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## A GUIDEBOOK TO LEARNING

For the Lifelong Pursuit of Wisdom

Mortimer J. Adler

### CHAPTER 2

## Encyclopedias

SCHOLARS who write learned articles on the history of encyclopedias tend to use that word in an extended sense. This may puzzle contemporary readers who use it to refer to a set of books the contents of which are arranged from A to Z. Paying attention to the meaning of the word's Greek roots, scholars apply it to any collection of writings that provides a complete system of learning or an all around education. The collection of writings must have, for its time and place, a scope that justifies regarding it as encyclopedic in its dimensions.

The lectures of Aristotle delivered at his Lyceum in the fourth century B.C., and later edited and compiled as an orderly set of treatises, can be so regarded. Beginning with treatises on physical phenomena and on the motion of the heavens, followed by a large number of treatises dealing with plants and animals and all the phenomena of life, and completed by a treatise on the souls of living organisms, the theoretical works of Aristotle reach their culmination in a treatise to which his editors gave the title "Metaphysics," the final sections of which are theological. This series of works is then followed by treatises of another kind, practical rather than theoretical, dealing with ethics, politics, rhetoric, and poetics. Prefacing the series as a whole are treatises on logic and the method of the sciences, grouped together under the title "Organon."

Implicit in this ordering of Aristotle's works is a scheme for the organization of knowledge. As we shall subsequently discover when we return to it in another context, it represents the most comprehensive and most clearly articulated plan for the organization of knowledge that has come down to us from antiquity. But the whole corpus of Aristotle's works is not an encyclopedia in the modern sense of that term, nor was it intended to be one.

This is equally true of all the other examples that scholarly expositions of the history of encyclopedia point to in antiquity and the Middle Ages. *Natural History*, written by Pliny the Elder in the first century of our era, consists of thirty-seven books covering the arts as well as the sciences as then generally understood. Medieval compilations of all the knowledge then extant—one by Hugh of St. Victor and one by Vincent of Beauvais in the eleventh and twelfth centuries—are of a similar character.

All of these, like the collected works of Aristotle, are encyclopedic in the comprehensiveness of their coverage of all the knowledge

existing at the time, but none is an encyclopedia of the kind that made its first appearance in the West in the seventeenth century. Nor are the elaborate collections of writings that the Chinese look back upon with pride and now call encyclopedias. They are anthologies of revered classics rather than systematic expositions of existing knowledge.

The first set of books constructed as a survey of existing knowledge appeared at the beginning of the eighteenth century, in 1704. It was the work of John Harris and was called by him a lexicon—*A Universal English Dictionary of the Arts and Sciences*. The use of the word “dictionary” in the subtitle notified readers that they could expect an alphabetical arrangement of the articles composing the work as a whole.

Harris’s work was soon followed in the eighteenth century by that of Ephraim Chambers, who produced a two volume work entitled *Cyclopaedia; or a Universal Dictionary of the Arts and Sciences* (1728); by the famous French Encyclopédie, compiled by Diderot, d’Alembert, and their colleagues, issued in a series of volumes that began in 1751 and ended in 1778, twenty eight volumes in all; and by the Encyclopaedia Britannica, published in Scotland in three volumes in the years 1768-1771. It, too, was called by its editors *A Dictionary of the Arts and Sciences*, the word “dictionary” being used in all these instances to signify the alphabetical arrangement of the articles that constituted the single comprehensive work.

The nineteenth century witnessed the proliferation of similar compilations constructed like lexicons or dictionaries beginning with one by Brockhaus in Germany (1808), which inspired similar works in Danish, Swedish, Dutch, Russian, French, and Italian, and which were followed by an American effort, the *Encyclopedia Americana*, published in Philadelphia in thirteen volumes in the years 1829-1833. All of these comprised a large number of short popular articles on a wide variety of subjects that aimed at a comprehensiveness of coverage that deserved the name “encyclopedia.”

The *Encyclopaedia Britannica* is distinguished from all the rest by the continuous history of its publication from 1768 to the present day in fifteen successive editions, growing from the three volume first edition to the thirty-two volume fifteenth edition, currently in print. It is also distinguished by the arrangement of the articles that constituted its first edition.

