THE GREAT IDEAS ONLINE
Feb '08 Nº 460

A GUIDEBOOK TO LEARNING

For the Lifelong Pursuit of Wisdom

Mortimer J. Adler

PART TWO

THE ORGANIZATION OF KNOWLEDGE PRIOR TO THE TWENTIETH CENTURY

It is necessary to call into council the views of our predecessors in order that we may profit by whatever is sound in their views and avoid their errors.

ARISTOTLE: On the Soul,
Book 1, Chapter 2

CHAPTER 5

Greek and Roman Antiquity

Plato [428–384 B.C.]

UNLIKE many of the schemes for the organization of knowledge that we shall come to later, the plan that Plato gives us is pedagogical. The subjects to be studied are arranged in the order in which they should be learned, an order that corresponds to successive stages in the development of the individual from childhood and youth to the full maturity of life's ripest years.

The context in which Plato outlines his regimen for a life of learning occurs in those books of the *Republic* in which he lays down his plan for the education of the guardians of the ideal state—its ruling class. It is not an organization of the parts of knowledge as such, in which different kinds of knowledge are related according to differences in their objects or subject matter. That may be implicit in it, but explicitly it is a temporal succession, placing first what should come first in the development of the mind and then, through intermediate stages, coming last to what should be the crowning culmination of the mind's journey on the road to wisdom and truth. It can, therefore, be regarded as a road map for the guidance of a lifetime of learning.

The terms Plato uses may not convey to the contemporary reader the elements of his plan as they would be understood today. I shall, therefore, translate his vocabulary into the more familiar terminology of our own day.

The period of childhood and youth, Plato thinks, should be devoted to gymnastics and music—gymnastics conferring upon the body the strength and skills that render it serviceable, and music being the cultivation of the sensibilities, the memory, and the imagination. During the later years of this first phase, gymnastics and music are to be supplemented by the acquisition of skill in the use of language, together with skill in the employment of the mind in the processes of definition, analysis, reasoning, and argument.

We cannot help being surprised by the fact that Plato assigns the first twenty years of life to this first phase of learning. But we must remember that this program is intended for the guardian or ruling class, persons with ample free time, not for those who will engage much earlier in all forms of productive labor.

The second phase, occurring in the years between twenty and thirty, turns the mind away from the world of the senses and toward the intelligible realm that is constituted by the objects of

mathematical thought and the demonstrations of mathematical science—the realm of numbers and figures, of ratios and proportions.

Plato's names for these elements in his order of learning are arithmetic, geometry, astronomy, and music. Of these, the first two are familiar terms for us. But for Plato, astronomy and music in this second phase are also mathematical sciences, the one dealing with the mathematical formulation of the celestial motions, the other with the ratios and proportions of harmonics.

Between the ages of thirty and fifty, the guardians slowly achieve full maturity through engagement in the affairs of state. This is a period devoted to profiting from experience in human affairs rather than one that involves the study of this or that subject matter. Their minds have been disciplined and cultivated by the subjects studied in the first two phases, and having been matured and enriched by the experiences acquired in the third phase, the guardians are now prepared for the fourth and final phase.

It is here that the development of their minds attains its highest elevation, their pursuit of truth reaches its culmination, and their search for wisdom approaches its goal. This is the phase that Plato devotes to dialectic, his name for philosophy in its purest form—the contemplation of ideas and the grasp of first principles. Here at last the mind has turned completely away from the world of sensible and changing things, the realm of becoming, and concentrates entirely on the realm of intelligible and immutable being.

One part or area of knowledge to which we today give a major share of our attention is almost totally absent from the Platonic scheme. Readers will have noticed that there is no mention of the natural sciences, sciences that involve observation of sensible phenomena. The one Platonic dialogue that deals with the formation and development of the cosmos, the *Timaeus*, includes a comment by Socrates to the effect that this cosmological exposition is only a "likely story," more like a myth than a scientific demonstration.

