LIFE OF ROGER JOSEPH BOSCOVICH

By BRANISLAV PETRONIEVIĆ

THE Slav world, being still in its infancy, has, despite a considerable number of scientific men, been unable to contribute as largely to general science as the other great European nations. It has, nevertheless, demonstrated its capacity of producing scientific works of the highest value. Above all, as I have elsewhere indicated,[a] it possesses Copernicus, Lobachevski, Mendeljev, and Boscovich.

In the following article, I propose to describe briefly the life of the Jugo-Slav, Boscovich, whose principal work is here published for the sixth time; the first edition having appeared in 1758, and others in 1759, 1763, 1764, and 1765. The present text is from the edition of 1763, the first Venetian edition, revised and enlarged.

On his father's side, the family of Boscovich is of purely Serbian origin, his grandfather, Boško, having been an orthodox Serbian peasant of the village of Orakova in Herzegovina. His father, Nikola, was first a merchant in Novi Pazar (Old Serbia), but later settled in Dubrovnik (Ragusa, the famous republic in Southern Dalmatia), whither his father, Boško, soon followed him, and where Nikola became a Roman Catholic. Pavica, Boscovich's mother, belonged to the Italian family of Betere, which for a century had been established in Dubrovnik and had become Slavonicized—Bara Betere, Pavica's father, having been a poet of some reputation in Ragusa.

Roger Joseph Boscovich (Rudjer Josif Boškovic', in Serbo-Croatian) was born at Ragusa on September 18th, 1711, and was one of the younger members of a large family. He received his primary and secondary education at the Jesuit College of his native town; in 1725 he became a member of the Jesuit order and was sent to Rome, where from 1728 to 1733 he studied philosophy, physics and mathematics in the Collegium Romanum. From 1733 to 1738 he taught rhetoric and grammar in various Jesuit schools; he became Professor of mathematics in the Collegium Romanum, continuing at the same time his studies in theology, until in 1744 he became a priest and a member of his order.

In 1736, Boscovich began his literary activity with the first fragment, "De Maculis Solaribus," of a scientific poem, "De Solis ac Lunæ Defectibus"; and almost every succeeding year he published at least one treatise upon some scientific or philosophic problem. His reputation as a mathematician was already established when he was commissioned by Pope Benedict XIV to examine with two other mathematicians the causes of the weakness in the cupola of St. Peter's at Rome. Shortly after, the same Pope commissioned him to consider various other problems, such as the drainage of the Pontine marshes, the regularization of the Tiber, and so on. In 1756, he was sent by the republic of Lucca to Vienna as arbiter in a dispute between Lucca and Tuscany. During this stay in Vienna, Boscovich was commanded by the Empress Maria Theresa to examine the building of the Imperial Library at Vienna and the cupola of the cathedral at Milan. But this stay in Vienna, which lasted until 1758, had still more important consequences; for Boscovich found time there to finish his principal work, *Theoria Philosophiæ Naturalis*; the publication was entrusted to a Jesuit, Father Scherffer, Boscovich having to leave Vienna, and the first edition appeared in 1758, followed by a second edition in the following year. With both of these editions, Boscovich was to some extent dissatisfied (see the remarks made by the printer who carried out the third edition at Venice, given in this volume on page 3); so a third edition was issued at Venice, revised, enlarged and rearranged under the author's personal superintendence in 1763. The revision was so extensive that as the printer remarks, "it ought to be considered in some measure as a first and original edition"; and as such it has been taken as the basis of the translation now published. The fourth and fifth editions followed in 1764 and 1765.

One of the most important tasks which Boscovich was commissioned to undertake was that of measuring an arc of the meridian in the Papal States. Boscovich had designed to take part in a Portuguese expedition to Brazil on a similar errand; but he was per-

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[a] *Slav Achievements in Advanced Science*, London, 1917.

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in the eulogium of the poet, Bernardo Zamagna.[a] This magnificent tribute from his native town was entirely deserved by Boscovich, both for his scientific works, and for his love and work for his country.

Boscovich had left his native country when a boy, and returned to it only once afterwards, when, in 1747, he passed the summer there, from June 20th to October 1st; but he often intended to return. In a letter, dated May 3rd, 1774, he seeks to secure a pension as a member of the Jesuit College of Ragusa; he writes: "I always hope at last to find my true peace in my own country and, if God permit me, to pass my old age there in quietness."

Although Boscovich has written nothing in his own language, he understood it perfectly; as is shown by the correspondence with his sister, by certain passages in his Italian letters, and also by his *Giornale* (p. 31; p. 59 of the French edition). In a dispute with d'Alembert, who had called him an Italian, he said: "we will notice here in the first place that our author is a Dalmatian, and from Ragusa, not Italian; and that is the reason why Marucelli, in a recent work on Italian authors, has made no mention of him."[b] That his feeling of Slav nationality was strong is proved by the tributes he pays to his native town and native land in his dedicatory epistle to Louis XV.

Boscovich was at once philosopher, astronomer, physicist, mathematician, historian, engineer, architect, and poet. In addition, he was a diplomatist and a man of the world; and yet a good Catholic and a devoted member of the Jesuit order. His friend, Lalande, has thus sketched his appearance and his character: "Father Boscovich was of great stature; he had a noble expression, and his disposition was obliging. He accommodated himself with ease to the foibles of the great, with whom he came into frequent contact. But his temper was a trifle hasty and irascible, even to his friends—at least his manner gave that impression—but this solitary defect was compensated by all those qualities which make up a great man. . . . He possessed so strong a constitution that it seemed likely that he would have lived much longer than he actually did; but his appetite was large, and his belief in the strength of his constitution hindered him from paying sufficient attention to the danger which always results from this." From other sources we learn that Boscovich had only one meal daily, déjeûner.

Of his ability as a poet, Lalande says: "He was himself a poet like his brother, who was also a Jesuit. . . . Boscovich wrote verse in Latin only, but he composed with extreme ease. He hardly ever found himself in company without dashing off some impromptu verses to well-known men or charming women. To the latter he paid no other attentions, for his austerity was always exemplary. . . . With such talents, it is not to be wondered at that he was everywhere appreciated and sought after. Ministers, princes and sovereigns all received him with the greatest distinction. M. de Lalande witnessed this in every part of Italy where Boscovich accompanied him in 1765."

Boscovich was acquainted with several languages—Latin, Italian, French, as well as his native Serbo-Croatian, which, despite his long absence from his country, he did not forget. Although he had studied in Italy and passed the greater part of his life there, he had never penetrated to the spirit of the language, as his Italian biographer, Ricca, notices. His command of French was even more defective; but in spite of this fact, French men of science urged him to write in French. English he did not understand, as he confessed in a letter to Priestley; although he had picked up some words of polite conversation during his stay in London.

His correspondence was extensive. The greater part of it has been published in the *Mémoirs de l'Académie Jougo-Slave* of Zagrab, 1887 to 1912.

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[a] Oratio in funere R. J. Boscovichii . . . a Bernardo Zamagna.
[b] *Voyage Astronomique*, p. 750; also on pp. 707 seq.
[c] *Journal des Sçavans*, Février, 1792, pp. 113–118.