

A little to the westward are other smaller and more easily accessible ice-masses, which plainly show a recent retreat; and two miles west of the summit one comes into view of the greatest of the visible Selkirk glaciers. It is overlooked by the stately monolith of Syndicate Peak, and the ice comes curving down to within a mile of the railway, feeding a copious stream. It is only about a thousand feet above the level of the rails; and, when a trail has been cut through the thickets in the ravine, it will be very easily reached, though one should no more attempt to go upon it without proper ice-creepers, ropes, etc., than he would in the Swiss Alps. I predict that the Agassiz glacier, if I may so name it, will be as famous an object of adventurous pilgrimage in a few years as any in Europe.

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#### THE ORIGIN OF HUMAN RACES AND TYPES.

ONE of the most inexplicable subjects in the evolution of man has been his racial persistency. The teachings of Agassiz are yet familiar, and the thorough and abundant testimony of Morton, Nott, and Gliddon has demonstrated the permanency of the great races of mankind. The peculiar physiognomy of the Jew stands out as clearly in the early Egyptian records as at the present day. Food, climate, the most diverse environmental conditions, all appear to cause but little modification in racial type. The evidence from his earliest known periods of existence throws but little light upon his immediate origin, and the opponents of evolution have long found great satisfaction in the few proofs of lower affinity that his fossil remains present. Certainly there must have been factors in his earliest development that we have not yet taken into account. When and where did the African, the Caucasian, the Malayan races first become fixed, and why have the causes that long ago led to their differentiation ceased to be active? An answer to this question, deserving consideration, has lately been attempted by Moritz Wagner (*Kosmos*, 1886, p. 23).

It has long been recognized that one of the strongest factors in the artificial production of new varieties is in-and-in breeding, — the repeated crossing, within narrow limits, of the progeny of related parents. It is rarely in any other way that the impression of peculiarities can be combined and not antagonized in the offspring. All breeders or growers are aware that the organism, be it vegetable or animal, acquires with every such repetition greater plasticity and capability of change, and that it can arrive at a con-

siderable degree of differentiation only when free crossing is hindered or prevented for a sufficient length of time for these variations to become fixed, and not dissipated. In nature, strong proof of the same law is afforded by the faunal and floral peculiarities of regions isolated by natural barriers. The Galapagos and the Hawaiian islands, notwithstanding the uniformity of climates and general conditions, show striking diversities in animal and plant life among themselves, — the result of crossing among nearly related forms. Isolation, from whatever cause it may be due, throughout all animal and vegetable life, brings almost inevitably variation, due to the limitation of crossing, and the consequent fixation of characters.

But, in both of these respects, man has, in all his known history, been strikingly at variance with all other members of both the animal and vegetable kingdoms. In him alone, among all living creatures, exists the instinctive aversion to crossing between near blood-relations, — an aversion that predominates in every grade of civilization, from the cultivated races to the Eskimo, Hottentot, or Australian. Indeed, among the lowest tribes, the aversion is often strongest, and incest not unfrequently is punished by death. Most assuredly, man will not form an exception to a law so potent for change among other animals; and we see, in this custom of marriage between those unrelated, the most important factor in the production of varieties removed, and we can understand the difficulty of the formation of new races. The very acceptance of man's origin recognizes the certainty that some time in his development this instinct has been acquired. In the earliest period it did not exist, and he was then subject to the same laws of variation as the ape and the dog. It was to this period that the chief divisions of mankind evidently date.

Every thing goes to indicate that man's origin extends back far into the pliocene age; and evidently in his early stages he differed little, in his habits, from wild animals of the forest. Without clothes and habitation, he depended upon the free gifts of nature for food and shelter, without family instincts, and, what seems to be a necessary concomitant, without any sexual aversions whatever. With the great climatic changes of the glacial period, all this was changed. The struggle for existence became bitter: sustenance, shelter, and clothes had then to be acquired by the exercise of brain and hand. Migrations to the most favored and isolated locations were the inevitable result, and the necessity of protection of offspring became the contingency of existence. Family life took the place of more brutal instincts,

and the child remained longer dependent upon the parent. But with the constant association of near relatives an aversion was acquired to close intermarriage, resulting in the custom, or rather instinct, that now characterizes all classes of mankind. The chief factor of change thus ceased its operation, but the formation of races had already occurred.

