ISAAC NEWTON (d. 1727)

1. Newton's *Principia* is one of the basic events in modern European history.
   a. "So at last, after twenty years of preparation, appeared the most important book of seventeenth-century science, rivaled, in the magnitude of its effects upon the mind of literate Europe, only by the *De revolutionibus orbium coelestium* (1543) of Copernicus and *The Origin of Species* (1859) of Darwin. These three books are the basic events in the history of modern Europe."[1]
   b. "Nature and Nature's laws lay hid in night; God said, Let Newton be! and all was light."[2]
   c. "Lagrange called the Principia 'the greatest production of the human mind,' and Laplace assured it for all time 'a pre-eminence above all other productions of the human intellect'; Newton, he added, was the most fortunate of men, for there is only one universe, and one ultimate principle in it, and Newton discovered that principle."[3]

2. Newton formulated three laws of motion:[4]
   a. "Every body continues in its state of rest, or of uniform motion in a straight line, unless it is compelled to change that state by forces impressed upon it."
   b. "The change of motion is proportional to the motive force impressed and is made in the direction of the straight line in which that force is impressed."
   c. "To every action there is always opposed an equal reaction."

3. Newton's ideas led to a materialism, mechanism, and naturalism with no place for God.
   a. "George Berkeley, in *Principles of Human Knowledge* (1710), regretted that Newton had thought of space, time, and motion as absolute, apparently eternal, and existing independently of divine support. Mechanism so pervaded the Newtonian system that there seemed no place in it for God."[5]
   b. "Theologians at first feared the influence of the *Principia* on religion; but Bentley's Boyle lectures (1692), encouraged by Newton, turned the new world-view to the support of faith by stressing the apparent unity, order, and grandeur of the universe as evidences of the wisdom, power, and majesty of God. However, the same Newtonian system was accepted by the deists as strengthening their replacement of the Christian theology with a simple acceptance of one God, or even their identification of God with Nature and her laws. Probably the final influence of Newton on religion was injurious; despite his protests, and his million words of theological writings, freethinkers supposed that he had conceived a self-subsistent world, and had brought deity into it as a comforting afterthought. In France especially, Newton's cosmology,

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[1] W. Durant, *The Age of Louis XIV*, 539-40.

[2] A. Pope, quoted in W. Durant, *The Age of Louis XIV*, 546.

[3] W. Durant, *The Age of Louis XIV*.

[4] W. Durant, *The Age of Louis XIV*, 540.

[5] W. Durant, *The Age of Louis XIV*, 542.

though presented deistically by Voltaire, encouraged the mechanistic atheism of many philosophes."[6]

4.
   a. "This most beautiful system of the sun, planets, and comets could only proceed from the counsel and dominion of an intelligent and powerful Being."[7]
   b. "To further meet religious objections he appended to the second edition a general scholium on the role of God in his system. He restricted his mechanistic explanations to the physical world; even in that world he saw evidences of divine design; the great machine required some initial source of its motion, which must be God; moreover there were, in the solar system, certain irregularities of behavior which God periodically corrected as they arose. To make room for such miraculous interpositions Newton surrendered the principle of the conservation of energy. The world machine, he now supposed, lost energy in time, and would run down if God did not intervene to restore its force."[8]
   c. See [] Bentley's Boyle lectures (1692).

5. Newton was as much a theologian as he was a scientist (though not a very good one).
   a. "[Newton] left theological writings greater in bulk than all his scientific works. His studies led him to semi-Arian conclusions much like those of Milton: that Christ, though the Son of God, was not equal in time or power with God the Father. For the rest, Newton was, or became, quite orthodox. He seems to have taken every word of the Bible as the word of God, and to have accepted the books of Daniel and Revelation as literal truth. The greatest scientist of his age was a mystic who lovingly copied out large passages from Jakob Böhme, and who asked Locke to discuss with him the meaning of the 'White Horse' in the Apocalypse. He encouraged his friend John Craig to write *Theologizae Christianae Principia Mathematica* (1699), which sought to prove mathematically the date of Christ's second coming, and the ratio between the highest attainable earthly happiness and the believer's rewarding bliss in Paradise. He wrote a commentary on the Apocalypse, and argued that the Antichrist therein predicted was the pope of Rome. Newton's mind was a mixture of Galileo's mechanics and Kepler's laws with Böhme's theology. We shall not soon see his like again."[9]

6.
   a. "I do not know what I may appear to the world; but to myself I seem to have been only like a boy playing on the seashore, and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, while the great ocean of truth lay all undiscovered before me."[10]

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[6] W. Durant, *The Age of Louis XIV*.

[7] I. Newton, quoted in W. Durant, *The Age of Louis XIV*, 542-43.

[8] W. Durant, *The Age of Louis XIV*.

[9] W. Durant, *The Age of Louis XIV*, 543.

[10] I. Newton, quoted in W. Durant, *The Age of Louis XIV*, 547.

Notes

Durant, W. *The Age of Louis XIV*.