

29.
Lotze's
"local
signs."

that of localisation of things in space. Lotze was one of the first to attempt detailed answers to these questions. In particular he propounded the theory of "local signs," which with certain modifications has been adopted by subsequent writers on the subject. The combination of physiological, optical, and psychological investigations in Helmholtz's great work on 'Physiological Optics' has brought definiteness and mathematical precision into many of the questions suggested by philosophers and naturalists before him. Through it and its great companion, the 'Physiological Acoustics,' psycho-physics has to a large extent become an exact science.

30.
Fechner.

A great step in the direction of drawing psychical phenomena into the circle of the exact sciences was taken independently by Gustav Theodor Fechner;¹ in fact, it is

¹ G. T. Fechner (1801-1887) was a unique figure in German literature, science, and philosophy. Beyond his own country he is only very imperfectly known and appreciated. He was self-taught, and living all his life somewhat outside the conventional categories of German academic activity, he made a position for himself which has only become intelligible to a larger public through the issue—after his death—of Prof. Wundt's oration, Prof. Kuntze's (his nephew's) charming biography (1892), and Prof. Lasswitz's monograph on Fechner (Stuttgart, 1896), in which for the first time a coherent exposition of his philosophical teaching is attempted. Prof. Wundt has also, in many passages of his work on psychology, and through the second edition of the 'Psychophysik,' contributed largely to a better understanding of Fechner's views and merits. He descended on both

sides from ancestors whose position was that of highly esteemed Protestant pastors; he studied medicine like Lotze, and was the friend and colleague of Lotze's teachers, Weber and Weisse. In his autobiographical record, communicated by Kuntze, he confesses having become almost an atheist under the influence of his medical studies, until he became acquainted with the philosophy of Schelling, Oken, and Steffens, which dazzled him, touched the poetical and mystical side of his nature, and, though he hardly understood it, had a lasting influence on him. The simultaneous occupation with the best scientific literature of the day (he translated French text-books such as those of Biot and Thénard, and verified Ohm's law experimentally), however, forced upon him the sceptical reflection whether, "of all the beautiful orderly connection of optical phenomena, so clearly expounded by Biot, anything could