tific spirit has added new interest to a study which was threatened with neglect, because it was too content with mere assertion, and presumed upon the self-evidence of words to communicate its wisdom. Although it may determine nothing as to the quality of sensation and consciousness, it will do much to drive away the mist that has ever hovered over many psychological speculations.

Still experiments have not yet demonstrated the derivative nature of time and space, although they have gone far to make them a matter of intelligible consideration and discussion. They have shown the variability of our empirical conceptions of them, but have not destroyed their validity as postulates of experience, because no special sense-perception may be constant enough to supply a criterion of their fixity. Indefinite conceptions of them at least are always assumed. However we may seek for some regular and uniform experiences within the ken of consciousness to serve as constants for them, or as the phenomena which determine and represent our conceptions of them, we shall find by closer scrutiny that some notion of time and space is already postulated in the very phenomena supposed to give the psychic constants for them ; that is, we shall in vain endeavor to go outside of time and space to discover events which will account for them, or present their genesis from non-spacial and non-temporal relations. But at the same time experiment is providing data to render them clearer and more tangible to ordinary reflection than older speculations. For space the theory of 'local signs,' both tactual and visual, is taking the place of transcendental conceptions; and for time, the theory of discontinuous states of consciousness that may be objectively regular and uniform in their causes.

Among the most important contributions, however, which psychophysics has given to science, are the results showing the differential functions of the nervous system. The sense of temperature has been shown to be as distinct from touch as that is from vision, and even a different nerve is required to perceive cold from that which perceives heat. How far this differentiation of the sensorium may be carried, no one can predict. But even the established conclusions of the present will exert a far-reaching influence upon psychological speculations, and none more than the fact that distinct nervous organisms are required to receive representations once supposed to be connected with the same sense. It is too soon to predict what influence it will have in modifying older views : it will certainly modify them, but there is always a truth, even in the past, that avails to survive the mortality of language ; and, although psychophysics may compel us to reconstruct some theories, it will not wholly do away with the intellectual conquests of history, or oblige us to cast dust in the face of introspective methods, merely to gratify and strengthen an unnecessary prejudice against older opinions.

J. H. HYSLOP.

ANATOMICAL AND MEDICAL KNOWLEDGE OF ANCIENT EGYPT.

IN a paper read at a recent meeting of the Royal institution of Great Britain, Prof. A. Macalister gave an account of the ancient anatomical and medical knowledge of Egypt, of which the following is a summary from the *Lancet*.

The surviving fragments of the early literature of Egypt are mainly of a religious character ; but this is not to be wondered at, for the genius of the people was essentially religious, and their doctrine of the future state leavened their national life in almost every particular. To them the body was an integral part of the immortal humanity : therefore it could not be permitted to turn to decay, but had to be preserved from corruption that it might be a fit receptacle for the soul to dwell in through eternity. Their treatment of the body was thus dependent on their belief of its relation to the soul, and this, we learn from their religious writings, was a relationship of eternal independence. To secure perpetual preservation, the body had to be properly embalmed, the cavities opened and subjected to the action of antiseptics. Although the body was sacred, under the special protection of the god Thoth, though each part was under the guardianship of a special divinity, yet this sacredness did not preclude careful inspection and the processes necessary for preservation, for all parts had to be perpetuated.

Embalming was a religious rite, to be performed by the priests of the Cultus ; and the historian Herodotus has preserved for us what is doubtless a substantially accurate account of the different methods whereby it was done in the later times in which he lived. The organs removed from the bodies of persons of the better classes were not returned into the body, but were preserved in vases of alabaster or stone, surmounted by the heads of the four divinities of Hades, the sons of Horus and Isis.

During the ascendency of Greek influence in Egypt, Alexandria earned the reputation of being the chief school of anatomy and medicine in the world. Erasistratus, who lived in the days of Ptolemy Soter, B.C. 285, was an anatomist of such enthusiasm, that he and his disciples received from the king criminals condemned to death.

