

ploration Fund, at San el-Hagar (the site of the Tanis of the classical writers, with which the Zoan of the Bible is universally identified), and of M. Naville's much attacked and much defended identifications of Pithom and Succoth—prominent names in the history of the Exodus from "the field of Zoan"—Mr. F. C. Whitehouse's dissertation "On the thesis, Zoan is Tanis magna, a suburb of Memphis, and not San el-Hagar or Tanis parva in the Delta" (in the last Proceedings of the American Oriental Society), has a particular interest. Considering that "all the scholars who have given any attention to the subject are agreed that San el-Hagar is the Zoan of the Old Testament," as well as the Tanis of Herodotus, Diodorus, Strabo, etc., the American critic's thesis is certainly a bold one; but it is sufficiently well supported by critical argument and traditional authority—as preserved by Josephus, Benjamin of Tudela, and Antoninus Martyr—to deserve attentive consideration. But whether found weighty or wanting by independent criticism in the fields of Egyptology and Biblical research, it has the best chances of achieving great popularity among Bible students of the theologico-conservative class. For Petrie's excavations, from which extraordinary results were expected for the vindication of the Scriptural narrative concerning the stay of the Israelites in the land of the Pharaohs, are to all appearances destined to end in a grand disappointment in that regard, however fruitful they may prove in unearthing the remains of later periods; and it will, therefore, be very convenient to have in the neighborhood of Cairo another Zoan-Tanis—one undreamed of even by Jablonski, who ventured to place Goshen south of Cairo—to fall back upon for new corroborative search and study.

—A notable article by M. Charles Diehl appears in the January number of the *Bulletin de Correspondance Hellenique* of this year, in which he describes and comments upon a discovery recently made by M. Paris while conducting some excavations for the French School of Athens on the site of the ancient Elatea, in Phocis. The original object of the work was to unearth a temple of Athena, but excavations were also conducted amid the ruins of a church of the Holy Virgin, where a slab of gray marble veined with white was found, above seven feet long, two feet wide, and one foot thick. The upper face was carefully polished, as also two contiguous lateral faces, the remainder being rough. Upon the longest smoothed lateral face was a Greek inscription, not disposed longitudinally as usual, but in short lines across the face. The letters are deeply cut, and belong to a late period. As is customary with Christian inscriptions, this begins and ends with the sign of the cross, and reads as follows: "This stone is from Cana of Galilee, where our Lord Jesus Christ turned the water into wine." M. Diehl shows from the Itineraries of the Middle Ages that several memorials of the marriage of Cana were preserved and exhibited there in later times, among them two of the hydrie ("water-pots of stone") in which the miracle was performed, and which the martyr Antoninus of Placentia, in the sixth century, declares renewed the miracle for him when he poured water into them. In the eighth century Saint Willibald found there a large church, in which one of the hydrie was still preserved. Besides these hydrie, Antoninus mentions another memorial, saying, "We went to Cana, where our Lord was present at the marriage feast, and we reclined on the very couch; and there, unworthy as I was, I wrote the names of my parents" (*Itinera Latina*, i, 93). These words indicate that he believed the couch on which the Saviour reclined at the feast was still there. Can it have been the stone just discov-

ered? M. Diehl thinks the faces of the stone which are smoothed show that it was affixed to a wall in the corner, and believes that if the inscription of Antoninus appeared upon it, this must be the stone. Strangely enough, upon the upper surface, near what would naturally be the head, he finds letters scratched which he reads, supplying the beginning, "[Remember, O Lord, the father] and the mother of (me) Antoninus."

—Hereupon, M. Diehl seeks to explain how so sacred a relic as he believes this to be found its way to an obscure town in Greece. At the time of Antoninus, already four of the six "water-pots of stone" had disappeared from Cana, and between the sixth and eighth centuries—that is, at the time when the Arabian invasion spread over Palestine—another had gone, and in the thirteenth century only traces remained. Two were preserved in Jerusalem, and two at least in Constantinople. No mention of the couch occurs after that of Antoninus, and M. Diehl thinks that it was probably removed by some Byzantine emperor to Constantinople, pending the Saracen invasion, as the character of the inscription would indicate, both epigraphically and from the fact that it proclaims a change of abode. In Constantinople it probably remained till the capture of that city by the Latin princes in 1204, when it may have fallen into the hands of Otho, Duke of Athens, or Guy Pallavicini, Marquis of Bodonizza, by whom it was conveyed to Greece, and at Elatea a church was built expressly for its reception, as shown by the position which it occupied in the building. The argument is ingenious.

