

Rudjer Joseph Bošković

(1711 – 1787)

Rudjer Josip Boskovic (1711-1787) horvát matematikus, természetfilozófus, csillagász, fizikus és költő, a nemeuklidészi geometria, illetve az idővel, a térrel, a mozgással és a tehetetlenséggel kapcsolatos relativista elképzelések egyik előfutára.

Csapodi – jóval a közelmúlt s napjaink valóságos Bošković-reneszánsza előtt – hangsúlyozza a nagy jezsuita fizikus magyarországi hatását s találóan jellemzi: „A nagy, dalmáciai származású jezsuita matematikus és csillagász – írja – a vonzóerő elfogadása mellett olyan önálló rendszert alakított ki, amely bizonyos mértékig összhangot teremt Leibniz és Newton iránya közt. Bošković rendszere főként a testek elemi alkotórészeinek és azok dinamizmusának tekintetében tér el Newtonétól. Rendszere dinamikus atomizmus, azt tanítja, hogy az erő magában az anyagban van.” Bošković filozófiája – s tekintélye – Monarchia-szerte segítette a newtonianizmus terjedését. „Az 1753-i reform utáni korszak filozófiai oktatásának első korszakát tehát az jellemzi – foglalja össze gondos elemzését Csapodi –, hogy leszámol a skolasztikával, a második szakaszt az, hogy leszámol a cartesiánizmussal. 1753 előtt Descartes még túlságosan új és forradalmi, azért nem kap helyet az oktatásban, egy jó évtized múlva már rendszerét mint elavult, meghaladott álláspontot küszöbölik ki. Annak bizonyosága ez, hogy a sokáig változatlan, régi szellemiséget milyen rohamos gyorsasággal váltják fel az újabb és újabb irányok.” Lásd: Csapodi Csaba: Newtonianizmus a nagyszombati jezsuita egyetemen. = Regnum. Egyháztörténeti Évkönyv 6 (1944–46) pp. 59–68.

Makó tulajdonképpen a Bošković-féle fizikához teremtette meg a matematikai apparátust; az ő infinitézimális-felfogására a Bošković-görbe „limes”-ei hatottak, nem a Cauchy- és Weierstrass-félék.

Notwithstanding the arduous duties of his professorship, he found time for investigation in various fields of physical science, and he published a very large number of dissertations, some of them of considerable length. Among the subjects were the transit of Mercury, the Aurora Borealis, the figure of the Earth, the observation of the fixed stars, the inequalities in terrestrial gravitation, the application of mathematics to the theory of the telescope, the limits of certainty in astronomical observations, the solid of greatest attraction, the cycloid, the logistic curve, the theory of comets, the tides, the law of continuity, the double refraction micrometre, and various problems of spherical trigonometry.

Works

- *De maculis solaribus* (1736) (*On Sunspots*)
- *De maculis solaribus exercitatio astronomica* (1736) (*An astronomical exercise on sunspots*)
- *De Mercurii novissimo infra Solem transitu* (1737) (*On the most recent transit of Mercury across the Sun*)
- *Trigonometriae sphaericae constructio* (1737) (*The construction of trigonometric spheres*)
- *De aurora boreali* (1738) (*On the Aurora Borealis*)
- *De novo telescopii usu ad objecta coelestia determinanda* (1739) (*On the new use of the telescope for determining celestial objects*)
- *De veterum argumentis pro telluris sphaericitate* (1739) (*On the arguments of the ancients for the sphericity of the earth*)
- *Dissertatio de telluris figura* (1739) (*A dissertation on the shape of the earth*)
- *De Circulis osculatoribus, Dissertatio* (1740) (*A dissertation on intersections of circles*)
- *De motu corporum projectorum in spatio non-resistente* (1741) (*On the motion of unresisting projected bodies in space*)
- *De inaequalitate gravitatis in diversis terrae locis* (1741) (*On the inequality of gravity in diverse places on earth*)
- *De natura et usu infinitorum et infinite parvorum* (1741) (*On the nature and use of infinities and infinitesimals*)
- *De annuasi fixarum aberrationibus* (1742) (*On the annual aberration fixed stars*)
- *De observationibus astronomicis et quo pertingat earundem certitudo* (1742) (*On astronomical observations and the certitude which pertains to them*)
- *Disquisitio in universam astronomiam* (1742) (*A disquisition on universal astronomy*)
- *Parere di tre Matematici sopra i danni che si sono trovati nella Cupola di S. Pietro* (1742) (*On the opinion of three mathematicians concerning the damage to the dome of St Peter's*)
- *De motu corporis attracti in centrum immobile viribus decrescentibus in ratione distantiarum reciproca duplicata in spatiis non-resistentibus* (1743) (*On the motion of attracted body at an immobile centre by forces decreasing by the duplicate reciprocal proportion in non-resisting spaces*)
- *Riflessioni de' Padri Tommaso Le Seur, Francesco Jacquier de el' Ordine de' Minimi, e Ruggiero Giuseppe Boscovich della Compagnia di Gesù Sopra alcune difficoltà spettanti i danni, e Risarcimenti della Cupola Di S. Pietro* (1743) (*Reflections of Fathers Tommaso Le Seur, Francis Jacquier of the Order of Minimi, and Ruggiero Giuseppe Boscovich of the Society of Jesus on problems due to damage, and repair of, the dome of St. Peter's*) [Link to full text](#)
- *Nova methodus adhibendi phasium observationes in eclipsibus lunaribus ad exercendam geometriam et promovendam astronomiam* (1744) (*A new method for using observations of phases in lunar eclipses for cultivating geometry and advancing astronomy*)
- [De cyloide et logistica](#) (1745) (*On the cycloid and the logistic curve*)
- [De viribus vivis](#) (1745) (*On living forces*)
- *Trigonometria sphaerica* (1745) (*Spherical trigonometry*)
- *De cometis* (1746) (*On comets*)
- *Dissertatio de maris aestu* (1747) (*A dissertation on the tides of the ocean*)
- *Dissertatio de lumine, I–2* (1748/1749) (*A dissertation on light*)
- *De determinanda orbita planetae ope catoptricae ex datis vi celeritate & directione motus in dato puncto* (1749) (*On determining the orbits of a planet by the aid of catoptrics/reflections from given force speed and direction of motion in a given point*)
- *Sopra il Turbine che la notte tra gli XI e XII giugno del MDCCXLIX danneggiò una gran parte di Roma* (1749; Latin translation 1766) (*Upon the whirlwind that on the night between*

