To be sure, there are very likely some scientists who are merely learned and not wise; but there are also some—one has only to think of such men as Faraday, Darwin and Pasteur—who are wise as well as learned, and who show their wisdom not only in making synthetic interpretations of accumulated knowledge as far as seems reasonable to them, but also in not deceiving themselves by thinking that the unproved hypotheses which they or others may invent about ultimate problems deserve acceptance along with reasonably verified knowledge. And on the other hand, while there are some philosophers who are so wise as to recognize their unprovable assumptions as nothing more than mental concepts, which therefore have no ascertained relation to external verities—indeed, some of the Greek philosophers reached this stage of advance twenty centuries ago—there are, it would seem, others less wise who become so fond of their assumptions that they persuade themselves and try to persuade others also that the assumptions really do fill gaps in scientific knowledge.

No sharp line can be drawn between well-verified scientific conclusions and wholly unverified hypotheses. There are all grades of verification. The proof of the regular rotation of the moon on its axis while it moves at varying velocity around its orbit, as given by lunar libration, may be instanced as an example of complete verification. There is no comparable proof of ancient Gondwanaland between India and Africa, although the former existence of that now vanished continental area is made fairly probable by a large body of consistent geological evidence. As to the recently launched Wegnerian concept of the flotation and shifting of continents, the evidence is so uncertain that many geologists find no value in it. Unproved or unprovable hypotheses are therefore by no means the possession of philosophy alone; but philosophers would seem, according to what Durant says of them, to have the unenviable habit of thinking that they can really fill out the blank spaces in scientific exploration by the invention of "experimentally unprovable assumptions." The scientific estimate of that habit is surely that it is a bad one; and hence that the world is fortunate now that even philosophers are coming to see that philosophy, *as thus constituted,* is failing.

Durant hopes that, in spite of its failure in this respect, philosophy may still include the studious pursuit of several special subjects, such as logic, esthetics, metaphysics, ethics and religion. But it may be well contended that several of these subjects had better be taken over by the modern sciences to which they are related. It is only by a traditional and arbitrary assignment that the strictly disciplinary study of logic is associated with so speculative a subject as philosophy; it would be much more appropriately grouped with the mathematical and physical sciences, where it might be practically taught by the case method so that no formal or systematic course in logic would be needed. Esthetics and metaphysics may be well left to philosophy, although the discovery of "the final and real nature of matter," which metaphysics may perhaps claim as its very own affair, had to-day much better be given over to physics, where progress toward that discovery is advancing marvelously. Ethics may be safely redeemed from the "academic disputes" which have robbed it of "all influence on mankind," by making it an inductive and therefore a truly scientific study of the natural history of goodness; and religion may be similarly treated, to its great advantage. Thus limited chiefly to its self-selected task of making "vaster hypotheses about ultimate problems," philosophy would be to-day by no means "the proud mistress of all the intellectual globe," as it was to Socrates, when he advised that it should be examined well and truly, and followed and served faithfully; it is by no means clear that he would advise us to follow it faithfully if its chief task is to make "experimentally unprovable assumptions." Indeed, if Socrates were now born again, we may well imagine that, in view of his strong belief in the value of experience, he would be less a teacher of the idealistic Plato than a follower of the experiential Avenarius. In any case, wise as Socrates was in his time, our time is so utterly different from his that his leadership even in philosophy is now long and far outgrown.

W. M. DAVIS

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EDWIN THEODORE DUMBLE

EDWIN THEODORE DUMBLE was born in Madison, Indiana, March 28, 1852, and died at Nice, France, January 25, 1927. He was a student at Washington and Lee University from 1866 to 1869 and from 1872 to 1874, receiving the degree of Sc.D. from that institution a few years since. He was state geologist of Texas from 1888 to 1896 and consulting geologist of the Southern Pacific Company and subsidiaries from 1897 until the time of his retirement in 1925.

Mr. Dumble published some seventy scientific papers during the thirty-seven years of his activity as a geologist. These papers embrace a wide range of geologic subjects. His output is remarkable since during the entire time he was heavily burdened with administration work. Although perhaps the most successful of all economic geologists, his main interest was pure geology. His predilection was for the somewhat disheartening field of the Texas Tertiary.

