

An Account of the Systeme of the World described in M^r Newton's Mathematicall Principles of Philosophy

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An Account of the Systeme of the World described in M^r Newton's Mathematicall Principles of Philosophy.

I Scripture abused to prove the immoveableness of the globe of the Earth.

In determining the true systeme of the world the main Question is whether the earth do rest or be moved. For deciding this some bring texts of scripture, but in my opinion misinterpreted, the Scriptures speaking not in the language of Astronomers (as they think) but in that of the common people to whom they were written. So where tis said that ^a[1] God hath made the round world so fast that it cannot be moved, the Prophet intended not to teach Mathematicians the spherical figure ^b[2] & immoveableness of the whole earth & sea in the heavens but to tell the vulgar in their own dialect that God had made the great continent of Asia Europe & Africa so fast upon its foundations in the great Ocean that it cannot be moved therein after the manner of a floating Island. For this Continent was the whole habitable world anciently known & by the ancient eastern nations was accounted ^b[3] round or circular as was also the ^c[4] sea encompassing it. & this earth & sea they accounted flat as if the sun moon & stars ascended out of the ocean at their rising & went down into it again at their setting. This Continent is the world or earth usually mentioned in scripture & there described to be ^d[5] broad & to have ^e[6] end or ^f[7] borders, that is circular ones whose center some placed in Egypt others at Delphos, others at Ierusalem. And this world the Prophets consider as established in the Ocean upon sure & immoveable foundations at the first creation. The heavens were of old & the earth standing out of the water & in the water [that is in the midst of the Ocean like an Island] by the word of God. 2 Pet. 3.5. Thou Lord in the beginning hast laid the foundations of the earth & the heavens are the work of thine hands Psal 102.25. Prov. 8.29. Where wast thou when I laid the foundations of the earth. Declare if thou hast understanding who {ha}th laid the measures thereof or who hath stretched {the} line over it. Whereupon are the foundations thereof fix'd {o}r who hath laid the corner stone thereof, when the starrs {of the} morning praised me together, &c. Iob 38.4. The earth <40r> is the Lord's & all that therein is the compas of the world & they that dwell therein. For he hath founded it upon the seas & established it upon the floods Psal 24.1, 2 & 136.6. Thou hast laid the foundation of the round world Psal. 89.12. † < insertion from f 39v > † When he set a circle upon the face of the deep [that is, formed it circular about the earth] – when he gave to the sea his decree that the waters should not pass his commandment, when he appointed the foundations of the earth, then was I by him. Prov. 8.27, 29. < text from f 40r resumes > He laid the foundations of the earth that it

never should move at any time: Thou encompassedst it with the deep like as with a garment Psal. 104.5. So then the round world spoken of in scriptures is such a world as hath foundations & is founded in the waters & by consequence 'tis not the whole globe of the Earth & Sea but only the habitable dry land. For the whole Globe hath no foundations, but this habitable world is founded in the seas. And since this world by reason of the firmness of its foundations is said in scripture to be immoveable this immoveableness cannot be of the whole globe together, but only of its parts one amongst another & signifies nothing more then that those parts are firmly compacted together so that the dry land or Continent of Europe Asia & Africk cannot be moved upon the main body of the globe on which tis founded. For this immoveableness of the earth is opposite to that it's motion spoken of in Iob. He removeth the mountains & they feel not when he overthroweth them in his wrath: He removeth the earth out of her place that the pillars thereof do shake Iob. 9.6

II

Mathematicks abused to prove the Globe of the Earth immoveable

There is another sort of arguments against the motion of the whole earth taken from our senses, as if the earth could not be moved without our being many ways sensible of its motion. But this way of arguing proceeds from want of skill & judgment in Mathematical things, & therefore is insisted upon only by the common people & such mathematicians as understand not so much as the principles of Mechanicks. Were the earth moved unevenly by jogs such motion would be easily perceived, but an even motion such as the earth's is supposed, ought to be imperceptible. For any systeme of bodies the motions of the bodies one amongst another are the same whether the systeme rest or be {moved} on uniformly, as is mathematically demonstrable <41r> So the motions of all things in a ship are found the same whether the ship rest or be under sail. In both cases things fall perpendicularly down by the mast & projectiles fly alike towards all quarters. Nor can a blinded Marriner tell whether the ship move fast or slow or not at all. And there is the same reason of the System of the earth sea & air with the things therein. We cannot tell by our senses whether they all rest or move on evenly together.

III

Accurate skill in geometry & Mechanicks requisite to decide the Question.

Such arguments as these being insufficient to determin the Question, 'tis fit we should lay aside these & the like vulgar prejudices & have recourse to some strickt & proper way of reasoning. Now the Question being about motion is a mathematical one & therefore requires skill in Mathematicks to decide it. And seeing it is difficulter to argue demonstratively about magnitude & motion together then about magnitude alone, there is greater skill required here then in pure Geometry so that none but able Mathematicians may pretend to be competent judges of this matter. The great difficulty of this part of Mathematicks seems to be the reason that the Ancients made but little progress in it. In this last age since the revival & advancement of these studies, some able Mathematicians as Galileo & Hugenius have carried it on further then the Ancients did. Mister Newton to advance it far enough for his purpose has spent the two first of his three books in demonstrating new Propositions about force & motion before he begins to consider the systeme of the world. Then in his third Book he teaches that systeme from the Propositions demonstrated in the two first. The designe of this {pa}per is to give you an account of this Systeme {& re}fer you to the Demonstrations thereof to the {Book its}elf or to the judgement of such Mathematicians as <42r> have perused it

[1] a Psal 93.2 & 96.10.

[2] *The contents of this note are only visible in the diplomatic transcript because they were deleted on the original manuscript*

[3] b Strabo Geog. 1. 1. p. 2, 4.

[4] c Prov. 8.27. Iob. 9.8.

[5] Iob. 38.18. Psal. 50.1.

[6] e Iob. 28.24 & 37.3. Psal. 46.9. & 72.8.

[7] f Psal 74.17

[8] *The contents of this note are only visible in the diplomatic transcript because they were deleted on the original manuscript*
