into the mysteries of their art that all possible misunderstandings be avoided; certainly that they themselves make no effort to mislead those they would instruct. Yet an architectural exhibition that consists only of exteriors not only fails in giving the public a true insight into what architecture really is, but is actually, though not intentionally, a deliberate deception. