

The Argument for a Deity

Isaac Newton

In these two selections, which *anticipate* much of Enlightenment deism, Newton insists that the design apparent everywhere in nature proves the existence *of* an intelligent and omnipresent Supreme Being. The first excerpt is from Newton's *Opticks* (1704), and the second is from a letter written in 1692 to the Reverend Dr. Richard Bentley.

The main business of natural philosophy is to argue from phenomena without feigning hypotheses and to deduce causes from effects, till we come to the very first cause, which certainly is not mechanical; and not only to unfold the mechanism of the world, but chiefly to resolve these and suchlike questions. What is there in places almost empty of matter, and whence is it that the sun and planets gravitate toward one another, without dense matter between them? Whence is it that nature does nothing in vain, and whence arises all that order and beauty which we see in the world? To what end are comets, and whence is it that planets move all one and the same way in orbs concentric while comets move all manner of ways in orbs very eccentric, and what hinders the fixed stars from falling upon one another? How came the bodies of animals to be contrived with so much art, and for what ends were their several parts? Was the eye contrived without skill in optics and the ear without knowledge of sounds? How do the motions of the body follow from the will, and whence is the instinct in animals? Is not the sensory of animals that place to which the sensitive substance is present and into which the sensible species of things are carried through the nerves and brain, that there they may be perceived by their immediate presence to that substance? And these things being rightly dispatched, does it not appear from phenomena that there is a Being, incorporeal, living, intelligent, omnipresent, who in infinite space, as it were in his sensory, sees the things themselves intimately and thoroughly perceives them, and comprehends them wholly by their immediate presence to himself, of which things the images only carried through the organs of sense into our little sensoriums are there seen and beheld by that which in us perceives and thinks? And though every true step made in this philosophy brings us not immediately to the knowledge of the first cause, yet it brings us nearer to it, and on that account is to be highly valued.

009

SIR,

When I wrote my Treatise about our System, I had an Eye upon such Principles as might work with considering Men, for the Belief of a Deity, and nothing can rejoice me more than to find it useful for that Purpose. But if I have done the Public any Service this way, it is due to nothing but Industry and patient Thought.

As to your first Query, it seems to me that if the Matter of our Sun and Planets, and all the Matter of the Universe, were evenly scattered throughout all the Heavens, and every Particle had an innate Gravity towards all the rest, and the whole Space, throughout which this Matter was scattered, was but finite; the Matter on the outside of this Space would by its Gravity tend towards all the Matter on the inside, and by consequence fall down into the middle of the whole Space, and there compose one great spherical Mass. But if the Matter was evenly disposed throughout an infinite Space, it could never convene into one Mass, but some of it would convene into one Mass and some into another, so as to make an infinite Number of great Masses, scattered at great Distances from one to another throughout all that infinite Space. And thus might the Sun and fixt Stars be formed, supposing the Matter were of a lucid Nature. But how the Matter should divide itself into two sorts, and that Part of it, which is fit to compose a shining Body, should fall down into one Mass and make a Sun, and the rest, which is fit to compose an opaque Body, should coalesce, not into one great Body, like the shining Matter, but into many little ones; or if the Sun at first were an opaque Body like the Planets, or the Planets lucid Bodies like the Sun, how he alone should be changed into a shining Body, whilst all they continue opaque, or all they be changed into opaque ones, whilst he remains unchanged, I do not think explicable by mere natural Causes, but am forced to ascribe it to the Counsel and Contrivance of a voluntary Agent.

The same Power, whether natural or supernatural, which placed the Sun in the Center of the six primary Planets, placed *Saturn* in the Center of the Orbs of his five secondary Planets, and Jupiter in the Center of his four secondary Planets, and the Earth in the Center of the Moon's Orb; and therefore had this Cause been a blind one, without Contrivance or Design, the Sun would have been a Body of the same kind with Saturn, Jupiter, and the Earth, that is, without Light and Heat. Why there is one Body in our System qualified to give Light and Heat to all the rest, I know no Reason, but because the Author of the System thought it convenient; and why there is but one Body of this kind I know no Reason, but because one was sufficient to warm and enlighten all the rest. For the Cartesian Hypothesis of Suns losing their Light, and then turning into Comets, and Comets into Planets, can have no Place in my System, and is plainly erroneous; because it is certain that as often as they appear to us, they descend into the System of our Planets, lower than the Orb of Jupiter, and sometimes lower than the Orbs of Venus and Mercury, and yet never stay here, but always return from the Sun with the same Degrees of Motion by which they approached him.