But this Alexandrian school, although upon Egyptian soil, was essentially Greek in spirit : even Herophilus had learned some of his anatomy

from Praxagoras of Cos, although, as the anatomy of the earlier Greek school had been derived from Egypt, it was but returning to the mother-country the traditions of culture derived therefrom. It was in Egypt Democritus of Abdera studied, and so was fitted to teach anatomy to Hippocrates, the father of medicine. The three pithy and graphic letters on anatomy (which are extant), which it is supposed Democritus sent to Hippocrates, may well have been the result of his Egyptian training. At a later period it was at Alexandria that Galen pursued his study of anatomy under Heraclianus, and the anatomical school of Alexandria survived until the Mohammedan invasion of Amru in A.D. 640.

That much even of the earlier Greek medicine, anatomy, and pathology was derived from Egypt, we learn both directly and indirectly. Most of the vegetable drugs in use in Greece were natives of Egypt; and Galen, speaking of one prescription called 'epigonos,' tells us that it was obtained from the adytum of the temple of Ptah, at Memphis. He quotes it, and other Egyptian prescriptions, from the book Narthex, written by Hera of Kappadokia.

Medical colleges of far greater antiquity than that of Alexandria existed in the priestly schools of Memphis, Heliopolis, Sais, and Thebes. These were much more faithful exponents of the purely Egyptian system of the art of physic.

Of the ancient medical literature of Egypt, two nearly complete treatises are still extant, and six or seven fragments of others. These vary in date and in perfection. The most complete are the Papyrus Ebers and the Medical papyrus of Berlin. The fragments which are noteworthy are, the British museum papyrus, formerly the property of the Royal institution, the Papyrus VI. of Boulaq, the Magical papyri of Turin and Paris, the Coptic medical manuscript in the Borgia library, and the Greek papyri 383 and 384 of Leyden.

ECONOMIC STATISTICS.

THIS volume is another of the *handbuchs* which the Germans of this generation are diligent in compiling. Encyclopedic in character, it deals with the statistics of production and consumption of economic goods in all countries where numerical data can be obtained. The germ of the work is discovered in a volume published by the same author in 1867, which presented certain commercial statistics collected during an extensive voyage around the earth. Since then two similar world-tours have been undertaken, while official reports have been ransacked to yield up their treasures. The result is this book, containing a mass of statistical information in regard to almost every conceivable commodity which nourishes man, or which enters into manufactures as raw material. The scope of the work embraces the statistics of minerals, mechanical forces, machinery, steam-power, electricity, money (both paper and metal), waterways, railroads, postal service, telegraphs, marine cables, and telephones.

To illustrate the plan pursued, the section treating of grains is here analyzed. At the outset is given the proportion of the area of Europe which is devoted to the culture of the several cereals during successive decades in different countries. The condensed tables reveal the wheat situation at once. Unfortunately, however, in such a work as this the picture cannot be a late one, and is useful in large part only for purposes of comparison.

No figures are apparently given for any year since 1883; but the author, in arriving at averages, has been careful to choose periods of legitimate length to be used in such comparison. The tables are re-enforced not only by summaries of the crops produced, the exports and imports, and the consumption, both total and per capita, but also by historical and descriptive matter. One table shows us the source of English wheat in successive years. Five pages are set apart to the statistics of the United States, while the South American grains receive their share of attention. This is finally all summarized in one short tabulation, presenting the total world-production of wheat, rye, barley, oats, and corn, in hectolitres and centimetres.

There is little attempt to generalize from these census wastes of figures; but no one can pick his way through this interlacing of exports and imports, as here interwoven, without reflecting upon the immense fact of the internationalism of trade. But a century ago the total of the world's export trade in corn was but eleven million hectolitres, while now it annually reaches five hundred and fifty millions.

The fortunes of some comparatively insignificant commodities are tracked from country to country. Neither pork-packing in Chicago nor the trade in human hair is neglected; and no fact is too minute for this fact-hunter, who carefully informs us that the skilful hair-trader distinguishes between French and German hair by the sense of smell. One of the most valuable tabulations is that on p. 640, summarizing the present condition of the world's trade. Naturally the grand total values of imports and exports do not exactly balance, the former being about ten per cent in excess

Das wirthschaftliche leben der völker. Ein handbuch über production und consum. VON DR. KARL VON SCHERZER. Leipzig, *Dürr*, 1885. 8°.