In the first edition of *Encyclopaedia Britannica*, the single alphabetical order of the articles was broken up into two quite different kinds of entries, all alphabetically arranged from A to Z.

On the one hand, there was a large number of extremely brief entries never more than a short paragraph and often consisting of a couple of lines, such as the entry on Japan, which is described as “a small island off the coast of California.”

On the other hand, there was a relatively small number of extremely long articles—essays, dissertations, or treatises on the major subjects that expounded the knowledge the editors thought their readers should have about all the arts and sciences then recognized as having theoretical significance or practical importance.

Although these two types of entries were arranged in a single alphabetical sequence, they were distinguished typographically: the short entries resembling the entries in a lexicon of words with their definitions, and the long articles resembling books with many subdivisions, just as a book is divided into many chapters.

What follows is an enumeration by title of the major treatises or essays that appeared in the first edition of *Britannica*. It has interest for us as a representation of what the world of learning looked like in the eighteenth century. The alphabetical arrangement of these major articles in the first edition also clearly exemplifies the absence of any significant principle for the ordering of the parts of knowledge. As compared with Aristotle’s nonalphabetical encyclopedic coverage of all the knowledge then extant, *Britannica*’s alphabetical encyclopedia does not present us with anything like a systematic and principled organization of human knowledge.

Agriculture	Alligation	Annuities
Algebra	Anatomy	Architecture
Arithmetick	Geography	Musick
Astronomy	Grammar	Natural History
Bleaching	Horsemanship; Or, The Art of Riding and of Training and Managing Horses	Navigation
Bookkeeping		
Botany		Optics

Brewing	Hydrostatics	Perspective
Chemistry		Pneumatics
Commerce	Law	Religion, or Theology
Conic Sections	Logic	
Electricity	Mechanics	Short Hand Writing
	Medicine	Surgery
Farriery	Metaphysics	Tanning
Fluxions	Midwifery	Trigonometry
Fortification	Moral Philosophy, or Morals	
Gardening		Watch and Clock Work

As far as I know, the first critic of the alphabetical arrangement of the articles in an encyclopedia was Samuel Taylor Coleridge at the beginning of the nineteenth century. He wrote a *Preliminary Treatise on Method* in which he set forth the principles for constructing an encyclopedia that was a systematic organization of knowledge rather than a mere alphabetical arrangement of articles, whether long or short. The *Encyclopedia Metropolitana*, which was to be that encyclopedia, he began but never finished.

We have in Coleridge's own words what he thought of all encyclopedias that, unlike the one he contemplated producing, suffered the defect of alphabetiasis. He wrote:

To call a huge unconnected miscellany of the *omne scibile* [the whole of knowledge], in any arrangement determined by the accident of initial letters, an encyclopedia, is the impudent ignorance of your Presbyterian bookmakers!

The Presbyterian bookmakers Coleridge had in mind must have been the Scottish editors of *Encyclopaedia Britannica*'s first edition. What he attributed to impudent ignorance might have been more generously explained as an effort on their part to make their encyclopedia useful as a reference book, in the same way that a dictionary is useful. A systematic, nonalphabetical order of articles may provide the users of an encyclopedia with an organization of

knowledge—a map or chart of the world of learning—but it also prevents them from using it as a reference work in which they can easily look up something in which they are interested.

This conflict between two ways of constructing an encyclopedia, each with its merits and demerits, was not explicitly addressed in the continuous history of *Encyclopaedia Britannica* until the eleventh edition in the twentieth century, in 1911 to be precise. From the second to the great ninth edition, *Britannica* retained a single alphabetical arrangement without any effort to overcome its central defect—the absence of any indication of how the parts of knowledge are related to one another systematically.

When we come in this century to the eleventh edition, we find the following opening paragraphs in the Preface written by the editors.

It is not perhaps commonly realized that a general Encyclopaedia is more than a mere storehouse of facts. In reality it is also a systematic survey of all departments of knowledge.