As state geologist of Texas he gathered about him an assemblage of truly remarkable men. The group includes Penrose, Taff, Tarr, Harris, Kennedy, Cummins, Hill, Osann, Von Steeruwitz, Drake and Owen. Dumble and these men in five years' time erected the enduring substructure of the geologic knowledge of more than one twelfth of the total area of the United States. Their achievement is in every sense equal to the pioneer work of Hayden, Gilbert, Powell, Dutton, King, Emmons and others in the West. Any geologist familiar with Texas and the West will probably agree that Texas geologic problems are the most difficult. Although both terranes are characterized by a large scale uniformity in stratigraphy, the rock exposures in Texas are scarcer and less connected than in the Rocky Mountains, Great Basin and Great Plains regions. Any geologist worth his salt is certain to have his interest stimulated by the variety and scenery of the West, but all of Texas east of the Pecos River is one of the world's most monotonous tracts and withal possessed of perhaps the worst of all climates and environments for the geologist. Discouragement appears to have been the ordinary diet of Dumble and his associates of the Geological Survey of Texas and they must have thrived on it or their immense output of work of lasting worth is no criterion.

Dumble was, with a possible single exception, the first to establish a geologic department for an oil company. He was organizer and manager from the beginning of all the Southern Pacific Oil Companies, the most important of which have been the Pacific, Associated, East Coast and Rio Bravo companies. His activities as an economic geologist extended from South America to China, by way of Alaska. The territory under his immediate supervision embraced the States of Oregon, California, Nevada, Arizona, New Mexico, Texas and Louisiana as well as northwest and northeast Mexico. It is doubtful if there is any natural resource which he was not required to study and to judge. His advice when followed proved very seldom wrong and very generally should have been heeded when it was not.

There was nothing of the spectacular flashiness of that present day incubus, the "go-getter," in Dumble. Always unassumingly modest, quiet, gentle and just he pursued the even tenor of his way and won the results desired without ever making any great ado about them. He had scant respect for half-baked deductions and sloppy work. He insisted that ample time and effort be spent in search of the facts and freely spent money for work of a purely scientific nature, regarded by rival companies as either unnecessary or inadvisable. This policy undoubtedly contributed to his almost unique success. Mr. Dumble's companies had few secrets and his offices in Houston and San Francisco have always served as clearing houses of information and discussion for all geologists interested in the West and Southwest. He firmly believed in the fullest possible cooperation among all engaged in the same line of endeavor. He not only freely published results which other companies would consider as private property to be jealously guarded but encouraged his subordinates to do likewise. His intelligence was sufficiently great to realize that an open, free and fair policy will always ultimately pay large dividends.

It would have been scarcely possible for any one to have commanded more respect, loyalty and sincere personal esteem from subordinates and associates. Many have remained with his organizations when they might have bettered their financial condition elsewhere; others have preferred to return after going elsewhere. Almost without exception those who did leave remained ever his friends. Colonel Newcome always carried with him Shakespeare and Don Quixote because he wished to be ever in company of gentlemen. Everyone associated with Edwin Theodore Dumble knew he was in the company of a gentleman.

CHARLES LAURENCE BAKER
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SCIENTIFIC EVENTS

BENACHEION PHYTOPATHOLOGICAL INSTITUTE

A LETTER was received about six months ago from Mr. Emanuel Benachis, a wealthy resident and ex-mayor of Athens, Greece, in which he announced that the Phytopathological Institute that was being built through his generous gift of ten million drachmas was expected to be ready for work in the summer of 1926. Mr. Benachis outlined in his letter some of the objects of this institute. These may be of interest to plant pathologists, as they are concerned with problems of applied as well as theoretical botany. This brief account of the institute may serve to assist those phytopathologists who intend to visit that part of the world in locating the place and to acquaint all those interested in the phytopathological problems of Mediterranean countries with the salient features of this new institute.

The institute is located on a very beautiful site at Strophylion, a suburb of Athens, and occupies a very extensive area of land. There are a number of buildings devoted to distinct types of work. In the main building are housed the various laboratories. In the warehouse building are stored articles, such as chemicals, glassware, machinery, etc. There is an adminis-