

## Notes on *NEWTON*, by Peter Ackroyd

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Review by Cheryl Macy Ross



In the series *Brief Lives*, British writer Peter Ackroyd brings us a well-researched, small biography of the life of Sir Isaac Newton (1642-1727). While we will not attempt to summarize all of Newton's lifetime of accomplishments, we would like to share Ackroyd's important insights into Newton's religious studies and his biblical understanding of the oneness of God.

Newton has long been regarded as one of the most brilliant scientists who ever lived, as well as one of the greatest mathematicians in England's history. Before he was 25 years old he formulated calculus, hit upon the idea of gravity, and discovered that white light was made up of all the colors of the spectrum. By his mid-30's, he designed a telescope from his work in optics to study the movement of the planets and published *Principia*, a milestone in the history of science which set forth his famous laws of motion and universal gravitation.

Born in an obscure village to farmer stock in Lincolnshire UK, northeast of London, Newton could easily have never learned to read or write. He was raised by his grandmother in a lonely childhood until he was sent away to grammar school in a neighboring town at the age of 12. Fortunately Newton's uncle noted his mechanical aptitude and specific scientific talents and enrolled him in Cambridge University in 1661 where he quickly became fascinated with mathematics and where he would remain for the next 35 years -- except for the several periods he returned to the family farm with the onset of the Great Plague in Cambridge in 1665.

During these retreats to the clear streams and green hills of his childhood, he continued wrestling with organizing his view of the universe and compiled a large document titled "*To resolve Problems by Motion these following Propositions are sufficient.*" This was the first written work on calculus, but one that Newton kept to himself. It is generally understood that the theory of universal gravitation occurred to Newton as he sat musing in this home garden and watched an apple fall to the ground. This legend seems to relate to the tree of knowledge and the eating of the forbidden fruit in the Garden of Eden. Images of Newton in the garden are very dear to the English.

In 1669 Newton was appointed to Professor of Mathematics, and took over the position from his mentor, Isaac Barrow. He was still only 26 years old and must be one of the youngest professors ever appointed in that university.

In the summer of 1668, Ackroyd reports that Newton made his first visit to London and bought books, a small furnace and other devices to further his heightened interest in alchemy. He had in previous years already begun taking notes on what might be called conventional chemistry under such headings as "Amalgam," "Crucible" and "Extraction". And now he approached the study of alchemy with his usual methodical care. He collected ancient and modern writings to master and left something like a million words devoted to the subject, engaging his attention for over thirty years. He yearned to search out the mystery of God moving throughout the earth and the cosmos.

Ackroyd writes that *“It was sometimes claimed that Moses was the first alchemist. Newton himself was a firm believer in what was known as ancient wisdom. He trusted in the knowledge of the ancients as an untapped source of great power that could be released into the modern age.”* While studying alchemy, Newton also became a student of the Scriptures, intent upon the prophecies of the Old and New Testaments, such as Daniel and Revelation. For him, science and theology were part of the same pursuit, all avenues to God. *“They were the keys to true knowledge of the universe. He was a philosopher in the ancient sense, a seeker after wisdom.”*

*“Newton’s study of the Old Testament was rigorous and thorough. He had more than thirty different versions or translations of the Bible. He learned Hebrew in order to study the original texts of the prophets. He amassed a huge library of biblical and patristic literature. . . . He wished to become the master of his subject, as he had previously become the master of optics and the master of mathematics. At his death he left a manuscript on biblical matters, incomplete, of some 850 pages as well as a mass of assorted papers and notes.*

*In particular he became preoccupied with a dispute of the fourth century, during the course of which he determined that the true faith – Protestantism, as he conceived it – had taken a perverse and highly injurious turn. The great controversy was between Arius and Athanasius. Athanasius propounded what had then become the orthodox doctrine of the Trinity, in which Christ is seen as equal or ‘consubstantial’ with God. Arius denied the doctrine of the Trinity by denying that Christ was of the same substance as God. The views of Athanasius were accepted at the Council of Nicaea in 325, and of course became a part of the Nicene Creed.*

*But in the course of his intense study of the biblical texts Newton concluded that Athanasius had perpetrated a fraud. He had interpolated key words into the sacred Scriptures to support his argument that Christ was God. In that endeavor he had been supported by the Church of Rome and from that corruption of the texts had sprung the general corruption of the Christian Church itself. The purity and faith of the early Church had been destroyed by superstitious zealots who were intent upon bowing down before the illusion of the Trinity or Three In One. His mathematical, as well as his spiritual, creed directly opposed their position. In his support of Arius Newton was proclaiming that the priests and bishops of the Church were practicing idolatry in their worship of Christ. Newton discovered, in the words of a fellow Arian, ‘that what has been long called Arianism is no other than Old uncorrupt Christianity; and that Athanasius was the grand and very wicked Instrument of the Change.’ In his notebook Newton declared that ‘the Father is God of the Son.’*