- the 11 and 12 June 1749 damaged a large part of Rome)*
- *De centrogravitatis* (1751) (*On the centre of gravity*)
 - *Elementorum matheseos ad usum studiosae juventutis* (1752) (*The elements of mathematics for the use of young students*)
 - *De lunae atmosphaera* (1753) (*On the atmosphere of the moon*)
 - *De continuitatis lege et eius consecrariis pertinentibus ad prima materiae elementa eorumque vires dissertatio* (1754) (*A dissertation on the law of continuity and its consequences pertaining to the first elements of matter and of its powers*)
 - *Elementorium universae matheseos, 1–3* (1757) (*Elements of general mathematics*)
 - *De lege virium in natura existentium* (1755) (*On the law of powers in the nature of existing things*)
 - *De lentibus et telescopiis dioptriciis disertatio* (1755) (*Of dioptric lenses and telescopes*)
 - *De inaequalitatibus quas Saturnus et Jupiter sibi mutuo videntur inducere praesertim circa tempus conjunctionis* (1756) (*On the inequalities which Saturn and Jupiter seem to induce between themselves particularly around times of conjunction*)
 - *Theoria philosophiae naturalis* (1758) (*A Theory of Natural Philosophy*) [link to full text](#)
 - *De Solis ac Lunae defectibus* (1760) (*On the sun, moon and eclipses*)
 - *Scrittura sulli danni osservati nell' edificio della Biblioteca Cesarea di Vienna, e loro riparazione* (1763) (*Writing on the damage observed in the building of the Library of Caesarea Vienna, and their repair*)
 - *Memorie sopra il Porti di Rimini* (1765) (*A memoir on the Ports of Rimini*)
 - *Sentimento sulla solidità della nuova Guglia del Duomo di Milano* (1765) (*Sentiments concerning the soundness of the new Spire of the Duomo of Milan*)
 - *dissertationes quinque ad dioptricam pertinentes* (1767) (*Five dissertations pertaining to dioptrics*)
 - *Voyage astronomique et géographique* (1770) (*An astronomic and geographic voyage*)
 - *Memorie sulli cannocchiali diottrici* (1771) (*A memoir on dioptric telescopes*)
 - [*Journal d'un voyage de Constantinople en Pologne*](#). 1772. (*Journal of a voyage from Constantinople to Poland*)
 - *Sullo sbocco dell'Adige in Mare* (1779) (*On the mouth of the River Adige*)
 - *Riflessioni sulla relazione del Sig. Abate Ximenes appartenente al Progetto di un nuovo Ozzeri nello Stato Lucchese* (1782) (*comments on the report of Signor Abbot Ximenes concerning the project for the Nuovo Ozzeri drainage channel in Lucca*)
 - [*Giornale di un viaggio da Costantinopoli in Polonia*](#). 1784. (*Journal of a voyage from Constantinople to Poland of Abbot Ruggiero Giuseppe Boscovich, together with his report of the ruins of Troy*)
 - *Opera pertinentia ad opticam et astronomiam, 1–5* (1785) (*Works pertaining to optics and astronomy*)
 - *Sui danni del Porto di Savona, loro cagioni e rimedi* (1771) (*On the damage to the port of Savona, its causes and possible repairs*)
 - *Lettere a Giovan Stefano Conti* (1780) (*Letter to Giovan Stefano Conti*)

T H E O R I A
PHILOSOPHIÆ NATURALIS

REDACTA AD UNICAM LEGEM VIRIUM
IN NATURA EXISTENTIUM,

A U C T O R E

P. ROGERIO JOSEPHO BOSCOVICH

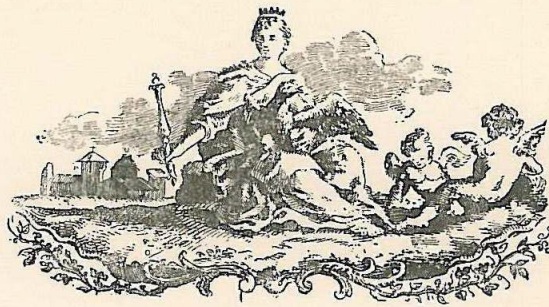
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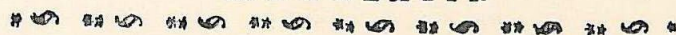
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V E N E T I I S,

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