If readers also wonder where in Plato's scheme the good life and the good society become matters to be thought about and studied, they must be told that ethics and politics are not, for Plato, sciences that occupy a place in the organization of knowledge. Such matters are to be thought about in the study of ideas—the idea of the good, of happiness and virtue, of the state and justice.

One further point remains. In many of his earlier dialogues, such as *The Gorgias*, and in one of his later dialogues, *The Sophist*, Plato is

concerned to differentiate the dialectician from the rhetorician and the sophist. All three employ the same, or very similar, methods. All three are skilled in the same or very similar uses of the mind. But the essential and crucial difference for Plato is that the dialectician's intellectual processes are governed throughout by dedication to the truth, whereas both the rhetorician and the sophist, often the same person, aim only to win the argument, regardless of the truth about the matters under consideration.

Aristotle [384–322 B.C.]

Aristotle's organization of knowledge resembles Plato's educational plan in three respects.

First, like Plato, Aristotle places at the outset of learning the disciplines governing the use of language and the operations of the mind, skills conferred by the study of grammar and logic. The initial work in the corpus of Aristotelian writings is called the *Organon*, which consists of a series of treatises that deal with the use of words, the interpretation and analysis of statements, the rules of reasoning, the methods of science, and the devices of argumentation. Competence in such matters is preparatory for all further learning. That is why it precedes all the rest.

The second point of similarity lies in the fact that Aristotle, like Plato, reserves the study of certain subjects for that period of life when, through the dint of much experience, individuals have attained full maturity. He tells us that the study of ethics and politics is not for the young. They do not have enough experience of human affairs to make sound judgments about what ought to be sought and ought to be done in the conduct of life and in the government of society.

The third respect in which Plato and Aristotle appear to be of one mind, although the terms they use are quite different, has to do with the culmination or highest level of study in the pursuit of theoretical truth and of philosophical wisdom. This, as we have seen, goes by the name of dialectic for Plato and is the study of ideas; whereas, for Aristotle, this is the highest of all sciences, sometimes called metaphysics, sometimes the first philosophy, and sometimes theology.

Each of the three names is appropriate: "metaphysics," inasmuch as the science in question goes beyond physics and is concerned with being rather than change, motion, or becoming; "first phi-

losophy," because it deals with first principles, principles underlying and common to all other branches of knowledge; and "theology," because its concluding chapters are concerned with God.

With these similarities acknowledged, we find many significant differences. One is that Aristotle puts into his scheme a whole set of sciences that Plato omits; namely, the sciences that give us knowledge of the physical world and of the observable phenomena of nature. In the collection of Aristotelian writings, the grammatical and logical treatises of the *Organon* are directly followed by physical treatises that deal with terrestrial change, motion, generation, and corruption, with the causes operative in all these transformations, and with space, time, and eternity. These are followed by a treatise that deals with celestial motions. Next in line come a whole series of biological works, sciences concerned with the classification of plants and animals, with their procreation or generation, and with their parts or vital organs. .

The last in this series of works is a treatise on the soul—Aristotle's psychology. It deals with the scale of living things and with the vegetative powers of plant organisms and the sensitive and locomotive powers of animal organisms before coming to the sensitive and intellectual powers of human organisms. In this latter connection, Aristotle's psychology serves as a bridge from his physical and biological sciences to his purely philosophical work, his *Metaphysics*.

It is necessary to remember that in Aristotle's day the words "science" and "philosophy" did not have the connotations they have today, which signify two quite different kinds of inquiry and types of knowledge. Nevertheless, it is sufficiently clear that, with the exception of the treatise called Physics, which is more natural philosophy than natural science, the rest, especially Aristotle's biological treatises, are empirical and investigative sciences based on the observation of natural phenomena. They represent the beginnings of empirical science in the modern sense of that term.

In sharp contrast, Aristotle's *Physics* and *Metaphysics* are philosophical works that do not involve empirical investigation, even though their reflective and analytical thought is based to a certain extent on simple, common experiences that all of us enjoy without our making any deliberate effort to investigate.

