

**ON THE DIVISIONS AND MUTUAL
RELATIONS OF KNOWLEDGE; A
LECTURE READ BEFORE THE RUGBY
LITERARY AND SCIENTIFIC
SOCIETY, APRIL VII, MDCCCXXXV**

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On the divisions and mutual relations of knowledge; A Lecture Read Before the Rugby Literary and Scientific Society, April VII, Mccccxxv by Thomas Arnold

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A LECTURE READ BEFORE THE RUGBY
LITERARY & SCIENTIFIC SOCIETY,

APRIL VII, MDCCCXXXV.

BY

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ON THE
DIVISIONS AND MUTUAL RELATIONS
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KNOWLEDGE.

THE subject which I have chosen for this evening's lecture may seem liable to two objections; it may be thought too dry to awaken interest in the minds of the audience, and too difficult to be properly treated without more time and more research than I have been able to devote to it. I am aware that there is some force in both of these objections: but on the other hand there are reasons which have induced me to choose this subject, and which I think will be found to outweigh them.

It happens necessarily in an institution such as ours, that the lectures delivered embrace a great variety of subjects, and that they are given without any order or mutual connection. Different views of the great world of knowledge are thus presented to us: but all are necessarily partial, nor do they tell us how

they are to be joined on to one another, in order to convey a just notion of the whole. Even an imperfect attempt therefore to show the connection or relation between them, seemed, to me to be better than nothing; that we may understand what is the value of the several branches of knowledge, as helping to make up the great sum of human wisdom; and may also see, which is a point of no small importance, what sort of knowledge it is which particularly entitles its possessor to be called a well educated man.

Now even this slight statement of the object of this lecture shows that we are going to venture on an inquiry of a very high order, inasmuch as it embraces not the subjects of any one or more of the sciences, but the nature and merits of those very sciences themselves. This sovereign investigation, in which the mind may be said to exert the very fulness of its power, examining at once the world of outward things and its own faculties and operations, standing apart as it were from all things visible and invisible, and as if by a mere abstract power of observation, looking at once above and below, around and within itself, this it is which is properly called Philosophy.

First then, with a subject before us so extensive and so various, it will be necessary to break it up into certain divisions, that our minds may be able to comprehend it. This process of philosophical division admits of very considerable variety. We are not to suppose that there are only a certain number of divisions in any subject, and that unless we follow these, we shall divide it wrongly and unsuccessfully: on the contrary every subject is as it were all joints, it will divide wherever we choose to strike it, and

therefore according to our particular object at different times we shall see fit to divide it very differently. For instance let us suppose that our subject be the vegetable creation; we shall see that this subject is divided differently, according to our different objects in studying it. If we consider vegetables only with reference to the uses which man can derive from them, we should divide them first into such as are useful to him directly, and such as are not; and the former again we should divide into such as are useful for food, such as are useful for clothing, and such as minister to our various wants in other ways. But in this division we should class some vegetables together which on another view of the subject we should find it necessary to separate, and separate others which on another view of the subject we should be obliged to class together. For instance on the view of the subject already noticed, we should class wheat, and the potatoe, and the grape, and the fig, under one division, that of vegetables useful for man's food; and should of course separate them from such plants as are incapable of being applied to the same purpose. But if we consider vegetables without any reference to man, and merely according to the differences or resemblances in their own structure, in other words if we consider them botanically, the wheat, the potatoe, the grape, and the fig, notwithstanding their common usefulness, are immediately separated from one another; the wheat is classed along with the grasses which feed our cattle, the potatoe and the vine are ranked with the nightshade and the henbane, and the fig is placed in the same division as the ash tree.

Bearing this in mind, we shall see that the various branches of human knowledge are capable of the most

different arrangements according to the light in which we wish to regard them. Bacon for instance makes a threefold division of them, which he derives from a similar division of the powers or operations of the human mind, into the memory, the imagination, and the reason. Accordingly he divides all knowledge into history, poetry, and science or philosophy; the first belonging to the memory, the second to the imagination, and the third to the reason. Another division has been adopted in a work still in the course of publication, the *Encyclopædia Metropolitana*; a division of which the author was, I believe, the late Mr. Coleridge. He first divides all science into pure and mixed. By pure science he means such as is conversant merely with the acts of the mind in itself, by mixed science that which considers these acts in connection with the outward world. The pure sciences again he divides into formal and real; under the first of which he places grammar, logic, arithmetic, and geometry; under the second are ranged metaphysics, morals, and theology. I am aware that this brief statement must be obscure; but my object in making it is to illustrate the truth, that human knowledge may be divided variously according to the purpose of the divider; and I wished to draw attention to the division into formal and real science, for I shall have occasion to make use of these terms hereafter, and shall then attempt to explain them.

For my present object, which is to give such a division as may be most readily and generally understood, I know not that I could adopt a better method than to divide our knowledge into such as relates to man, and such as relates to other objects of what

kind soever, animate or inanimate. But when I speak of man, I mean that part of him which is peculiar to himself, namely, his intellectual and moral nature. For the study of his mere bodily frame, or of the phenomena of his physical life, is but a small part of one great whole, of which by far the greatest part relates to objects distinct from himself, and therefore the study may generally be classed more properly with those which relate to external things. Thus the knowledge which relates to man would naturally include every thing relating to his double nature, as a being having an understanding, and a moral part which we may call for convenience a spirit. Thus it would in the first place embrace the study of his mind; the analysis of its faculties and ideas, which is metaphysics; the analysis of the processes of his reason, which is logic; and the analysis of language, the instrument which he necessarily employs in these processes, which is grammar. Secondly, it would embrace the study of his moral nature; the analysis of his feelings and affections; which like that of the faculties of his understanding may be classed under metaphysics; and the analysis of his duties. This last, so long as his duties towards God are not understood, is the part of ethics or morals: but as soon as we are acquainted with God, and with our relations to Him, all our duties, whether towards God or man, are properly to be classed under one name, that of religion; because it is manifest that all our duties to other men are duties to God, and that whatever we ought to do is our duty for this very reason, because it is the will of God that we should do it.

Besides the study of man's nature in general, knowledge relating to man would also embrace a knowledge

of the actions, characters, and fortunes, of particular parts of mankind, whether larger or smaller. Under this head are to be ranked History with all its subdivisions, and Biography.

Then turning to the other great division of human knowledge, the knowledge that relates to all other objects besides ourselves; here too the one vast whole thus presented to our imaginations may be broken up into various parts. It will include Natural History in its widest sense, including not only the animal and vegetable kingdoms, but the mineral also, and even the earth itself. But when we speak of the history of animals and plants we must remember that here history is wholly distinct from biography. Amongst creatures without reason, whether animate or inanimate, one individual is like another; history with them regards only the species. Nor is chronology much more connected with them than biography; for the oak and the lion of the present day are the same, so far as we can discover, as the oak and the lion of the first year of the world's existence. Time has only wrought changes in some few cases, through the agency of man, as in the change effected in particular vegetables by cultivation, and perhaps in one or two instances in animals also, by the attention bestowed on improving the breed. With the history of the earth on the contrary chronology is every thing. Here there are constant changes working, altering the limits of land and water, and in some instances, where volcanic agency is busy, or where particular phenomena of wind and soil are combined, actually altering the character of the land, as well as lessening or increasing its limits. But still in all history