

schools the same habit—almost absent in other countries—of looking upon private study and research as a necessary qualification of the lecturer and teacher. The educational organisation of the combined universities and higher schools has thus become an equally powerful organisation for research, and for increasing knowledge. Wherever the progress of learning and science requires a large amount of detailed study inspired by a few leading ideas, or subservient to some common design and plan, the German universities and higher schools supply a well-trained army of workers, standing under the intellectual generalship of a few great leading minds. Thus it is that no nation in modern times has so many *schools of thought* and learning as Germany, and none can boast of having started and carried through such a large number of gigantic enterprises, requiring the co-operation and collective application of a numerous and well-trained staff.<sup>1</sup> The university system, in one word, not only teaches knowledge, but above all it teaches *research*. This is its pride and the foundation of its fame.

8.  
The university a training-school of research.

<sup>1</sup> The editions of the ancient classics brought out by Tauchnitz, Weidmann, and Teubner are well known. The collections of the Histories of all countries, begun by Heeren and Ukert and continued in this century by the publishing firm of Salomon Hirzel of Leipsic; the 'Jahresberichte,' started by Berzelius for chemistry, and now separately conducted for all the different sciences; contain summaries of the labours of the whole world systematically arranged. There is the geographical establishment of Petermann at Gotha; not to speak of publications specifically national, such as the 'Monumenta Germanicæ,'

as other countries possess similar undertakings. Von Zach was the first to establish a regular international organ for astronomical observations. It was started in 1798, and soon became the "living organ of astronomy," equally appreciated by Lalande and Gauss. This "monthly" was soon succeeded by Schumacher's "weekly," the 'Astronomische Nachrichten.' See Wolf, 'Geschichte der Astronomie,' p. 764, &c. Humboldt's and Gauss's scheme for a network of magnetic observations all over the world was taken up by English men of science.