is it, observes Cuvier, that we are often on the brink of a discovery without suspecting that we are so;—so true is it, we may add, that a certain succession of time and of persons is generally necessary to familiarize men with one thought, before they can advance to that which is the next in order.

Sect. 2.—The Discovery of the Circulation made by Harvey.

William Harvey was born in 1578, at Folkestone in Kent.[14] He first studied at Cambridge: he afterwards went to Padua, where the celebrity of Fabricius of Acquapendente attracted from all parts those who wished to be instructed in anatomy and physiology. In this city, excited by the discovery of the valves of the veins, which his master had recently made, and reflecting on the direction of the valves which are at the entrance of the veins into the heart, and at the exit of the arteries from it, he conceived the idea of making experiments, in order to determine what is the course of the blood in its vessels. He found that when he tied up veins in various animals, they swelled below the ligature, or in the part furthest from the heart; while arteries, with a like ligature, swelled on the side next the heart. Combining these facts with the direction of the valves, he came to the conclusion that the blood is impelled, by the left side of the heart, in the arteries to the extremities, and thence returns by the veins into the right side of the heart. He showed, too, how this was confirmed by the phenomena of the pulse, and by the results of opening the vessels. He proved, also, that the circulation of the lungs is a continuation of the larger circulation; and thus the whole doctrine of the double circulation was established.

Harvey's experiments had been made in 1616 and 1618; it is commonly said that he first promulgated his opinion in 1619; but the manuscript of the lectures, delivered by him as lecturer to the College of Physicians, is extant in the British Museum, and, containing the propositions on which the doctrine is founded, refers them to April, 1616. It was not till 1628 that he published, at Frankfort, his *Exercitatio Anatomica de Motu Cordis et Sanguinis;* but he there observes that he had for above nine years confirmed and illustrated his opinion in his lectures, by arguments grounded upon ocular demonstrations.

---

[14] Cuv. p. 51.