRAPHY.

The education of Henry Adams. Henry Adams.

The life of Samuel Johnson. Boswell.

The life of Robert Burns. Catherine Carswell.

The memoirs of Casanova.

The autobiography of Benvenuto. Cellini.

James Joyce. Richard Ellmann.

Parnell. St. John Ervine.

The diary of John Evelyn. (The recent edition prepared by E. S. de Beer is best).

Franklin. Fay.

R. E. Lee. D. S. Freeman.

The Wynn diaries. Freemantle.

The life of Washington. Hughes.

The romance of Leonardo da Vinci. Merejkowski.

The intelligent heart: the story Athens; Childe Harold; and of D. H. Lawrence. Harry T. Moore.Don Juan. Lord Byron.

Pepys' diary. (Wheatly ed.)

Confessions. Rousseau.

Abraham Lincoln. Carl Sandburg.

The age of Jackson. Arthur M. Schlesinger, Jr.

E. Sherwood.

The agony and the ecstacy: a biographical novel of Michelangelo. Irving Stone.

On Britain and Germany. (Mainly about Agricola.) Tacitus.

Leonardo da Vinci. Antonina Vallentin.

The autobiography of Giambattista Vico (Trans. by Fisch and Bergin).

The Medici. G. F. Young.

9. POETRY AND DRAMA.

Robyn Hode.

The song of Roland.

John Brown's body. Benet.

Songs of experience; The marriage of Heaven and Hell; and other poems. William Blake.

Sonnets from the Portuguese; and A musical instrument. E. B. Browning.

Thanatopsis. Bryant.

Cotter's Saturday night; and other poems. Robert Burns.

She walks in beauty; Maid of

The Canterbury tales. Chaucer (Trans. into modern English by Neville Coghill). Penguin.

The rime of the ancient mariner; and other poems. Coleridge.

Poems. Emily Dickinson.

Poems. John Donne.

Poems. T. S. Eliot.

Poems, including the death of the hired man. Robert Frost.

Hermann and Dorothea. Goethe.

The deserted village. Goldsmith.

Elegy written in a country churchyard. Gray.

The Iliad; and The Odyssey. Homer.

Roan stallion. R. Jeffers.

The Odyssey: a modern sequel (Trans. by Kimon Friar). Nikos Kazantzakis.

The realm of fancy; Ode on melancholy; The eve of St. Agnes; and other poems. Keats.

Rubaiyat of Omar Khayyam. Fitzgerald's 5th. edition.

The Congo. Vachel Lindsay.

Hiawatha. Longfellow.

Figs from thistles; and other verse. Edna St. Vincent Millay.

Samson Agonistes; and other poems. John Milton.

The torch bearers. Noyes.

The raven; etc. Poe.

The land. V. Sackville-West.

Lochinvar. Scott.

The sonnets. Shakespeare.

Adonais; The hymn of Pan; and Ode to the west wind. Shelley.

The Faerie Queene. Spenser.

Aeneid. Vergil.

Poems. Paul Verlaine. (Trans. by MacIntyre).

The testaments of Francois Villon.

Poems. Wordsworth.

Prometheus bound. Aeschylus.

The life of man. Andreyev.

The daughter of Jorio. d'Annunzio.

Plays. Aristophanes.

Waiting for Godot. Samuel Beckett.

Manfred. Lord Byron.

The cherry orchard. Chekhov.

The lady's not for burning. Christopher Fry.

Faust. Goethe.

The sunken bell; and The Weavers. Hauptmann.

The doll's house; and other plays. Ibsen.

The alchemist. Ben Jonson.

The tragical history of Dr. Faustus. Marlowe.

The silver tassie; and other plays. Sean O'Casey.

Lazarus laughed; and Mourning becomes Electra. Eugene O'Neill.

Cyrano de Bergerac. Rostand.

William Tell. Schiller.

Macbeth; Hamlet; Romeo and Juliet; and other plays. Shakespeare.

Pygmalion; Saint Joan; and other plays. Bernard Shaw.

The school for scandal. Sheridan.

The father. Strindberg.

Salome. Oscar Wilde.

The skin of our teeth. Wilder.