



Mortimer J. Adler

ADLER on SCIENCE and PHILOSOPHY

MODERN SCIENCE AND ANCIENT WISDOM

The outstanding achievement and intellectual glory of modern times has been empirical science and the mathematics that it has put to such good use. The progress it has made in the last three centuries, together with the technological advances that have resulted therefrom, are breathtaking.

The equally great achievement and intellectual glory of Greek antiquity and of the Middle Ages was philosophy. We have inherited from those epochs a fund of accumulated wisdom. That, too, is breathtaking, especially when one considers how little philosophical progress has been made in modern times.

This is not to say that no advances in philosophical thought have occurred in the last three hundred years. They are mainly in logic, in the philosophy of science, and in political theory, not in metaphysics, in the philosophy of nature, or in the philosophy of mind, and least of all in moral philosophy. Nor is it true to say that, in Greek antiquity and in the later Middle Ages, from the fourteenth century on, science did not prosper at all. On the contrary, the foundations were laid in mathematics, in mathematical physics, in biology, and in medicine.

It is in metaphysics, the philosophy of nature, the philosophy of mind, and moral philosophy that the ancients and their mediaeval successors did more than lay the foundations for the sound understanding and the modicum of wisdom we possess. They did not make the philosophical mistakes that have been the ruination of modern thought. On the contrary, they had the insights and made the indispensable distinctions that provide us with the means for correcting these mistakes.

At its best, investigative science gives us knowledge of reality. As I have argued earlier in this book, philosophy is, at the very least, also knowledge of reality, not mere opinion. Much better than that, it is knowledge illuminated by understanding. At its best, it approaches wisdom, both speculative and practical.

Precisely because science is investigative and philosophy is not, one should not be surprised by the remarkable progress in science and by the equally remarkable lack of it in philosophy. Precisely because philosophy is based upon the common experience of mankind and is a refinement and elaboration of the common-sense knowledge and understanding that derives from reflection on that common experience, philosophy came to maturity early and developed beyond that point only slightly and slowly.

Scientific knowledge changes, grows, improves, expands, as a result of refinements in and accretions to the special experience—the observational data—on which science as an investigative mode of inquiry must rely. Philosophical knowledge is not subject to the same conditions of change or growth. Common experience, or more precisely, the general lineaments or common core of that experience, which suffices for the philosopher, remains relatively constant over the ages.

SCIENCE TODAY

The word “science” has changed its meaning as we pass from antiquity and the Middle Ages to modern times, especially to the nineteenth and twentieth centuries.

Today it means the observational or investigative sciences, sometimes called the empirical and experimental sciences. It must be added that the word “science” is also used to refer to mathematics, which is clearly non-empirical and noninvestigative.

The adjective “scientific” is used as a term of praise conferred on other disciplines; such disciplines employ methods which have a certain objectivity in their appeal to evidence which sets them apart from mere, unfounded opinion. Though history is not a science, nor is philosophy, nevertheless as branches of humanistic scholarship, both can be conducted in a manner that is praised when they are called scientific.

The word “science” derives from the Latin word “*scientia*,” for which the Greek equivalent is either “*episteme*” or “*doxa*.” In antiquity and the Middle Ages, the various branches of philosophy were called sciences. Today, from the point of view of the empirical sciences, when philosophers employ a praiseworthy method they are called scientific.

With the rise of positivism in the nineteenth and twentieth centuries, which asserts that empirically reliable knowledge is to be found only in the empirical and experimental sciences, it has become necessary to set investigative science apart from history, from mathematics, and from philosophy.

I have explained elsewhere in what manner the branches of philosophy, especially metaphysics (or philosophical theology) and philosophical psychology, can be properly compared with the empirical and experimental sciences with regard to agreement and disagreement, progress, and the criteria of truth and falsity.

It is of great interest that all the disciplines being compared (the empirical sciences, mathematics, history, and philosophy) have a history and a philosophy, but no science (in the modern, positivistic sense) that is applicable to the understanding of the sciences themselves. There is no science of science.

