in Relation to Botany' (*Scientific Monthly*), and as Henry Jones Ford uses it in 'Radicalism in American Poltics' (July, *Yale Review*), in the first paragraph of which he refers to Madison and Franklin as radicals. The word can not possibly be regarded as synonymous with, or identified with, Bolshevism, I.W.W., or anarchy." ED.]

ANATOMICAL LITERATURE

PROFESSOR ERICH KALLIUS (Anatomisches Institute, Breslau, Germany), who has taken over the editorship of the Anatomische Hefte and Ergebnisse der Anatomie und Entwicklungsgeschichte, writes that it is difficult now to obtain foreign literature and that he would be very glad if American contributors would send reprints as freely as possible for the use of these journals.

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SCIENTIFIC BOOKS

Greek Science and Modern Science. A Comparison and a Contrast. By CHARLES SINGER. London, Oxford University Press, 1920, 8o, 22 pp.

This lecture, inaugurating a systematic course on the history of science and of scientific ideas, was delivered at University College, London, on May 12, 1920. Its author, one of Emerson's "monks of Oxford," was a captain in the Royal Army Medical Corps during the recent war. Its object is to bridge over the embarrassing gap between the history of Greek science and that of modern science. It is a commonplace to deride the Middle Ages for sterility in science; the thing is to ascertain just how, where and why they were sterile. This department of historical investigation Singer defines as "the pathology and embryology of human thought"; for, in the Middle Ages, Greek science did slowly and surely die, and strange as it may seem, our modern scientific methods were actually engendered, by lengthy and painful travail, out of medieval restrictions.

Of this view of things, Dr. Singer's lecture gives a clear and intelligible account. The argument is as follows: It is one of the vainest delusions of the modern mind to imagine that we can entirely enter into the modes of thought of the ancient Greeks. This fact, which Singer has frequently insisted upon in private correspondence, was already emphasized long ago in the verses of one who was very close to them, the Roman Lucretius.

> Nec me animi fallit Graiorum obscura reperta
> Difficile inlustrare Latinis versibus esse,
> Multa novis verbis præsertim cum sit agendum
> Propter egestatem linguae et rerum novitatem.

But it is at least reasonably certain that the Greeks based their scientific system upon Egyptian, Minoan and Assyro-Babylonian tradition, that this pre-Hellenic material was an anonymous, socialistic, collectivistic product; while the Greeks thought as individuals, not as a people, stamping their work, each one of them, with his own individuality, thus giving to science the eponymous character which it has since retained. We have only to think of Diophantine algebra, Euclidian geometry, the *corpus Hippocraticum* of Galenical remedies. Credulous and facile of generalization as were the Greeks, they had yet an abiding intuitive conviction that "order reigns in nature"; that behind the observed and observable phenomena there is an ascertainable law which correlates them and is their *raison d'être*. It is just this sense of law in nature and of the necessity for personal scientific investigation that is their most valuable heritage to posterity. This is what Sir Henry Maine meant when he said that "Nothing moves in the modern world which is not Greek." In the Middle Ages, the reckless freedom in speculation as to the causes of things which the Greeks enjoyed was suppressed by prince and prelate as subversive of the feudal theory of the state and of the theological view of the universe. But, in spite of the harm it has done, there was, in Singer's view, a distinct advantage in all this. It got the practical scientific worker away from sterile speculation and down to brass tacks; so that gunpowder, printing, the mariner's compass, spectacle lenses were immediately taken up, and the outcast, outlawed medieval