

lines on the other. This is partly attributable, no doubt, to considerable changes in the intensity and breadth of some of these markings; but so long as the term 'canal' is applied indiscriminately to all the linear markings and streaks, the general statement sometimes met with, that photography does not show the canals, is apt, if unqualified, to be misleading. The 'canals' bounding Elysium, and those in the neighbourhood of Solis Lacus, as well as strong broad features, such as the Casius and Nepenthes-Thoth have been for several years past, do come out very plainly on the photographic plate. Moreover, such features were seen and drawn before Schiaparelli's time, and, in general, so far from being straight, many of them are very distinctly curved. Of the objective existence of these markings we may feel assured. As in the case with the term 'mare' for the designation of lunar features, it may now be difficult, perhaps, to give up altogether the use of the term 'canal' for the linear markings of Mars, as M. Antoniadi has done, but the retention of the same term for objects of widely different characteristics can scarcely be other than a fruitful source of misunderstanding and confusion.

Another point which M. Antoniadi's researches—and, indeed, the work of many other observers, like Prof. W. H. Pickering, who has similarly devoted many years to the study of Mars and its seasonal changes—reveal with great clearness is that, despite its shortage of water, Mars is by no means as yet a dead world. The work under review is not directly concerned with those recent methods of investigation by photography in light of different wave-lengths or the measurement of the surface temperature with the thermo-couple which have gone so far to establish points of analogy with the earth, but the visual revelations of the telescope described by M. Antoniadi, such as the drift of the clouds and other manifestations of Martian meteorology, the seasonal changes in the colour, form, and intensity of dark markings like the Syrtis Major, the occasional developments and changes on an enormous scale like those observed in recent years in the Solis Lacus and Noachis regions of the disc, all indicate that Mars is still very much alive and full of interest for the student of its surface and physical state.

At the end of the volume are a number of plates which are exceedingly well reproduced. The first five are maps and these are followed by plates containing four whole-disc drawings of the planet as seen at Meudon during the apparitions of 1909, 1911, 1924, 1926, and 1928–29.

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Our Bookshelf.

L'art primitif. Par Prof. G.-H. Luquet. (*Encyclopédie scientifique : Bibliothèque d'anthropologie.*) Pp. iii + 267. (Paris : Gaston Doin et Cie, 1930.) 30 francs.

In "L'art primitif" M. Luquet turns once more to the problem of the origin of art. Very briefly, his theory is that two forms of representative art are to be distinguished. First, there is the classical art of the adult, no longer to be regarded as the one and only form. Secondly, there is a form of art which is called 'primitive'. Under this heading, on the ground of their common characteristics, he groups certain tendencies opposed to those of the adult classical art—the art of children, some adults ("même des professionnels"), savages, and prehistoric man. Both in the individual and in the history of the human race, the urge to artistic representation arises in the same way—an accidental production or discovery of a resemblance to a real object. Hence comes a desire for the execution of a purposive reproduction, which in turn gives rise to the pleasure of creation. In this disinterested art lies the germ of magical art; but the pre-existence of the artistic product before its magical use is a necessary postulate. Further, while 'classical art' is static, primitive art is dynamic; by an intellectual realism it sees the whole story in time and space. Hence the representation of invisible parts, distorted perspective, and duplication.

M. Luquet argues his case ably, with illustrations drawn from primitive art and from infant psychology. The book is stimulating but far from conclusive. Savages are not children, whatever may be the similarities in the artistic products of each. Even if fortuitous resemblance gives rise to artistic activity in both cases, the savage brings a range of relatively highly developed concepts to bear upon his problem from the very first. There is, in fact, no reason why the magical impulse should not be present from the very beginning. The real analogy is not with the art of children, in which it is difficult to isolate the spontaneous activity from the imitative, but with such an urge as that for jewelry, in which an artistic product is the ultimate outcome of the magical efficacy of a natural object, afterwards imitated in some precious or magical material—for example, coral—and finally desired for its beauty or intrinsic value without reference to any original meaning.

Some Applications of Organic Chemistry to Biology and Medicine. By George Barger. (The George Fisher Baker Non-resident Lectureship in Chemistry at Cornell University, Vol. 5.) Pp. v + 186. (New York : McGraw-Hill Book Co., Inc. ; London : McGraw-Hill Publishing Co., Ltd., 1930.) 12s. 6d. net.

THIS volume represents the fifth of a series in which are reproduced the lectures delivered by distinguished visitors invited to Cornell University in accordance with the terms of the George Fisher Baker Foundation. The purpose of this Foundation is to facilitate intercourse between scientific