But the alphabetical system of arrangement, with its obvious advantages, necessarily results in the separation from one another of articles dealing with any particular subject. Consequently, the student who desires to make a complete study of a given topic must exercise his imagination if he seeks to exhaust the articles in which the topic is treated. Though the Index proper . . . will give him assistance in obtaining information under headings which are not themselves the titles of articles in the Encyclopaedia, he will still find it of the greatest service to have a bird's eye view of all the articles upon his subject.

The ensuing pages of this volume contain what we believe to be the first attempt in any general work of reference at a systematic subject catalogue or analysis of the material contained in it.

What follows is an enumeration of the twenty-four general headings or main categories in the Classified Table of Contents under which are listed the more specific subjects treated in the encyclopedia.

I. Anthropology and  
Ethnology

II. Archaeology and

XIV. Language and  
Writing

XV. Law and Political

Antiquities	Science
III. Art	XVI. Literature
IV. Astronomy	XVII. Mathematics
V. Biology	XVIII. Medical Science
VI. Chemistry	XIX. Military and Naval
VII. Economics and Social Science	XX. Philosophy and Psychology
VIII. Education	XXI. Physics
IX. Engineering	XXII. Religion and Theology
X. Geography	XXIII. Sports and Pastimes
XI. Geology	XXIV. Miscellaneous
XII. History	
XIII. Industries, Manufactures, and Occupations	

Remarkable as it was at the time, this Classified Table of Contents did not succeed in overcoming the defects of an alphabetical arrangement of articles. It was not a systematic or topical organization of knowledge. An inspection of the foregoing list of twenty-four headings or categories immediately reveals that the alphabet was still the only thread on which the constituent parts of knowledge were strung.

Furthermore, under each of the alphabetically arranged main categories or general headings, from Anthropology to Religion and Theology (omitting Sports and Pastimes and Miscellaneous), the further subdivisions, after an initial enumeration of general subjects, consist of more specific headings, also alphabetically arranged.

For example, under the general heading Art, we find Architecture, Music, Painting and Engraving, Sculpture, Stage and Dancing, interrupted here and there by the heading Minor Arts. Beyond that, if

we look at the listing of particular articles in this Classified Table of Contents, we find that their enumeration is also alphabetical.

What the editors of the eleventh edition said in their preface was unquestionably sound. A general encyclopedia should be “more than a mere “storehouse of facts”—more than a reference book with alphabetically arranged entries that, like a dictionary, enables users to look something up. To do more than that, it must offer its users a mode of access to its contents other than the alphabet. It must, in one way or another, present its readers with a systematic or topical outline of knowledge that maps or charts the whole world of learning in a way that provides guidelines for the exploration of all its related parts.

With two or three notable exceptions, no encyclopedia so far completed in the twentieth century corrects the defects of alphabetiasis—a malady peculiar to modern times, and especially prevalent in our day. I will deal with these exceptions in Part Three after I review, in Part Two, ancient, medieval, and modern attempts to map or chart the world of learning, quite apart from the publication of encyclopedias constructed on the dictionary model.

But first let us continue the examination of the alphabetiasis that prevails today by turning from general encyclopedias to the catalogues of our great universities.

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## LETTERS TO THE EDITOR

Max - Thanks for reprinting the Hutchins excerpt. I take it to be the most profound of his many profound utterances - I quoted it in my Cafe post on his hundredth birthday. (Was I closer to the truth 36 years ago than I am now? Probably.) Hope all's well.

Jay Gold

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Max,

I knew before even reading the quote from Hutchins 1935 Commencement Address what it would say, because I remember Milton Mayer's moving account of how it changed his life.

It's always inspirational. Thanks for running it in TGIO.



Jim Warren

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Max:

I had an opportunity to read TRADE EASY PLEASURES FOR MORE COMPLEX AND CHALLENGING ONES last evening and it was wonderful. Right on. Thanks for making it available.

Dennis Picha

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## WELCOME NEW MEMBERS

**John Cahalan**

**Carla Oliveira**

*We welcome your comments, questions or suggestions.*

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