In order to differentiate metaphysics from, and relate it to, other sciences, Aristotle established a hierarchy of the theoretical branches of knowledge. In this ascending scale, the lowest rung is

occupied by the natural sciences, dealing with sensible, changing things. A gradation higher is mathematics, being the study of abstract or ideal objects. Numbers and figures exist as objects of thought, whether or not they also have any mode of existence in physical reality. Metaphysics stands at the highest level, above mathematics. It is like mathematics in that it deals with purely intelligible objects, but it goes beyond mathematics in reaching to objects of thought that can also have real existence apart from the world of sensible, material things.

A second major differentiating feature of Aristotle's organization of knowledge lies in his sharp distinction between knowledge that is theoretical and to be studied for its own sake and knowledge that is practical and to be studied for the sake of actions to be prescribed, regulated, and judged. Physics, mathematics, and metaphysics constitute the three grades of theoretical knowledge; ethics, economics, and politics, the three kinds of practical science. They can be grouped together under the general heading of moral philosophy.

There is still a third division in the classification of the parts of knowledge that we find in Aristotle's scheme but not in Plato's. To the theoretical and practical sciences, Aristotle adds the study of the productive arts, both the fine and the useful arts, the former productive of things to be enjoyed for their beauty, the latter productive of things to be of service in achieving some desired result. Aristotle's treatment of the fine arts, in a book entitled *Poetics*, is mainly concerned with epic and dramatic literature. His treatment of the useful arts occurs in those scientific treatises in which he compares the productions of art with the productions of nature.

Readers will have observed the absence, from both the Platonic and the Aristotelian schemes, of certain parts of knowledge that are given prominence in any modern enumeration of subjects that deserve consideration. History is not mentioned at all by Plato. It is mentioned by Aristotle in a single passage in which he says that poetry is more philosophical than history because it has a certain measure of universality. Poetry portrays actions that are possible and even probable, while history must confine itself to the narration of what has actually happened and is therefore limited to particulars.

Other disciplines of modern origin and contemporary importance do not appear, such as sociology or anthropology in the field of the behavioral sciences, or chemistry in the field of the physical sci-

ences. While theology has a position of high esteem for both Plato and Aristotle, neither devote much, if any, attention to religion.

The Roman Stoics
[First and Second Centuries A.D.]

The Roman Stoics present us with a tripartite division of knowledge that has an attractive simplicity and a common touch. According to them, the three parts of human knowledge are logic, physics, and ethics—the study of the principles and laws of human thought, the study of the principles and laws of nature, the study of the principles and rules of human conduct.

As far as I can tell, none of the leading Stoic philosophers assigned priority or superiority to one of these three parts as compared with the others. Nevertheless one might, as a matter of common sense, regard the study of logic as preparatory to the other two kinds of knowledge.

Stoic philosophy placed great emphasis on the station that man occupies in the natural scheme of things. In conformity with that view, one would make physics precede ethics, as logic precedes them both. The study of the laws of nature throws light on what is right and good in the sphere of human conduct. To be of good will is to act in accordance with the laws of nature.

Augustine [354–430]

St. Augustine, being a Christian theologian as well as a Roman philosopher, alters the picture of the realm of learning that he inherited from his Greek predecessors. For him, it is not speculative theology as a branch of philosophy that stands at the apex of human knowledge, but rather the knowledge possessed by those who have religious faith in the revealed word of God.

In other respects, Augustine is a Platonist who adds little to the teaching of Plato. Himself a student and teacher of rhetoric, he lays stress on that art along with the related arts of grammar and logic as indispensable instruments of learning, not just as tools of communication. He adopts Plato's conception of dialectic as the highest reach of philosophical thought, always, of course, with the qualification that above it lies the truth and the wisdom to be found by persons of religious faith in Sacred Scripture.

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THE GREAT IDEAS ONLINE

published weekly for its members by the

CENTER FOR THE STUDY OF THE GREAT IDEAS

Founded in 1990 by Mortimer J. Adler & Max Weismann

Max Weismann, Publisher and Editor

Marie E. Cotter, Editorial Assistant

Ken Dzugan, Senior Fellow and Archivist

A not-for-profit (501)(c)(3) educational organization.

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