

of the concrete through the problems in arithmetic, algebra, and geometry, it is true, but pure mathematics is purely formal. In the same way the grammar of any tongue is not thought, but it is a form in which all thought must be expressed. Now, if linguistics and mathematics may fairly be called formal in their nature, the one giving the form in which human thought must express itself, and the other giving the form governing the natural sciences, then it follows that these are largely form studies rather than thought or knowledge studies.

The position of the modern college is that it is perhaps more liberalizing and certainly far more useful to pursue thought studies along with form studies than it is to spend all the time on the formal aspect of instruction alone. The old idea that the student must, in order to get a liberal training, withdraw from lines of thought having immediate relation to life, reminds us of the monastic period when men withdrew to monasteries and hermits' caves in order to live a religious life, thus preparing themselves for the life to come. But just as we now perceive that religion is vital only as it is wrought out in daily life, so the modern college perceives that true liberality in education consists in training the student, not only through the forms of knowledge, but by means of the knowledge itself. Liberality of education consists not so much in possessing a traditional store of ideas, as in having understanding and sympathetic interest for what most concerns the welfare of man. He is illiberally educated whose interests and understanding are measured alone by what pertains solely to his calling.

The studies of which linguistics may be said to be the form are those that pertain to human life and social organizations, such as history, the record of what men have done; political economy, the examination of

the production, exchange, and consumption of wealth; social science, a study of the social problems growing out of our religious, economic, and political conditions; political science, the systematic study of government; literature, the artistic representation of the ideals and strivings of men. On the other hand, the concrete studies pertaining to nature are physics, chemistry, biology, geology, physical geography, etc. If, therefore, we grant the principle that it is as good for the mind to exercise itself on concrete knowledge as upon merely the abstract forms of knowledge, we see that the scope of college work immediately broadens. The old education fitted men for a few professions as they formally existed, such as law, medicine, and theology; but it had little immediate relation to other practical callings. It constituted in reality a special training for a few professions. Furthermore, it gave young men little opportunity to discover their natural tastes and abilities, whereas, the modern college, dealing with a number of lines of actual knowledge, furnishes this very desirable opportunity. The natural results of the old formal training are more apparent in Germany than in this new land, where pioneer conditions still exert an influence. There the cultured and the uncultured form distinct social castes. So powerful has this caste feeling been, that students have been known to commit suicide rather than engage in unprofessional work outside their caste. To this day the "bread studies," *i. e.* those having to do with real knowledge, are theoretically despised though they are in reality diligently pursued by students of the universities. Now, however, in this country, since the modern colleges recognize the dignity and culture value of all the great sciences of life and nature, they bring the advantages of higher education to entirely new classes of society.