

The Apotheosis and Damnation of Sir Isaac Newton

Sir Isaac Newton died on 20 March 1727 and within 2 months James Thomson had prepared his “Poem sacred to the Memory of Sir Isaac Newton”, an unrestrained celebration of “Britain’s boast!” whose brilliance at once scattered ignorance and “The Pride of Schools” (e21). Newton literally becomes the dawn of an ‘Enlightenment’:

“All-piercing sage! Who sat not down and dream’d
Romantic schemes, defended by the din
Of specious words, and tyranny of names;
But, bidding his amazing mind attend,
And with heroic patience years on years
Deep searching, saw at last the System dawn,
And shine, of all his race, on him alone.” (e23-9)

The contest of Ancients and Moderns is instantly resolved with superstition and scholasticism being banished once and for all.

“At once their pleasing visions fled,
With the gay shadows of the morning mix’d
When Newton rose, our philosophic sun” (e88-90)

The identical motif of enlightenment is evoked in Pope’s famous epitaph:

“Nature and Nature’s Laws lay hid in Night.
God said, Let Newton be! and all was Light.”

To virtually everyone the spectacle of a single man simultaneously unravelling the laws of motion, integral calculus (reputedly done in one Friday evening), the universal law of gravitation and the composition of light must have been both bewildering and invigorating. Indeed, in so far as the 18th century can be seen as a period of scientific enlightenment and optimism, Newton stands as its patron saint.

It is with this Newton, the paragon of modern science, “who taught us to think on the lines of cold and untinctured reason”, that John Maynard Keynes begins his portrait of the reclusive Cambridge professor who eventually becomes the toast of Augustan England. Besides being an economist, Keynes dedicated a considerable amount of time to collecting the dispersed manuscripts of Newton’s non-scientific work, and the Isaac Newton he discovers is “not the first of the age of reason” but rather “the last of the magicians, the last of the Babylonians and Sumerians.” Beneath the image of Newton lionized by Thomson, Pope and many others, lies a hotbed of 17th century preoccupation:

a fascination with Alchemy and medieval alchemical works; an obsession with deciphering the prophetic books of the Scriptures; strongly anti-Trinitarian views; a disposition ill-suited to conversation but perfectly tuned to the “intense introspection” of speculation. These non-scientific endeavours were carefully concealed, first by Newton, in order to retain his chair at Trinity and then the Mint’s Controllershship, and then by generations of admirers who preferred to keep Newton as the symbol of modernity.

Keynes remarks, as does T.S. Kuhn, that Newton’s scientific methodology had very little to do with the experimentalism usually associated with the Scientific Revolution. Keynes finds that Newton’s strength lay in his “muscles of intuition”, his ability to conceptualize a problem then work it until it was solved. So when Edmund Halley asked how he came to know the law of planetary motion and how he proved it, Newton reputedly replied “Why, I’ve known it for years. If you’ll give me a few days, I’ll certainly find you a proof of it.” This chimes perfectly with a similar statement made by Newton’s successor, Einstein, who, when asked what he would think if an upcoming experiment contradicted his theory of relativity, replied with suitable hubris “I would be sorry for God, because the theory is correct.”

As to Newton’s relation to God, one finds that it is far from straightforward. As R.F. Jones says, Newton’s external piety and orthodox conformity did much to diffuse many fears which could have been aroused among the faithful by so catastrophic a revolution in Natural Philosophy. But as Frank E. Manuel shows, (in the Fremantle Lectures in 1973) Newton’s relation to God was personal in a way befitting the 17th century. Born without a father and on Christmas Day, 1642, Newton was anti-Trinitarian because he was concerned with God, the father, as his, to use Milton’s words, “Task-master.” Newton felt a burden of responsibility very similar to that of Milton in that he recognized his own talents and the imperative of use that accompanied them. And “God said, Let Newton be! And all was Light” captures perfectly Newton’s own sense of purpose and so for 25 years at Cambridge he laboured indefatigably seeking divine order in Nature, in Alchemy, in the Scriptures, in the Church fathers, and in the Non-canonical heresies. Even while he was composing his Principia and experimenting with prisms, these were literally weeks when his Alchemical furnace did not go out, and that no less time was spent with the scripture, on which he wrote commentaries amounting to

1,000,000 words. In each field he was scrupulously precise in his method, and this, as well as his personal conception of God, appears in the General Scholium which he added to a later edition of the Principia. Here he responds to those who deduce irreligiosity from his physics.

“This Being governs all Things, not as a Soul of the World, but as Lord of the Universe; and upon Account of his Dominion, he is stiled Lord God, supreme over all. For the word God is a relative Term, and has Reference to Servants, and Deity is the Dominion of God not (such as a soul has) over a Body of his own, which is the Notion of those, who make God the Soul of the World; but (such as a Governor has) over Servants.”

Here we see the semantical care with which Newton operated in his Biblical studies. We also note that his God is a dominant ruler present not only in Newton’s Life but in the physical universe. Newton, for example, was aware that certain anomalies in the orbit of mercury pointed to a problem with his mathematic model of planetary motion; he concluded that the continued harmony of the universe required the corrective hand of the Creator. Newton, was not a deist and his God was not an absent first-cause to be taken lightly. This also has the effect of changing Newton’s scientific discoveries from descriptions of creation to illuminations of the dictates by which God rules the cosmos.

James Thomson seems to have originally missed, or misrepresented this side of Newton’s Cosmology for in the first version of “Summer” he praised the harmony of nature’s cycles in terms which border on deism or worse.