To your second Query, I answer, that the Motions which the Planets now have

could not spring from any natural Cause alone, but were impressed by an intelligent Agent. For since Comets descend into the Region of our Planets, and here move all manner of ways, going sometimes the same way with the Planets, sometimes the contrary way, and sometimes in cross ways, in Planes inclined to the Plane of the Ecliptick, and at all kinds of Angles, 'tis plain that there is no natural Cause which could determine all the Planets, both primary and secondary, to move the same way and in the same Plane, without any considerable Variation: This must have been the Effect of Counsel. Nor is there any natural Cause which could give the Planets those just Degrees of Velocity, in Proportion to their Distances from the Sun, and other central Bodies, which were requisite to make them move in such concentrick Orbs about those Bodies. Had the Planets been as swift as Comets, in Proportion to their Distances from the Sun (as they would have been, had their Motion been caused by their Gravity, whereby the Matter, at the first Formation of the Planets, might fall from the remotest Regions towards the Sun) they would not move in concentrick Orbs, but in such eccentrick ones as the Comets move in. Were all the Planets as swift as Mercury, or as slow as Saturn or his Satellites; or were their several Velocities otherwise much greater or less than they are, as they might have been had they arose from any other Cause than their Gravities; or had the Distances from the Centers about which they move, been greater or less than they are with the same Velocities; or had the Quantity of Matter in the Sun, or in Saturn, Jupiter, and the Earth, and by consequence their gravitating Power been greater or less than it is; the primary Planets could not have revolved about the Sun, nor the secondary ones about Saturn, Jupiter, and the Earth, in concentrick Circles as they do, but would have moved in Hyperbolas, or Parabolas, or in Ellipses very eccentrick. To make this System therefore, with all its Motions, required a Cause which understood, and compared together, the Quantities of Matter in the several Bodies of the Sun and Planets, and the gravitating Powers resulting from thence; the several Distances of the primary Planets from the Sun, and of the secondary ones from Saturn, Jupiter, and the Earth; and the Velocities with which these Planets could revolve about those Quantities of Matter in the central Bodies; and to compare and adjust all these Things together, in so great a Variety of Bodies, argues that Cause to be not blind and fortuitous, but very well skilled in Mechanicks and Geometry.

To your third Query, I answer, that it may be represented that the Sun may, by heating those Planets most which are nearest to him, cause them to be better concocted, and more condensed by that Concoction. But when I consider that our Earth is much more heated in its Bowels below the upper Crust by subterraneous Fermentations of mineral Bodies than by the Sun, I see not why the interior Parts of Jupiter and Saturn might not be as much heated, concocted, and coagulated by those Fermentations as our Earth is; and therefore this various Density should have some other Cause than the various Distances of the Planets from the Sun. And I am confirmed in this Opinion by considering, that the Planets of Jupiter and Saturn, as they are rarer than the rest, so they are vastly greater, and contain a far greater Quantity of Matter, and have many Satellites

about them; which Qualifications surely arose not from their being placed at so great a Distance from the Sun, but were rather the Cause why the Creator placed them at great Distance. For by their gravitating Powers they disturb one another's Motions very sensibly, as I find by some late Observations of Mr. Flamsteed, and had they been placed much nearer to the Sun and to one another, they would by the same Powers have caused a considerable Disturbance in the whole System.

To your fourth Query, I answer, that in the Hypothesis of Vortices, the Inclination of the Axis of the Earth might, in my Opinion, be ascribed to the Situation of the Earth's Vortex before it was absorbed by the neighboring Vortices, and the Earth turned from a Sun to a Comet; but this Inclination ought to decrease constantly in Compliance with the Motion of the Earth's Vortex, whose Axis is much less inclined to the Ecliptick, as appears by the Motion of the Moon carried about therein. If the Sun by his Rays could carry about the Planets, yet I do not see how he could thereby effect their diurnal Motions.

Lastly, I see nothing extraordinary in the Inclination of the Earth's Axis for proving a Deity, unless you will urge it as a Contrivance for Winter and Summer, and for making the Earth habitable towards the Poles; and that the diurnal Rotations of the Sun and Planets, as they could hardly arise from any Cause purely mechanical, so by being determined all the same way with the annual and menstrual Motions, they seem to make up that Harmony in the System, which, as I explained above, was the Effect of Choice rather than Chance.

There is yet another argument for a Deity, which I take to be a very strong one, but till the Principles on which it is grounded are better received, I think it more advisable to let it sleep.

I am,
Your most humble Servant
to command,
Is. NEWTON.

Cambridge,

Decemb. 10, 1692.