

## DISCOURSE ON NATURAL PHILOSOPHY.

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DELIVERED AT THE ENCENIA OF KING'S COLLEGE, WINDSOR, N. S., June 25, 1863.

AN ancient poet in a work devoted to Agriculture, breaks off in the midst of a gorgeous description of the pleasures of rural life, to express his ardent desire to know the causes of things: why the stars pursue their courses, whence the eclipses of the sun and moon, earthquakes, and tides. With all his love for the ordinary pleasures of the country, he speaks of this knowledge as something far more to be desired, were it only attainable. And the sentiment which thus finds utterance in a place where we should perhaps have least expected it—a place which shows how near and dear it was to the poet's heart, is no peculiar sentiment of his own, but may rather be regarded as the common voice of humanity, making itself heard through the lips of the poet. All nations of men can join, and more heartily in proportion to their intellectual and moral earnestness, in the language—

*Felix qui potuit rerum cognoscere causas.\**

The investigation of natural causes, which is comprehended under the general name of Physical Science, naturally divides itself into two departments, Natural History and Natural Philosophy. Observation and classification more especially belong to the former; the deduction of laws and the application of these laws to the prediction of results to the latter. Every branch of Physical Science must, in the earlier stages of its existence, belong to natural history, since observation and classification must always be the first steps in discovery; and so long as the reasoning which connects observed facts with general laws is of a comparatively simple character, the science may still be included under the same name. But when our knowledge of causes has advanced so far that we can not only predict results in a general way, but can predict them with as much or nearly as much accuracy as we can observe facts, then the science may be said to have come under the dominion of Natural Philosophy. And whenever this latter stage is reached, it is invariably found that that species of logic which sufficed in the earlier stages, is no longer sufficient for solving the numerous problems which present themselves, and which

\* Virgil, Georg. II., 490.