## CHAPTER 7 — THE KNOWLEDGE PROPERLY CALLED SCIENCE

Science is a word much abused just now, when all sorts of pretenders to special knowledge style themselves scientists, and all sorts of ill-verified speculations are called sciences; yet it has a well-defined, proper meaning which may easily be kept in mind. In its proper and definite meaning, science is that knowledge by or in which phenomena are related to what we assume to be their cause, and called a law or laws of nature.

With human laws what is properly called science has nothing whatever to do, unless it be as phenomena which it subjects to examination in the effort to discover in natural law their cause. Thus there may be a science of jurisprudence, or a science of legislation, as there may be a science of grammar, a science of language, or a science of the mental structure and its operations. But the object of such sciences, properly so-called, is always to discover the laws of nature in which human laws, customs and modes of thought originate — the natural laws which lie behind and permanently affect, not nearly all external manifestations of human will, but even the internal affections of that will itself.

Human laws are made by man, and share in all his weaknesses and frailties. They must be enforced by penalties subsequent to and conditioned upon their violation. Unless accompanied by some penalty for its violation, no act of legislative body or sovereign prince becomes law. Human laws are acknowledged only by man; and that not by all men in all times and places, but only by some men — that is, by men living in the time and place where the political power that imposes them has the ability to enforce their sanctions; and not even by all of these men, but generally by only a very small part of them. Limited to the circumscribed areas which we call political divisions, they are even there constantly fluctuating and changing.

Natural laws, on the other hand, belong to the natural order of things. They have no sanctions in the sense of penalties imposed upon their violation, and enforced subsequent to their violation; they cannot be violated. Man can no more resist or swerve natural law than he can build the world. Their sway extends not merely over and throughout the whole earth of which we are constantly changing tenants, but over and through the whole system of which it is a part, and so far as either observation or reason can give us light, over and through the whole universe.

I dwell again on the distinction between laws of nature and laws of man, because it is necessary, in beginning the study of political economy, that we should grasp it firmly and keep it clearly in mind. This necessity is the greater, since we shall find that in the accredited economic treatises laws of nature and laws of man are confused together in what they call laws of political economy.

It is not worthwhile to make many quotations to show a confusion which one may see by taking up the economic work approved by college or university that first comes to his hand; but that what passes in these institutions for the science of political economy may speak for itself, I shall make one quotation.

I take for that purpose the best book I can find that puts into compact form the teachings of the scholastic economists. It is the *Primer of Political Economy in Sixteen Definitions and Forty Propositions* by Mason and Lalor. Their primer has been widely endorsed and largely used in institutions of learning. In this is the first of their sixteen definitions, and their explanation of it:

DEFINITION I. — Political Economy is the Science which teaches the laws that regulate the Production, Distribution and Exchange of Wealth.

Everything in this world is governed by law. Human laws are those made by man. All others are natural laws. A law

providing for the education of children in schools is a human law. The law that children shall keep growing, if they live, until they are men and women, and shall then slowly decay and at last die, is a natural law. An apple falls from a tree and the earth moves around the sun in obedience to natural laws. The laws which regulate the production, distribution and exchange of wealth are of both kinds. The more important ones, however, are natural.

In this Messrs. Mason and Lalor aptly illustrate the essential difference between natural law and human law. But the way in which the two are mixed together as economic laws suggests the examination-paper of the Philadelphia boy more interested in hooking catfish and stoning frogs than in his lessons. To the question, "Name and describe nouns?" the answer was:

Nouns are three in number and sometimes more. There are proper nouns, common nouns, bloody nouns\* and other nouns. Proper nouns are the properest nouns, but common nouns are the commonest. Bloody nouns are the big ones. Other nouns are no good.

Yet ridiculous as is this confusion of human law and natural law, and absurd as is a definition that leaves one to guess what is meant by "laws," this little primer correctly gives what is to be found in the pretentious treatises it endeavors to condense.

It is only with the implication that by law is meant natural law, that we can say "Everything in this world is governed by law." To say, as the little summary of the scholastic political economy from which I have quoted says, that political economy is the science which teaches the laws, some of them natural laws and some of them human laws, which regulate the production, distribution and exchange of wealth, is like saying that astronomy is a science which

\*A name given by boys in Philadelphia to large bullfrogs.

teaches the laws, some of them laws of matter and motion and some of them Bulls of Popes and Acts of Parliament, which regulate the movements of stars and comets.

The absurdity of this is not so strikingly obvious in the ponderous treatises from which it is derived as in this little primer, because their reader's attention is confused by their utter lack of logical arrangement, and distracted by the shoveling in on him, as it were, of great masses of irrelevant matter, which makes it a most difficult task to dig out what is really meant — a task usually abandoned by the ordinary reader with a secret feeling of shame at his own incapacity to follow such deep and learned men. The expositions of what passes for the science of political economy in our schools do indeed for the most part contain some things that really belong to science. But in their larger part what properly belongs to science is, in the literature of political economy that has grown up since his time, confused and overlaid with what Turgot, over a hundred years ago, spoke of as an art — the art, namely, "of those who set themselves to darken things that are clear to the open mind."

What this truly great Frenchman of the eighteenth century said is worth quoting, For it finds abundant and constant illustration in the writings of the professors of political economy of the nineteenth century, and especially in the latest of them:

This art consists in never beginning at the beginning, but in rushing into the subject in all its complications, or with some fact that is only an exception, or some circumstance, isolated, farfetched or merely collateral, which does not belong to the essence of the question and goes for nothing in its solution.... Like a geometer who treating of triangles should begin with white triangles as most simple, in order to treat afterwards of blue triangles, then of red triangles, and so on.

If political economy is a science — and if not it is hardly worth the while of earnest men to bother themselves with it — it must follow the rules of science, and seek in natural law the causes of the phenomena which it investigates. With human law, except as furnishing illustrations and supplying subjects for its investigation, it has, as I have already said, nothing whatever to do. It is concerned with the permanent, not with the transient; with the laws of nature, not with the laws of man.