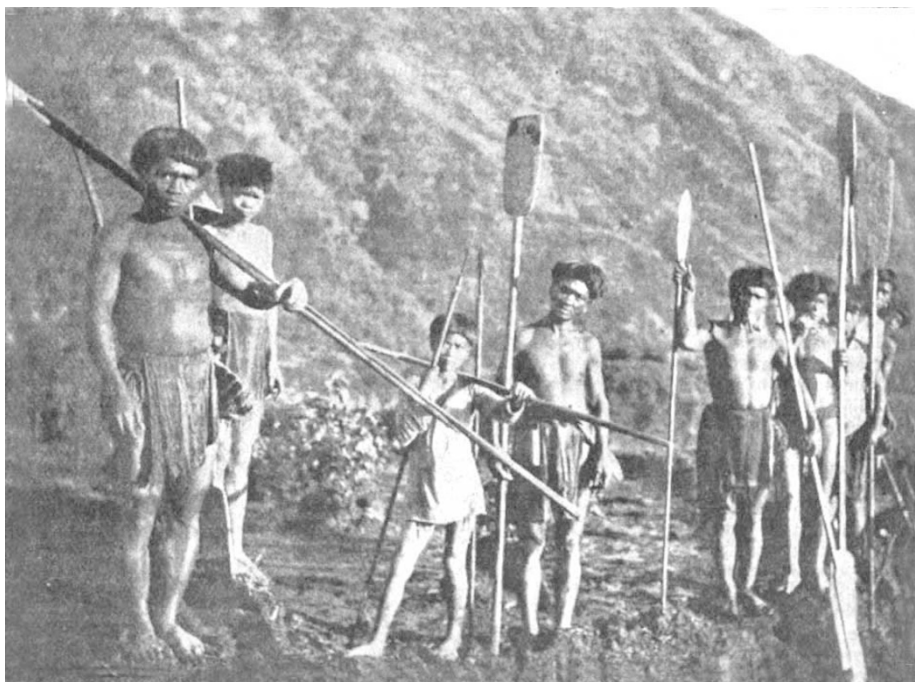


the medium height, with narrow heads, broad noses and faces; the Primitives resemble the latter, but have a cephalic index ten in excess of the Iberian. The Australoid and Primitive types are probably the original elements in the population, the other types representing modifications caused by the introduction of Europeans and Chinese, recent and remote. The result is an improvement in all the physical measurements, which, with increasing European and Chinese immigration, will probably advance, and be accompanied by an increase of bodily and mental vigour, a process facilitated by improved nutrition and in hygiene by the reduction of noxious parasitic life.

The second paper devoted to pure ethnography is an account, by Fr. Juan Villaverde, of the Quiangan Ifugao tribes. They are of Negrito affinities, and present a remarkable combination of an advanced culture with savagery. They live by agriculture, cultivating rice in the hilly tracts by an elaborate system of terrace farming, by which they utilise the supplies of spring water which they consider necessary to the growth of this crop. They have neither king nor rulers, but are divided into two



Ifugaos with wooden shovels, Banaue.

distinct grades, the nobles exercising considerable authority over the plebeians. A man can rise to the higher from the lower class by the exercise of profuse hospitality, which is provided by a series of elaborate feasts. They respect the aged, who act the part of priests in their idolatrous rites, and generally hold women in high estimation. They divorce their wives continually, each of the pair readily finding a fresh partner. Their worship is chiefly that of the moon and other heavenly bodies, and they practise divination to relieve the fears of the spirit world which always beset them. They lend and borrow on exorbitant interest, and sons are responsible for the debts of their parents. Combined with this fairly advanced culture they are grossly addicted to drunkenness, and the absence of any controlling authority leads to constant blood feuds, every murder being followed by inexorable vengeance extending, not only to the offender, but embracing his nearest relatives. This is accompanied by the custom of head-hunting, in which even women, though ordinarily respected, and children are not spared, the heads of the victims being brought home in triumph, and the fronts of the houses decorated with the captured heads.

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THE DEVELOPMENT OF EVOLUTIONARY IDEAS.

THE annual Herbert Spencer lecture was delivered at Oxford on December 2 by the Linacre professor, Dr. G. C. Bourne. In the course of a brief historical sketch, the lecturer pointed out that evolutionary ideas were widely prevalent at the end of the eighteenth century, though, after being apparently routed by Cuvier, the doctrine remained for many years in abeyance. Herbert Spencer was a pioneer in the evolutionary revival. Not an original investigator in zoology or botany, he was yet a very earnest student of biological subjects. Evolution, in Spencer's view, was a cosmic process, consisting essentially in the passage of the homogeneous into the heterogeneous. Confronted with the difficulty of the transition from the non-living to the living, Spencer framed the theory of "physiological units" with their mutual interactions. This proved to be a fertile idea, and was adopted in one form or another by many subsequent investigators. In phylogeny there is a real advance from the homogeneous

to the heterogeneous; in ontogeny, however, there are obvious difficulties in the way of this interpretation. These difficulties Herbert Spencer tried to meet by assuming for his units "polarities" of differing values, and a power of undergoing modification when subject to the influence of each other and of the environment. Hence a true epigenesis took place, and in this way he thought it possible to account for both inheritance and variation. Acquired characters, he held, *must* be inherited; and on this basis he reared the fabric of the "synthetic philosophy."

Against the system thus outlined, two crushing blows were delivered by Weismann. The first was his insistence on the fact that there is no clear evidence of the inheritance of acquired characters; the second was the demonstration that the germ-plasm in ontogeny is from the first a structure of very great complexity. The germ, it was found, must have historical properties, and the embryological history of the individual is really a genealogy.

The bearing of recent experiments in the "mechanics of development" upon the views of Spencer and Weismann respectively was very carefully and lucidly explained by Prof. Bourne, who showed that the pre-existence of certain materials in the germ, and their subsequent sorting out in the course of ontogeny, facts which could no longer be denied, were entirely adverse to the Spencerian conception. On the other hand, the view of Weismann, though in some particulars erroneous, received in the main a strong confirmation from experiments by the followers of Mendel. Prof. Bourne concluded his discourse by urging that biological studies were no mere plaything, but of the highest importance for dealing with human affairs. An essential link was now broken in the chain of the synthetic philosophy, and it behoved those concerned in such matters to inquire whether our sociological methods were right, and whether certain schemes of social improvement, founded on the biological principles of fifty years ago, should not be re-considered in the light of those of the present day.