

Every great historical epoch and every variety of social organization must be explained on the basis of factors and forces now at work, and which the student may study at first hand.

This is now called sociological uniformitarianism. It was strongly hinted at by Sir Charles Lyell himself ('Principles of Geology,' eleventh edition, Vol. I., p. 167). It is called by Gumpłowicz 'the eternal uniformity (*Wesensgleichheit*) of social processes' ('*Rassenkampf*,' p. 172), and is discussed at length by him. It has been insisted upon by Bernès and Regnano in Europe and by Ross and Small in America, and was applied by Schleicher to language.

Conformably to this philosophical introduction, Dr. Carver has undertaken to classify his materials under certain logical heads. The late Dr. G. Brown Goode described a museum as 'a collection of labels illustrated by specimens.' The materials of this work have about the same importance relatively to these heads as do the specimens of a museum to the labels. He divides the matter of the book into three parts, the first relating to the nature, scope and method of sociology, the second to its bearing on social progress, while the third part embraces the various factors of social progress, which he still further subdivides into physical and biological, psychical, social and economic, and political and legal.

This classification may have value for some minds, but doubtless chiefly for that of the compiler, and the ordinary reader will not generally know, and will care less, where he is in the scheme when he is reading any of the interesting essays that the work contains. It would have been just as well to arrange them in the alphabetical order of the authors, or still better in the chronological order of the works.

As already said, the authors cited are nearly all either famous or of a high order, and some of the essays whose authors are either contemporary or somewhat less well known are among the best selections. The essay entitled 'War and Economics in History and Theory,' by Edward Van Dyke Robinson, certainly answers this description. There are, however, a few of the articles whose appearance in this

roll of honor is matter for regret. Only one such need be mentioned, viz., Drummond's *Struggle for the Life of Others*, from his book 'The Ascent of Man,' 1894, the very title of which was plagiarized from the address of Dr. Frank Baker, as president of the Anthropological Section of the American Association for the Advancement of Science at the Indianapolis meeting, in August, 1890, published in the *Proceedings*, Vol. XXXIX., p. 351, and also in the *American Anthropologist* for October, 1890, Vol. III., No. 4, p. 297, and with which Drummond must have been familiar. But this might have been pardoned if the book itself, or most of what is true in it, were not a plagiarism from Haeckel and other authors. Even this offense, however, is less grave than the utterly unscientific and mainly false attitude of the author in the application and interpretation of his facts.

From the standpoint of book-making this volume has its defects. Not to mention its ugly, unesthetic style of binding, it is one of those books in which the user is always lost and constantly compelled to revert to the contents to find what he wants. This could easily have been remedied by head-lines showing 'who is talking' on any page. But such things are 'trifles light as air' by the side of the sterling merits of the work.

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#### VARIATIONS OF THE BONES OF THE FACE<sup>1</sup>

THIS work (which should have been reviewed sooner) is the continuation of Professor Le Double's great undertaking which is to give us a complete account of the variations of the human skeleton. His last work, which was noticed in these pages, treated of the variations of the cranial bones. This one, therefore completes the head. In the preface the author gives some account of his labors and maintains that none of his propositions

<sup>1</sup> 'Traité des Variations des Os de la Face de l'Homme et leur signification au point de vue de l'Anthropologie Zoologique,' par M le Dr. A. F. Le Double, Paris, Vigot Frères, 1906.

has been refuted. He dwells very justly on the correlation of malformation (or perhaps merely variation) and disease. In his conclusions at the end of the work there is much that is interesting. He is severe on Lombroso. In fact, it is easy enough to demolish the fantastic exaggerations of that school; but we are not yet convinced that the idea of a criminal type is absurd.

Dr. Le Double writes as follows concerning variation: "In the actual conditions of our methods of investigation no truly scientific theory of heredity seems to me possible. There is not one of the explanations proposed to us that is not to some extent a matter of discussion." This is true and well said. We incline to think that he is rather too ready to accept the very general view of atavism. If a peculiarity is inherited we have a right to ask for the line of descent, and this line must not diverge from the lines used to explain other peculiarities. In point of fact this has not yet been shown. On the contrary, the threads tend to get snarled very badly.

We had not meant, however, to go into any discussion. Ours is the pleasanter purpose of calling attention to the thoroughness of the analysis and the wealth of material to be found in this book. None but a trained anatomist has any suspicion of the vast number of variations found in the bones of the face. We cannot even begin to enumerate them. Suffice it to say that the book is indispensable to the anatomist working in this department of science. The opening chapter on the nasal bones is a very attractive one. Then comes the chapter on the lachrymal, from which we would extract a table as a very striking illustration of the necessity of large series for statistics. The table shows the cases of absence of this bone seen by different observers:

Krause, 8 in	100 skulls.
Macalister, 2 in	150 skulls.
Bianchi, 5 in	350 skulls.
Merkel and Kallius, 1 in	1,000 skulls.
Zabel, 3 in	200 skulls.
Adachi, 6 in	121 skulls.
Le Double, 1 in	100 skulls.

