

and many of them taught there for many years.<sup>1</sup> It was with a true insight into the higher intellectual needs of the nation that the successive Governments of the Revo-

<sup>1</sup> Before the age of the Revolution, which did so much to promote higher scientific education, Paris possessed already many great schools. First in importance was the Collège de France, founded in 1530 by Francis I. Gassendi and Roberval taught there in the seventeenth century, and about the middle of the eighteenth century science began to be more extensively represented, Lalande and Daubenton, occupying chairs. The Collège et École de Chirurgie was an ancient establishment. There was the Jardin des Plantes, with Buffon, Lemonnier, Daubenton, and Fourcroy; the École royale des Mines, founded in 1783, where Duhamel taught metallurgy; the École des Ponts et Chaussées, founded by Turgot in 1775. Daubenton, Fourcroy, and Vicq d'Azyr taught in the École vétérinaire d'Alfort, founded in 1766. Besides the Académie des Sciences, the Académie royale de Chirurgie, founded by Lapeyronie under Louis XV. in 1731, had a great influence on the development of anatomy and surgery during the eighteenth century. Tenon and Petit, as well as Quesnay the economist, were amongst its members, and it kept up a lively intercourse with anatomists all over Europe. The Paris academies had also their representatives and connections in the provinces. Independent academies of science were affiliated with the Académie des Sciences—1716 at Bordeaux, 1706 at Montpellier, 1746 at Toulouse, 1766 at Béziers. Before having received their *lettres patentes*, which gave their members certain privileges, most of these academies had existed as independent societies. Other

provincial academies, such as Arles (1668), Nîmes (1684), Soissons (1674), Marseilles (1726), were affiliated with the Académie française. Others, such as Caen (1705), Lyons (1724), Dijon (1740), Rouen (1744), Amiens and Nancy (1750), Besançon (1757), Metz (1760), Clermont (1780), Orléans (1786), were not specially affiliated. These dates show how very much earlier a literary and scientific organisation existed in France than in other countries. The Protestant universities in Germany formed an organisation of a different kind, with which I shall deal later on. The academic system, so early developed in France, was of great use to the culture of the sciences. French science is usually considered to be almost entirely located in Paris. M. Bouillier ('L'Institut et les Académies de Province,' Paris, 1879) has drawn attention to the great services of this network of academies. Many of the most eminent writers belonged to these provincial centres, and worked for them even after becoming members of the more celebrated academies. Montesquieu is connected with Bordeaux, Cassini and many eminent doctors with Montpellier, Dijon has the honour of bringing out Rousseau, and Toulouse gave prizes to Bossut and Clairault. Robespierre's name is connected with the Academy of Arras, Marat discourses at Rouen and Lyons on electricity and optics, and Danton and Bonaparte compete for the *prix Raynal* at Lyons. "Mais," says M. Bouillier, "ce qui nous semble le plus digne de remarque et d'éloge, ce sont les écoles gratuites de dessin, les cours gratuits de physique, de chimie,