If philosophy did not exist, we would have no moral philosophy as a branch of knowledge and we would have no understanding of science itself, for when scientists write about science, they do so as philosophers, not as scientists.

HISTORY, SCIENCE, PHILOSOPHY AND RELIGION

Ultimately there can be no disagreement between history, science, philosophy, and theology. Where there is disagreement, there is either ignorance or error.

Each of these four major branches of seeking knowledge of reality have different objects of study, and different methods of inquiry. Even within the individual sciences for example; astronomy can answer questions and refute answers about the celestial bodies and their movements, but it cannot answer questions or refute answers about anthropology and vice versa.

Only when one branch either becomes imperialistic or prejudicially ignores another branches findings do these problems arise.

For example (in brief):

HISTORY: Its object is the past. Its method is research utilizing testimony, documents, and remains.

SCIENCE: Its object is phenomena and their appearances. Its method is observation, investigation and/or experimentation—reason serves the senses. It describes the facts.

PHILOSOPHY: Its object is reality and causes. Its method is reflective—senses serve reason. It provides an understanding of the facts.

RELIGION: Its object is ultimate mysteries. Its method is receptive—reason serves revelation. It accepts and believes.

The knowledge we can derive from science and history, are limited to first-order knowledge by their investigative mode of inquiry. They are incapable of enlarging our understanding by the second-order work, or philosophical analysis, with respect to ideas and all branches of knowledge. Without the contributions made by

philosophy, we would be left with voids that science and history cannot fill.

Even in the one sphere in which the contributions of science and philosophy are comparable—our knowledge of reality—philosophy, because it is noninvestigative, can answer questions that are beyond the reach of investigative science—questions that are more profound and penetrating than any questions answerable by science. By virtue of its being investigative, science is limited to the experienceable world of physical nature. Philosophical thought can extend its inquiries into trans-empirical reality. It is philosophy, not science, that takes the overall view.

Furthermore, when there is an apparent conflict between science and philosophy, it is to philosophy that we must turn for the resolution. Science cannot provide it. When scientists such as Einstein, Bohr, and Heisenberg become involved with mixed questions, they must philosophize. They cannot discuss these questions merely as scientists; the principles for the statement and solution of such problems come from philosophy, not from science.

For all these reasons, I think we are compelled to regard the contributions of philosophy as having greater value for us than the contributions of science. I say this even though we must all gratefully acknowledge the benefits that science and its technological applications confer upon us. The power that science gives us over our environment, health, and lives can, as we all know, be either misused and misdirected, or used with good purpose and results. Without the prescriptive knowledge given us by ethical and political philosophy, we have no guidance in the use of that power, directing it to the ends of a good life and a good society. The more power science and technology confer upon us, the more dangerous and malevolent that power may become unless its use is checked and guided by moral obligations stemming from our philosophical knowledge of how we ought to conduct our lives and our society.

SCIENCE: SCOPE AND FUNCTION

Let us consider what science can and cannot do—its proper scope and function.

The sciences study physical and social phenomena in order to arrive at an accurate picture of them. They try to describe how things behave. They may be concerned with the movement of the

heavenly bodies, the inner workings of the atom, physiological processes, social movements, or human behavior.

What is the utility of scientific knowledge? Francis Bacon answers that question by saying that science gives us power. It enables us to exercise a certain degree of mastery or control over the physical and social phenomena of the world in which we live. Another way of answering the question is to say that science enables us to produce things. Applied by the engineer or the physician, it helps him to build bridges or to restore health. But the same knowledge can also be used, as we know, to destroy things and to maim or kill men.


In other words, science gives us power which can be used either constructively or destructively. It provides us with means which may facilitate our pursuit of bad ends as well as good. Science itself is not only morally neutral, that is, indifferent to the value of the ends for which the means are used, it is also totally unable to give us any moral direction, for it affords us no knowledge whatsoever of the order of goods and the hierarchy of ends.