THOMPSON'S PSYCHOLOGY.

A System of Psychology. By Daniel Greenleaf Thompson. London: Longmans, Green & Co. 1884. 8vo. Vol. i, pp. xiv, 613; vol. ii, pp. viii, 589.

AN author is supposed to appeal to other people to judge of the real value of his work. These other people, called reviewers, usually come to their task a little proudly, feeling that their opinion is desired, and therefore must be worth having. Imagine, then, the chagrin of such a reviewer when, at the end of these two vast and laborious volumes, he finds a strong hint that the author neither needs nor encourages very independent critical efforts on the part of his readers, save, perhaps, such efforts as may express themselves in private communication of "imperfections" (presumably small ones), for the convenience of the author in making a second edition. As for the other natural business of a critic, namely, a public and free discussion of the merits and demerits of the book, the author forestalls and discourages all that by these remarkable words: "If any critic of this work desires a complete and searching review made of its faults, I can assure him that he will do well to apply to me, for I am certain of more shortcomings than any one who has not made the subject an especial study can possibly observe." "Complete and searching"—well do these words illustrate the vanity of modesty. What has the reviewer left to do for himself; and why did not the author publish the complete and searching confession of his sins (if he has committed any sins) along with his book? Nay, what wisdom can a man hope to attain after æons of blessed immortality more than would be implied in a complete and searching knowledge of all the errors that he had committed? And if Mr. Thompson has already got so far, what need of us?

But we must not yield to our sense of disappointment. Mr. Thompson, as it seems, needs no help of importance; but psychology, which is an active, progressive, and much studied science, needs all the help that any student finds time to

give to it. And to psychology, if not to Mr. Thompson, is due the very slight service that we can here render in helping any fellow-student who may chance to read these lines to determine how much time he needs to devote to these two volumes.

First, then, as to the author and his equipment. Mr. Thompson is evidently a very conscientious and industrious man, devoted to his work, thoughtful, naturally keen in analysis, undaunted by the magnitude of his task, an excellent collector of facts, a good critic of such theories as are known to him. On the other hand, he knows very few theories, he shows hardly a sign of acquaintance with modern Continental psychology, his scientific horizon is limited to the older English writers—to the two Mills, to Bain, to Spencer, and to Lewes; while of the modern developments of general philosophy, apart from the few names just mentioned, he is almost totally ignorant. Kant he cites once in a while in a puzzled way from Meiklejohn's translation, just as they used to do in days long past. Other Continental thinkers he cites in an amusingly hap-hazard fashion from Hamilton or Blakey, never distinguishing the obscure from the great, and showing an entire ignorance of what those strange fellows were about. One man comes by accident to get the full force of his sternest criticisms, and seems to represent for him all that is revolting in German speculation. It is long since quietly reposing Jacobi, whose place in the history of German thought was as fixed, we had supposed, as the place of his quaintly printed old volumes on the shelves of our libraries—as fixed and as often remembered. If Jacobi thus needs Mr. Thompson's severe criticism, the post-Kantian idealists are, oddly enough, on the whole forgotten. That there is any very recent German thought at all, our author seems not to have had occasion to hear—presumably, because Sir William Hamilton and his commonplace books furnish no information about the matter. To be sure, there is *Mind*, and the author reads *Mind*. But all the very interesting work which that journal is doing to bring together into close and living intercourse the various schools and undertakings of modern philosophical thought seems as good as lost upon our author. He sees only the philosophical problems that Hamilton and Mill and Spencer see. He seems to suppose that he has exhaustively treated the most important questions at issue in philosophy when he has elaborately refuted Hiccock and Whewell and President McCosh. And thus he writes as English thinkers, in their old-fashioned insular ignorance of the world's thought, were accustomed to write a quarter of a century ago. But in these days, after all the earnest and generous study of manifold philosophical opinions that has characterized the last decade, after all the efforts that European thinkers have everywhere been making to lay aside their narrowness and to understand one another, Mr. Thompson's equipment for his task seems to us disastrously and intolerably provincial.