It is to be noted that Adachi's observations were on Japanese. This raises the further

question of the effect of race on variation. The whole subject is a very fascinating one.

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*Amerikanisches Hochschulwesen. Eindrücke und Betrachtungen.* By Dr. W. BÖTTGER, Privatdozent at the University of Leipsic. Pp. 70. Leipsic, Wilhelm Engelmann. 1906.

This little book is a critical comparison of the conditions in American and German universities and schools for higher education, and is written especially with the aim of presenting to German readers that which is of merit in American institutions. The author's experience was gained by one year's residence in America, during which time he occupied the station of research associate at the Massachusetts Institute of Technology. By nature and training a keen observer and student of conditions, he has gained a remarkably thorough appreciation of the methods and ideals of American higher education as typified in the Massachusetts Institute of Technology and Harvard University. As he himself emphasizes, he has not immediately embodied his ideas in print, but has first allowed them to mature during several months after his return to his work in his native country. He thus can give a fairer survey of the subject and not one distorted by the accidental being mistaken for the typical, as has been done by some who have essayed to express themselves upon this subject.

America is, according to Dr. Böttger, the land of experimentation in educational matters; it is only during the last thirty years that the American universities have developed to their present importance. Their life is, therefore, younger and thus more energetic.

The length of time occupied in the preparatory schools by the youth of both countries is about equal—an average of twelve years; yet the graduate of the American preparatory school has only the training requisite for entrance to the highest class of the German 'gymnasium.' The reason for this is, naturally, that the American boy is not so severely pressed in his studies, whereby more oppor-

tunity is given for his very essential physical development.

The first years of the American college are still in the nature of preparation for his special line of study; thus the transition from a condition of dependence in the preparatory school to one of independence in the higher school is a gradual one. Much stress is laid by the author upon the American system of supervision of the students' work as compared with the German system of complete freedom. The advantages of the American method are evident—that many students are guarded against mistakes which would entail serious consequences. Contrasted to this, the German system suddenly throws the student wholly upon his own responsibility—upon entrance into the university his choice of studies is unrestricted, and he takes no examination until his final one, when he deems himself prepared to try for the degree of 'doctor' from the university. The German contends that his system possesses the advantage that those who do not make the proper use of the freedom accorded to them will sooner or later fall out, so that only those will reach the goal who properly understand the privileges and duties of the students' freedom. This argument, however, presupposes that the student already has that which he must first acquire. In America, the same goal is striven for, but with fewer losses, in that the transition to the condition of independence is made gradual.

The difference in the ideals of education in the two countries may be summed up in the following: In America the aim of the higher education is to increase the efficiency of the average man; while in Germany the stress is laid upon bringing the best to the highest development. The author seems to reach the conclusion that due precaution is exercised in America to prevent the invasion of the less diligent into the ranks of the learned professions, while, at the same time, pains are taken to develop the less gifted, who are, on this account, the more in need of education.

The author discusses at some length the matters of state and private schools, the organization of instruction, the cost of instruc-

tion and scholarships, athletics and the love and loyalty of the alumni of a school for their alma mater. Many matters of interest are treated which can not be touched upon in this review. The author has dealt very lightly with our failings and has devoted himself chiefly to pointing out to his countrymen, with whom education is an established science, that which has been attained in a country where education is still in the state of development. It is a matter of interest to learn those points in our system which are deemed commendable, or worthy of study, by a student trained in the old world educational ideals. This work is of additional interest as treating the subject especially from the viewpoint of education in the exact natural sciences; previous writers in the main having treated the subject in its relation to general culture.

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#### SCIENTIFIC JOURNALS AND ARTICLES

*The Journal of Geology* for November-December has for its frontispiece a reproduction of a photograph of the late Professor Israel C. Russel. The first article is a sketch of his life by G. K. Gilbert. Following this is an article by James Geikie, "On the so-called 'Postglacial Formations' of Scotland." In this are discussed geographical and climatic changes, from evidence gathered in the Scottish mountains. As the most representative deposits known as 'postglacial,' he speaks of 'raised beaches, estuarine and fluvial terraces, lacustrine alluvia and peat mosses.' He considers the term 'postglacial' misleading, because glacial conditions disappeared from different regions at widely different times. The following succession of events is given: (1) after the disappearance of district ice-sheets and mountain-valley glaciers, the sea retreated considerably, and the climate became milder; (2) subsidence and return to cold climate; (3) retreat of sea beyond present coast line and return to dry genial conditions; (4) partial subsidence with change of climate to cold and wet; (5) final retreat of sea to present level. The next article is on 'The Three Paleozoic Ice Ages of South Africa,' by Ernest H. L. Schwarz. Evidence is offered