*Newton also believed that the true religion was derived from the sons of Noah and had been transmitted by Abraham, Isaac and Moses. Pythagoras was a convert to this religion, and passed it on to his own disciples. Christ was a witness to that primitive faith in his simple commandments to love God and to love one’s neighbor. (This would be the covenant promises of the Abrahamic faith found in Genesis and Ephesians?) In a later document Newton declared that we must worship ‘the only invisible God’ and venerate the ‘one mediator between God & man the man Christ Jesus.’ At the peril of our souls ‘we must not pray to two Gods.’ We must not worship Christ. Christ had been filled with divine spirit, but he was not God.*

*The fact was that, in the mid-seventeenth century, Arianism was still considered to be a dangerous heresy. If Newton had admitted his faith he would have been stripped of his university appointments, as were other and less cautious Arians. So he did not discuss these matters openly. He reserved his theological conversations for fellow believers. The full scale of his religious heterodoxy was not revealed until after*

*his death, and even then the knowledge of it was suppressed by those scholars who believed that the father of English science must be above suspicion. To all outward appearances he remained a firm and orthodox member of the Church of England, leaning somewhat to the dissenting or radical tradition within that Church. But nothing more.*

*There were other, and perhaps more curious, aspects of Newton's secret faith. He knew by heart the words of the angels to St. John, 'Rise, and measure the temple of God . . .' He took the instruction literally, and from ancient documents measured the dimensions of the Temple of Solomon. Newton believed that Solomon, the son of David and great king of the Jews, was 'the greatest Philosopher in the world.' He believed that Solomon had imbibed the wisdom of the ancients and that in the design of his temple he had incorporated the pattern of the universe. . . .*

*He was intent, too, upon the nature of biblical prophecy. He pored over the prophets, tracing the path of their utterance through symbols and hieroglyphs. He believed that in their words could be found hidden truths concerning the future history of the world. He drew up a catalogue of seventy inspired men, noting down the details of their lives and writings. He compiled a dictionary of world events that were deemed to match their prophecies. And he wrote an essay entitled 'The Proof' in which he maintained the authenticity and accuracy of the prophets' words. The eleventh horn of the Beast of Revelation, for example, was the Church of Rome.*

*He also devised a chronology for the future as well as the past. This was a continuation of his work on the prophecies, and was characterized by the same imposition of formulae and rules of interpretation. In 1944 would end 'the tribulation of the Jews' – and he was 'out' by one year as WWII ended in 1945 – and in 2370 would begin a thousand years of peace. We may seem to be a world away from the optical experiments and the mathematical calculations of his public work but all his activities evince the rapt contemplation of the magus poring over the universe. . . . He wanted to clarify, and therefore bring within his control, the machinery of the universe.*

*In theory and practice, therefore, his scientific and religious studies (if we can even make that distinction) were connected. . . . There seems no doubt that he believed his destiny to lie in the discovery and interpretation of the works of God. His discovery of universal gravity was further proof of the divine plan, and he declared that God was everywhere within his creation. . . .*

*Yet his conscience did not cease to trouble him. Newton could not retain his fellowship at Trinity indefinitely without taking holy orders. This would mean, in particular, that he would have to subscribe to the doctrine of the Holy Trinity. This he could not do. So he travelled to London in February 1675, with a petition to Charles II asking that he be excused taking holy orders while he was still Professor of Mathematics. It was a technical excuse designed to cover a momentous difficulty. He waited in the capital for a month, until the petition was granted. The king declared that he wished 'to give all just encouragement to learned men who are & shall be elected to the said professorship.' It is a signal instance of the new regard now held in England for mathematics and natural philosophy.*

*Like other alchemists he believed that the universe was instinct with life and spirit; it was not simply the collection of lifeless corpuscles or atoms favored by mechanical philosophers. . . He stated in one of his short papers that 'The vital agent diffused through everything in the earth is one and the same. And it is a mercurial spirit, extremely subtle and supremely volatile, which is dispersed through every place.' This is not so far distant from his theory of universal gravity, yet to be formulated, and it has often been noted that his concept of 'occult' forces in the material world – such as the evident 'attraction' and 'repulsion'*

*between particles that no one could explain – helped to create the arguments of the Principia Mathematica.”*

A man of wide eclectic interests, Newton blurred the borders between natural philosophy (natural science or physical science/physics) and the spiritual. He passionately embraced both astrology and astronomy; he unrelentingly researched alchemy without undermining his religious faith. He was determined to interpret a modern universe as God’s logical and mathematical universe. Newton’s brilliant perceptions have changed our understanding of the world and also upheld the one God of the Scriptures.