In the next place, as to our author's actual contributions to his chosen science, we must admit a great deal of really valuable work, although he has not helped us to find it, but has embedded it in a mass of useless material. He explains at great length why he does not treat certain topics more fully, fills pages with his reasons for not mentioning further the things therein mentioned, and vexes the reader with atrociously long quotations and condensations from authors whose thoughts are vastly more accessible in their own well-known books than in Mr. Thompson's. But when at last he really gives us his own contributions, these are not only ingenious and thoughtful, but they are often suggestions that promise to become more useful as we digest them more, and

that future students of psychology ought not to neglect. These contributions are for the most part contained, so far as we have been able to learn, in Parts 6 and 8. They concern especially descriptive psychology, in which Mr. Thompson's talent is obviously the most free of movement. If the rest of the book had been reduced to very much smaller proportions, we should have little but thanks to offer. The discussion of intuition and inference, in Part 6, is probably the best piece of work in the book. When one reads it one can only regret that such ability and earnestness as are there shown should have been wasted, in many other instances, for lack of wider reading. In the section on "Necessary Truth," in Part 7, the great fault seems to us, not that the author is far wrong in what he asserts, but that he has failed to see even the shape of the real philosophic problems involved, so that the discussions, excellent very often as psychological descriptions, fail to have any philosophical significance whatever.

Utterly intolerable is, finally, the whole of what the author has to say about "Force" and the "Persistence of Force." It is a fine example of the persistence of error. After centuries of debate, modern physical science has reached certain relatively clear notions about "force" and "energy" and the "conservation of energy." These notions such men as Maxwell, together with most of the writers of the highest order of elementary treatises on physics, have been trying to make clear to the general public. Meanwhile, however, Spencer, in his 'First Principles,' stated an utterly obscure and antiquated doctrine about the nature of what he called "Force," and supposed himself to be in the front ranks of physical science when he said that this "force" "persists." Now the modern doctrine of the "conservation of energy" is in no wise identical with this vague Spencerian "persistence of force." But Spencer and his followers have remained in their hopeless obscurity of ideas, and so form a serious obstacle to the growth of clear notions about these matters. When the disciples are appealed to concerning the master's vagueness they sometimes say that his 'First Principles,' having been written a good while ago, cannot be quite abreast of the latest science, while the many occupations of the master prevent the thorough revision that he would like to give to his work. This may excuse Mr. Spencer if it can; but meanwhile it cannot excuse those who come freshly into the field, as Mr. Thompson does, and who elaborately and systematically develop this confusing notion about the nature of force. When Clerk Maxwell was troubled by people who maintained the doctrine that matter is only a conglomeration of "centres of force," he advised them to turn a grindstone, or to try to stop a fast-turning one, and so to see whether all the properties of matter were to be explained on Boscovitch's theory. Even so one might advise Mr. Thompson, when he talks of "forces in motion," and "forces at rest," and when he tells us that the "same force with reference to other forces may be dynamic, while with reference to its own parts it is static," to study the elementary facts and notions of mechanics, as Clerk Maxwell gives them in the book on 'Matter and Motion,' or as Professor Tait gives them in his lecture on "Force," or, better still, as Professor Mach has recently stated them in his beautiful little book, 'Die Mechanik in ihren Grundprinzipien historisch-kritisch dargestellt.' Let Mr. Thompson then see how much remains of sense in this curious half-Spencerian jargon in which he indulges.

We have been plain-spoken, and perhaps we have not sufficiently recorded our appreciation of the really beautiful and self-sacrificing devotion that Mr. Thompson, in the midst of other

cares—those, namely, of an exhausting profession—and in the midst of a world that does not exactly shower benefits on the heads of philosophic students, has still given to his chosen philosophic work. We honor that devotion very deeply.

ANCIENT SKULLS.

Ueber alte Schädel von Assos und Cypern. Von Rud. Virchow. Mit 5 Tafeln. Berlin. 1884.

THE wide scope of Doctor Virchow's work, taken in connection with its high scientific character, is a striking instance of breadth of interest, in these days of intellectual centralization. While, in the Reichstag, he has become one of the most popular and influential politicians of Germany, he has still maintained a position in the first rank of living physiologists. And of late years he has been publishing a series of minute researches concerning anthropological and archaeological matters, which now oblige us to regard him as a chief authority in these fields as well. In a volume which appeared in 1882 he presented an exhaustive inquiry into all the human remains from Troy and the Trojan plain, brought to light during the digging of Schliemann at Hissarlik and of Calvert at Hanaï-Tepeli. The accuracy of method followed in this investigation, and the suggestiveness of the results thereby obtained, led to the author's receiving, soon afterward, the three most perfect ancient skulls discovered in the Street of Tombs at Assos by the excavations of the Archeological Institute of America, as well as two from Cyprus, which, at the instance of Mr. Georg von Bunsen, were sent to Berlin by the trustees of the Metropolitan Museum of New York.

