formations of energy in the body, the problems of animal heat and body-temperature, the dynamics of the circulation, animal electricity, the mechanics of movement, the optics of the eye, the acoustics of the ear, and so on; in short, the study of all those phenomena associated with life which admit of being studied and measured by the methods and instruments of experimental physics. Perhaps it may be said that the whole body of research in this direction is centred in the doctrine of the conservation of energy which Joule and Mayer established, and which was shown by Helmholtz and others to hold true for the living organism as well as for the dead engine.

Du Bois-Reymond.

Among those who have welded the contact between physics and physiology, and equally, perhaps, among those who have vindicated the biological standpoint in modern culture, Emil du Bois-Reymond (1818–1896) ranks high.

He was interesting personally as a man of versatile genius, as a loyal German patriot of French descent, and as one of the many who have reacted from Theology to Science, doubtless to the benefit of both. After a period of interest in geology he found himself, along with Helmholtz and many other afterwards illustrious workers, at the feet of Johannes Müller, whose chair he eventually filled.

Taking up the clues which Galvani and Volta had first handled about the end of the eighteenth century, and which many had tried to use, Du Bois-Reymond devoted his life to the study of the electromotor phenomena associated with muscle and nerve. There are electric currents in these tissues, and alterations in the currents during functional activity. By working out the intricate details of this thesis, now so familiar to students of medicine; by the more general application of physical methods to physiological problems; by introducing ingenious instruments; and by establishing (after many years of sorry quarters) a truly wonderful Physiological Institute, he did great service to physiology.

In spite of his lifelong devotion to one main problem,