Therefore, science must be supplemented by philosophy if the means that science gives us are to be used for worthwhile ends. Many people today think that philosophy is useless as compared with science, because it cannot be applied in the production of things or in the control of means. But philosophical knowledge is useful in a quite different and, in my judgment, superior way. Its utility or application is moral or directive, not technical or productive. Where science furnishes us with means we can use, philosophy directs us to ends we should seek.

Let me make this last point quite clear. The conduct of human life and the organization of human society depend on our answers to such questions as what happiness consists in, what our duties are, what form of government is most just, what constitutes the common good of society, what freedom men should have, and so on. Not one of these questions, nor any question like them which involves right and wrong or good and bad, can be answered by science, now or ever.

Without the answers to these questions, we are adrift in the world without compass or rudder. In this atomic age when we can move at great speed and with great power, catastrophe threatens us at every turn if we do not know the right turn from the wrong one.

It is philosophy, not science, that teaches us the difference between right and wrong and directs us to the goods that befit our nature. Just as the productive utility of science derives from its accurate description of the way things behave, so the moral utility of philosophy derives from its profound understanding of the ultimate realities that underlie the phenomena which science studies. Each kind of knowledge answers questions that the other cannot answer and that is why each is useful in a different way.

In my judgment it is philosophy, not science, which should be uppermost in any culture or civilization, simply because the questions it can answer are more important for human life. Certainly it should be clear that the more science we possess, the more we need philosophy, because the more power we have, the more we need direction. 

LETTERS TO THE EDITOR

Dear Max,

I am no scientist or mathematician, just an average citizen, but I disagree with most of what this article says about science in general and evolution specifically.

Mr. Dembski is generalizing that scientists are dogmatic in their fields of study when actually most scientists agree that all theories are just approximations to the truth of how nature works and are always subject to revision. The scientific community has an excellent filter, the scientific method, to weed out any theories that do not hold up to the scrutiny. That the method can be abused is true but only due to faults in human nature. Any theory must go through all the steps, publishing, testing, peer review, predictability, replicability, simplicity, etc., in order to be accepted.

He proposes radical skepticism as a method of inquiry and understanding. But if we are to doubt everything we have learned from scientific discoveries and always assume that we might be wrong about what we have learned, then how can we know anything?. We will be in perpetual doubt and unable to make any advances on the understanding of the physical world around us. Should we doubt gravity, evolution, plate tectonics, the laws of thermodynamics, etc? He also claims that a scientific theory “is just another word for faith”. But faith is believing that something is

true because we want to believe it without evidence. As for scientific theories, they are based on empirical evidence, experimentation and replicability.

I do agree that scientists should not belittle the general public for not accepting or understating a scientific theory but should make an extra effort to explain it in simple terms, and point to the available evidence, in order for them to understand it. Any belittling promotes alienation only. But I disagree with his notion that because the public does not accept a theory, therefore the theory must be wrong. The public knows best?!. I am sorry but science has evolved into a very complex subject that requires extensive training. This does not mean that the average person cannot or will not be able to understand the major theories. It only means that the average person must make an effort to understand how science works in order to understand.

That the theory of evolution is being opposed by the public can also be attributed to the general public reluctance to accept our more humble beginnings as oppose to a grand creation by an “intelligent designer”. Unfortunately everything points to “chance and necessity” based on the fossil record, although incomplete, and observations from our surroundings. It is the best scientific explanation we have to date. To appeal to the “intelligent designer” hypothesis is wishful thinking for the simple fact that is not testable. No observation can be made or experiment designed to test the hypothesis. It is an unknowable concept. One that will only make you feel good but explains nothing of the world we live in.

Sincerely, Alfonso A. Campbell

YOUR COMMENTS ARE MOST WELCOME

=====

WELCOME NEW MEMBERS

Alexander Golossanov

Earl Taylor

THE GREAT IDEAS ONLINE

is published weekly for its members by the

CENTER FOR THE STUDY OF THE GREAT IDEAS

Founded in 1990 by Mortimer J. Adler & Max Weismann

E-mail: TGIdeas@speedsite.com

Homepage: <http://www.thegreatideas.org/>

A not-for-profit (501)(c)(3) educational organization.
Donations are tax deductible as the law allows.