The greater part of the publication now before us is devoted to Assos and to the skulls from its Necropolis. Doctor Virchow himself visited that site in 1879, two years before the American exploration was begun, and, to a scholarly review of the accounts, ancient and modern, of this important citadel, he is thus enabled to add a charming page of personal impression. He describes the wonderful view obtained on crossing one of the spurs of Ida, at the north of Assos—the Gulf of Adramyttion and the mountains of Lesbos as a background, the scarped volcanic crater forming the Acropolis, and the fertile valley of the river, the "fair-flowing Satnioeis" of Homer, which winds through green meadows beneath the forbidding walls of the city. The famous flesh-devouring Assos-stone is discussed at some length, and, having thus approached his special subject, the author classifies the various manners of interment which the remains found in the Street of Tombs prove to have been chiefly employed. It is particularly fortunate that the three skulls from Assos, which alone had not returned unto dust, are representative of the chief modes of inhuming the unburned body practised in the Troad, namely, in enormous jars of baked earth, in monolithic sarcophagi, and in stone chests built of slabs.

It would be impossible to give here any abstract of the technical results obtained by the exceedingly accurate measurements made of these skulls, important as are the tables of dimensions for craniological comparison. The specialist will here find a method employed which, in itself an advance upon the system of Weisbach, has provided us with the first definite and trustworthy anthropological data concerning the races inhabiting the shores of the Ægean two thousand years and more ago. Virchow calls attention to the important bearing of such materials upon the question of tribal derivation, but he does not express any decided opinion in regard to the ethnographical character of the primitive Trojans. This is disappointing, but it is certainly quite reasonable in view of the few

skulls as yet available for comparison. About early Thracian craniology, for instance, almost nothing is known. Nevertheless, the gradually accumulating evidence inclines one to believe that the Mysians were immigrants from Europe, rather than representatives of a short-headed and distinctly Asiatic race, like the Armenians. The discoveries of human remains at Troy and at Assos, thus scientifically considered, throw the first true light upon these historical problems. If it be still somewhat dim, it is certainly far less delusive than the will-of-the-wisp of literary tradition.

Concerning the skulls themselves, it must now suffice to refer to the attractive human interest attaching to these venerable relics. The first two given by the author may serve as examples. The man whose cranium is now designated as No. 1 lived toward the close of the sixth century B. C. As his head had received many and severe wounds from a sword, some of which had healed during life, he was in all probability a warrior. The last blow proves that he died as he had fought—facing the enemy. He might have felt a pardonable pride could he have foreseen this striking vindication of Asian honor, some two thousand five hundred years after his demise. His body was buried with some distinction in a huge earthenware pot, six feet and a half long and three feet in diameter; the mouth of this vessel was closed with a flat stone, and the whole covered with earth. So he lay before the principal gate of the city fortifications, undisturbed beneath the trampings of many conquerors. The Persians, against whom this Æolian Greek must often have taken arms, were driven out. Aristotle sat upon the stone bench erected in later times near the tomb. The Roman Empire itself was outlived. Byzantine ecclesiasticism was overthrown by the Turks. Yet when, in April, 1882, the lid of the jar was removed by excavators from an undreamt-of land, the sense of human presence in these archaic bones was still so great that the Roman workmen felt themselves to be disturbers of a recent sepulchre; and as they gazed upon the drawn-up knees, the jaw dropped forward upon the breast, and the folded arms of the ancient warrior, they solemnly muttered a *kyrie eleison*—words of his language still unchanged, but of a meaning which the twentieth generation of his descendants would have lived too early to comprehend.

The second skull is 400 years more recent. By silver coins of Athens, Ephesus, and of the native city, as well as by various fragments of pottery, its age could be very accurately determined. It was taken from a private lot in the ancient cemetery, where had been buried numerous members of an influential family of Assos, among whom the name Larichos (that of the brother of Sappho) was particularly common. The elderly individual to whom these bones last belonged was evidently of high rank, but his broad face and low forehead do not bespeak notable ability. He outlived his attractions; senile degeneration is everywhere apparent. His few remaining teeth are literally worn to the roots, and a fracture of the nasal bones, although healed, must have been keenly felt as an unworthy disfigurement.

The sixth sense of the antiquarian—that powerful second-sight which recognizes magnificent edifices and crowded streets where lie but disjointed blocks and heaps of débris—sees the aristocrat living amid surroundings entirely different from those familiar to the soldier who is now so closely cheek by jowl with him upon the shelf of a scientific museum. Not half a dozen fragments of the city as it was in the sixth century B. C. can be recognized among the overthrown ruins; the fortifications of a still earlier age alone remain of all the monuments which made Assos the chief place of the Troad at the close of