

crawling in pursuit, the gorilla must wonder how a being, so ill-adapted as man, ever came into existence. In spite of his enormous strength, the gorilla is a peace lover. He never sets out deliberately on the war-path; all his 'scraps' are accidental, the result of some man, woman or beast intruding into his family circle without giving sufficient warning. But when he has to fight, as when the group he leads is in danger, he shows always the utmost courage, giving his life when necessary. It is this instinctive trait which is the undoing of the male gorilla; he falls a victim when he turns to defend his flock. The natives assert that gorillas talk at night; the

most that Mr. Raven could hear were noisy movements in their stomachs and a hissing—apparently an expiratory movement of the lips.

The real danger to which the gorilla and chimpanzee are exposed is not the hunter but the planter, native and European. Gorillas are destructive feeders when they invade gardens and plantations. They are also counted good to eat by most natives of West Africa. The total number of gorillas cannot be large; I doubt if there are 10,000 of them, even when western and eastern are added together. Prof. Gregory thinks they may be increasing their numbers in certain districts.

A. K.

Significance of the History of Science

The History of Science and the New Humanism
By George Sarton. (Colver Lectures in Brown University, Elihu Root Lecture at the Carnegie Institution of Washington.) Pp. xx + 196. (Cambridge, Mass.: Harvard University Press; London: Oxford University Press, 1937.) 8s. 6d. net.

ONE welcomes especially any fresh utterance of Dr. Sarton on general lines, because he devotes himself too exclusively to the learned studies of which he is a master and speaks too seldom on the wider aspects and applications of those studies, on which he has so much to tell us. He is at the same time the most eloquent and convincing prophet of the value of the history of science as a discipline and the man best qualified on the history itself. It is a unique position and one envies the United States for possessing him.

In the volume under notice, Dr. Sarton publishes the substance of four comparatively popular lectures which he was invited to give by the Brown University and the Carnegie Institution of Washington. They are all full of inspiration and of good sense. Sarton does not overpress the claim for instruction in the history of science. He would even admit that it is not food for every palate. But he strongly and truly insists on its educational value as a central progressive and co-ordinating study, when taught by those who have an adequate preparation both in the sciences themselves and in general history, and applied by the learners in the same spirit. He makes the sound, though somewhat disquieting, remark that though there is no mental discipline so attractive and easy to receive, there is also none more difficult to impart. It is another case of the dominance of the specialist and the urgent need of more synthetically trained minds.

Of the four chapters, that on the relation of East and West and that entitled "The New

Humanism" contain the freshest material and the most interesting detail. Dr. Sarton points out most seasonably that there should be no rivalry between West and East in the building up of science, for the creative movement was reciprocal. The East lit the first torch, which we know from recent discoveries in Babylonia and Egypt to have been a much brighter one than was at one time supposed. Then the Greeks took it up and made the blaze which has since illuminated the world. But before the work of the Greeks had been recovered and extended in the modern world, the light had gone back again to the East and was tended for centuries by the Arabs and Indians until the early Renaissance in Europe.

There are some specially interesting particulars here as to the function of the Jews in this matter. They were for long the linguistic intermediaries between East and West, though, after the middle of the thirteenth century, they lost this position of linguistic and national isolation and tended to become—educationally—one with the nationals of the Western countries where they lived. Thus, when we come to Spinoza, "we do not count him any more as a Jewish philosopher in the sense in which we counted Maimonides or Levi ben Gershon. He is one of the founders of modern philosophy, one of the noblest representatives of the human mind, not Eastern or Western, but the two unified".

Dr. Sarton's remarks on the right programme for a 'humanist' education will also be read with profit. He denounces an artificial international language, thinks that mathematics is the true international medium, but that everyone should have a usable knowledge of at least two of the great world-tongues. Ancient languages must, by the press of new knowledge, be left more and more to the specialist.

F. S. MARVIN.