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British con-  
tributions to  
biology.

Germany this latter department of research was specially cultivated, how all the mathematical, experimental, and philosophical sciences combined to organise the one great science of physiology or biology, with its central and crowning problem—the problem of consciousness. We also noted how this science worked a great reform in the whole domain of medical theory and practice. Let us now return to the question, What has Great Britain done during the first half of this century in this great department of scientific thought? Single great names, like those of Harvey,<sup>1</sup> marked in former centuries discoveries in the natural sciences equal to those of Newton in the mathematical; the name of Ray<sup>2</sup> is still preserved in the

<sup>1</sup> William Harvey (1578-1657), a native of Kent, received his medical education in Italy, especially in Padua, under Fabricius of Acquapendente. The discovery of the circulation of the blood belongs to the year 1616, and is almost contemporary with Napier's invention of logarithms. This discovery is contained in the manuscript of Harvey's lectures preserved in the British Museum, but the publication did not take place till 1628 ('*Exercitatio anatomica de motu corporis et sanguinis in animalibus*,' published at Frankfort). Although Harvey was drawn into long controversies by his publication of this work, he had the satisfaction of seeing his discovery generally recognised. Descartes abroad took Harvey's part in his letter to Beverwijck in 1637, and in his '*Discours de la Méthode*,' published in the same year; and it is noteworthy that—as has been the case with many subsequent English discoveries—the first great acknowledgment came from the Continent, notably Holland. The acceptance in France by the faculties of Paris and

Montpellier was less rapid, and in England it is well known that Lord Bacon took no notice either of Harvey's discovery or of Napier's invention. See James Spedding's preface to the "*De interpretatione Naturæ Proœmium*" in works of Lord Bacon, vol. iii. p. 507, &c.; also Harvey's own opinion on Bacon, *ibid.*, p. 515. Hobbes, on the other hand, "was eager to accept Harvey's revolutionary discovery" (Croom Robertson, '*Hobbes*,' p. 123), and refers to Harvey in the dedication of the '*De Corpore*' (1655) as "the only man I know that, conquering envy, hath established a new doctrine in his lifetime" (*ibid.*, p. 187 n.) On Harvey's other works, notably on the work '*De Generatione*,' see, *inter alia*, Huxley, '*Science and Culture*,' 1888, p. 333, &c.

<sup>2</sup> John Ray, or Rajus, as he is called abroad (1628-1705), a native of Essex, was a Cambridge man; he, however, gave up his fellowship in 1662, feeling himself unable to subscribe to the Act of Uniformity of 1661. He was one of the first great classifiers of plants; he col-