

that we owe the reformation of the calendar and the computations which determine with nice accuracy the length of the solar year. Galileo, Kepler, and Secchi, Sir Isaac Newton, and Lord Bacon, Leibnitz, Lavoisier, Euler, Cuvier, and Descartes, are recognized as leaders in the field of science. They were, moreover, firm believers in revelation, while most of them combined strong religious convictions with scientific erudition. In the study of nature they do not fail to record with devout praise their admiration for the power and providence of the Creator.

The first circumnavigation of the globe, the discovery of the American continent, the doubling of the Cape of Good Hope, as well as the most accurate geographical survey of the earth's surface, are events for which we are indebted to Christian navigators and explorers, all actuated by an indomitable spirit of enterprise, and most of them inspired with the higher motive of zeal for the propagation of the Gospel. Marco Polo, Columbus, Amerigo, Vespucci, Magellan, and Vasco da Gama, were men of strong religious faith, who embarked on their perilous voyages with the benediction of the Church upon them.

Our own country is largely indebted to Catholic priests, who were the pioneers, not only of religion and civilization, but also of science. In one hand they bore the torch of faith, and in the other the torch of religion. They not only carried the Gospel to the aboriginal tribes of North America, but they explored our rivers, lakes, and mountains; and the charts that they sent to Europe over two hundred years ago are still admired as models of topographical accuracy.

With these facts before us it is difficult to suppress a feeling of indignation when we are told that Christianity is a bar to scientific investigation. These maligners of Christianity owe it to the Christian religion that they are able to revile her. Separate them from the universities and schools founded by Christian patronage; withdraw them from Christian traditions and literature, and they would die of intellectual stagnation.

There is no branch of art in which the disciples of Christianity have not excelled. Was not Michael Angelo a devout son of the Church? And who surpassed him in sculpture and architecture? To him we are indebted for St. Peter's Basilica, the grandest church ever erected to God by the hand of man. Byron found that

"Power, glory, strength, and beauty—all are aisled
In this eternal ark of worship undefiled."

And were not Raphael and Domenichino, Fra Angelico and Leonardo da Vinci members of the Church? And are they not the recognized masters in the exquisite art of painting? Mozart and Haydn, Beethoven and Palestrina were Christian artists, and were patronized by Popes and Bishops. And are they not acknowledged leaders in the rich and harmonious strains of music? Their Masses are as unrivalled in musical composition as our cathedrals are in architecture.

The apparent conflict between the deductions of science and the doctrines of Christian faith is clearly accounted for in the following decree of the Vatican Council: "There never can be any real discrepancy between reason and faith, since the same God who reveals mysteries has bestowed the light of reason upon the human mind; and God cannot deny himself, nor can truth ever contradict truth. The false appearance of such a contradiction is mainly due either to the dogmas of faith not having been clearly understood and expounded according to the mind of the Church, or to the inventions of opinion having been taken for the verdict of reason."

If these explanations are kept in view, they will serve to demonstrate that the apparent conflict between science and revelation has no foundation on which to rest.

It is often erroneously assumed that the Scriptures professed doctrines which they never professed to teach. The sacred volume was not intended by its divine Author to give a scientific treatise on astronomy, or cosmogony, or geology, or even a complete series of chronology or genealogy. These matters are incidentally introduced to illustrate a higher subject.

The purpose of the Scriptures is to recount God's super-natural relations with mankind, His providential government of the world, and man's moral obligations to his Creator.

When, for instance, the sacred text declares that the sun is still in the heavens, it simply gives expression to the fabulous prolongation of the day; and this in popular language such as even now, with our improved knowledge of astronomy, we employ, for we speak of the rising and the setting

of the sun as if, according to the Ptolemaic system, we still believed that he revolves around the earth. The Church has no mission to teach astronomy. One may be as bad an astronomer as John Jasper and yet be a good Christian.

Again, the results of geological investigation, by which it is ascertained that ages must have elapsed between the formation of matter and the creation of man, would seem to conflict with the book of Genesis, which states that all vegetable and animal life was created within the space of six days. But the Church, as is well known, has never defined the meaning to be attached to these *days* of Genesis. We are at liberty, so far as the Church is concerned, and if the deductions of science are incontrovertible, we are compelled to ascribe an indefinite period of years to each day. The context itself insinuates that the day cannot be restricted to twenty-four hours, since for the first three days there was no sun to measure their duration; and in the second chapter of Genesis the word *day* is manifestly used to express an indefinite period of time employed in the creation of the material universe.

The Mosaic narrative simply records the creation of matter out of nothing, and the order in which life, both animal and human, came into existence. The chronological order of Moses is borne out by the researches of geologists, who have discovered that vegetable fossils are anterior to animal remains, and that those of the lower animals are more ancient than any human skeletons ever found. Our knowledge, moreover, of the laws governing the vegetable and animal kingdoms confirms this arrangement, since vegetable life derives its subsistence from inorganic matter, animal life is nourished by the vegetable kingdom, and man himself is sustained by the nutriment he derives from both.

The discovery of human fossils, and of other geological and historical monuments is sometimes boldly assumed to stamp the human family with a far greater antiquity than appears to be warranted by Scripture genealogies. To this I reply that the Scripture gives no precise date regarding the time intervening between Adam and our Lord. We have only conjectures resting on genealogies. The enumeration of Adam's lineal descendants is not claimed to be consecutive and complete. It is not denied that links may be missing in the chain of generation. There is also a marked discrepancy between the different versions of the Bible in computing the age of man. The Vulgate reckons four thousand years; the Septuagint, five thousand, and the Hebrew, six thousand years from Adam to our Saviour. Some Catholic writers, without any reproof from the Church, are disposed to extend the period to eight thousand years.

"Nothing is more strange," observes a recent writer, "than the incessant reproduction of old thoughts under the guise of new and advanced opinions. It would seem as if the human mind, with all its restless activity, were destined to revolve in an endless circle. . . . Professor Tyndall addressing the world from the throne of modern science, repeats the thoughts of Democritus and Epicurus as the last guesses of the scientific mind."

In fact, there is no class of men so dogmatic and so impatient of contradiction as certain modern scientists; and "this dogmatism is the more intolerable, as the so-called demonstrations of one age have sometimes been the butt and ridicule of succeeding generations." Not content with cultivating their own field, they invade the region of theology and politics. They speak as if they had an exclusive diploma to treat of everything in the heaven above, on the earth beneath, and in the waters under the earth; and from their infallible judgment there must be no appeal.

The position of the Catholic Church in reference to modern scientists may be thus briefly summarized: The Church fosters and encourages every department of science. But just because she is the friend of true science she is opposed to all false pretensions to science. There is as much difference between true and false science as there is between authority and despotism, liberty and license. When she hears a man advancing some crude theory at variance with the received doctrines of revelations—with the existence of God, for example, or His superintending providence, or His wisdom, or His sanctity; when she hears him advancing some hypothesis opposed to the unity of the human species, to the spirituality and the immortality of the soul, to the future destiny of man, and to those other great doctrines that involve at once the dignity and moral responsibility of the human race, she knows