“To Day, and Night, and the delightful Round
Of Seasons, faithful; not excentric once:
So pois’d, and perfect, is the Vast Machine!”

The vision of the universe as a material mechanism would abandon man to his own devices and this is not what Newton wished to believe. Perhaps a rereading of some passage in Newton, or an indignant letter from one of Newton’s many disciples, must have caused Thomson to amend this error to read:

“To the kind-temper’d Change of Night and Day,
And of the Season ever stealing round,
Minutely faithful: Such Th’ All – Perfect Hand,
That pois’d, impels, and rules the steady Whole” (e39-42)

This is exactly what Newton means. “Nature’s general symphony” (To Newton e11) demonstrates both “simple laws” (e14) and “the secret hand of Providence” (e15). Nature and Nature’s laws are divinely ordained; the due posture for humanity is a mixture of reverence and obedience.

Thus it is more than Newton’s demonstration of physical laws and cosmological harmony that impresses the minds of poets like Pope and Thomson, and later, William Blake; it is an attitude toward creation and the natural order. Newton’s own position, as we have just begun to show, is far from uncommitted or ideologically neutral, and it is one which meshes easily with the needs of early 18th century society. In An Essay on Man, Alexander Pope effortlessly fuses the Newtonian Cosmos to a sense of social hierarchy, the common ground being the Divinely ordained laws of Nature. So Pope writes in the fourth Epistle:

“Ode is Heav’n’s first law, and this confest
Some are, and must be, greater than the rest” (e49-50)

In the third Epistle, there is the famous passage where the motions of individual planets embody the universal laws of nature and this is linked to the idea of liberty, where an individual pursuing individual ends supports the general mechanism of the economy:

“On their own Axis as the Planets run,
Yet make at once their circle round the Sun:
So two consistent motions act the Soul;
And one regards Itself, and one the Whole.
Thus God and Nature link’d the general frame,
And bade Self-Love and Social be the same.” (e314-8)

“Whatever is, is Right” for it is created by God, guided by God’s law and watched by God. The political and social implications of this particular position are obvious, as well as widely discussed. It is a defense of the structure of English society as it existed in the early 18th century. It is a kind of conservatism shared by Whig and Tory alike.

To return to Newton’s life, it is remarkable how Newton seemed to live out a conveniently emblematic life; during the turbulent years of the restoration, Newton toiled away as the most brilliant in an impressive generation of scientists. By the early 1690’s, and in the wake of the glorious revolution, Newton’s scientific career had come to a halt. In 1689 he lost his mother and in 1692 he had a severe breakdown. Concerned friends,

notably Charles Montague, Earl of Halifax, who had warned Newton of the psychological ill-effects of a too studious life, stepped in. By 1696, Newton had been successfully removed to London where he obtained various government posts, became the President of and figurehead for the Royal Society, was knighted by Queen Anne at a reception hosted by the notorious Bentley, Master of Trinity, and made a healthy fortune through investments (despite losing £9000 to the South Sea Bubble). He entered a new century and accepted an appropriately more social existence. He became a portly but amiable host to visitors who arrived from all over Europe, though it was observed that he “spoke very little in company” and “had something rather languid in his look and manners.” He had to a large extent fulfilled his divinely-imposed purpose and what concerns did remain were eclipsed by a social life within a class which could be likewise content with a measure of success.

It is intensely that Thomson, who like Pope, felt obliged to defend the present economic state of England, likewise reinforce the divinity of the Natural laws but does so with a concept of inspiration. Thomson asks if mere nervous sensitivity and refinement, for which we can read sensibility, were enough to explain Newton’s insights:

“say, can a soul
Of such extensive, deep, tremendous powers,
Enlarging still, be but a finer breath
Of spirits dancing thro’ their tubes a while,
And then for ever lost in vacant air?” (e166-70)

No, it cannot be simply human genius, and in an image which resembles a neoplatonic conception of divine light, Thomson sees “that light / so plenteous ray’d into thy mind below ‘descended’ from Light Himself” (e196-8). Thomson has brought together a picture of Newton’s delicate sensibility, a symbol of social and intellectual distinction, with a notion of inspiration which explains and endorsed the uncanny accuracy of Newton’s laws. These are united in what can be seen as a vista onto Thomson’s imperialism as he sees Newton towering, like Hercules or like Britain, ready to enjoy the fruits of conquest:

“Nature herself
Stood all subdued by him, and open laid
Has every latent glory to his view.” (e36-8)

The various detractors, who appear in the 18th century, to rebel against “Single Vision and Newton’s Sleep” are reacting, as Blake is here, as much to Newton’s ideology and God as to his mythical status as the symbol of reason. In fact, if one were to remove the mythical additions given to Newton, by men like Pope and Thomson, the distance between him and Blake would be greatly diminished, though not eliminated. Andrew Ramsay reported that Newton said on his death-bed:

“I don’t know what I may seem to the world, but as to myself, I seem to have been only like a boy playing on the sea-shore and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me.”

It is a picture which in its humility would reconcile the man Newton to one such as Blake whose Poem “Mock on, Mock on, Voltaire, Rousseau”, is an attack on Deists and Atheists who used Newton in ways he would not have enjoyed, and which is a poem whose conclusion is strangely reminiscent of Newton’s death-bed self-description:

“The Atoms of Democritus,
And Newton’s Particles of Light,
Are sande upon the Red sea shore,
Where Israel’s tents do shine so bright.”