Thus the author would account for those primitive and wide divergences that must once have taken place. With his development and acquisition of language, man became the most cosmopolitan of animals; tendency to further divergence was checked, and is now rather toward homogeneity. Anthropologists are fast recognizing the futility of separating tribes and classes by cranial classification. Very great variations are found between dolichocephalic and brachycephalic types among all civilized or uncivilized races. The pure Germanic race of the blond type is disappearing, as Virchow has shown, and greater racial uniformity is becoming apparent. The larger part of the German people is a mixture between the light-skinned indigenous race and the dark-skinned Indo-European races. Free crossing prevents the further formation of striking changes; but, with the development of civilization, a new and subordinate factor is taking, in a measure, its place,—that of national and social caste, which tends to the formation of minor variations. The peasant and the noble, the Jew, the German, Frenchman, or Englishman,—all are differentiated by very tangible characters, the result of partially restricted crossing, from social causes. Thus in man's history we see the unrestricted crossing of bestiality, fruitful in change; the acquired humane instincts averse to pairing between blood-relations, and eager for remote and strange mates; and, finally, the prejudices of social and political castes that lead to the formation of minor variations.

#### AN OLD-FASHIONED BOOK.

THIS volume seems to be in its principal features an abridged translation of Weber's '*Lehrbuch der weltgeschichte*,' to which, indeed, Dr. Fisher acknowledges his great indebtedness, especially as to ancient and mediæval history. As to the need of some such book as the one under review, there can be no question. Teachers still, even in many of our best colleges, use the old mechanical method of teaching history. We call it the mechanical method with no intention of discrediting it; for there is no doubt but that, in the case of the great majority of our history teachers,

*Outlines of universal history.* By G. P. FISHER. New York, Ivison, Blakeman, Taylor & Co., 1885. 12°.

the safest way is to put a good book into the hands of the student, and make him commit to memory so many pages a week. To be sure, he forgets most of his facts as soon as possible after the examination. But, on the other hand, if the book is a good one, he has learned very few things which will have to be carefully unlearned in after-life. The best example that occurs to us, of the working of this system, is with regard to the teaching of botany in one of our smaller sectarian colleges not so very many years ago. The text-book was large, and well supplied with poor pictures. The class came in regularly: they could not be absent without excuse. As soon as the man in charge had satisfied himself that all were present, he said to N. or M., 'Proceed.' N. or M. proceeded to recite from memory the opening paragraph of the day's lesson. When the man in charge thought he had recited enough, he ordered another boy to 'proceed.' Then came reviews and second reviews. At the end of the term or year the boys knew the book by heart. As they had never analyzed a flower, or applied the knowledge thus gained in any way, their botanical wisdom was very slight. To this day, most of them know absolutely nothing of botany, though still able to recite page after page of the large and very dry text-book. So it is with history. A man may know a hundred dates. He may know, for instance, that Magna Charta was signed by King John on June 15, 1215; but if he knows nothing about the document itself, what it meant, who drew it up and why, under what circumstances it was signed and why, he may be said to know nothing about the most interesting document in the history of the Anglo-Saxon race. He may know, too, that the first perfect parliament was summoned by Edward I.; but, if he knows no more, he may with truth be said to be utterly ignorant of an event which John Richard Green has denominated 'the most important event in English history.' Still, books giving such general knowledge of the world's history have their place.

Professor Fisher has undoubtedly put much time and labor into the making of this book. Portions of it are well done—exceedingly well done. It is also very well proportioned, and in its arrangement no fault can be found. We are conscious, too, of the enormous labor involved in getting out such a work. But all these considerations only add to our regret that Dr. Fisher did not use still more care in his original writing, and exercise very much more vigilance in his proof-reading; then he might have produced a book that would have remained the standard work, of its size, for a very long time. Let us call attention to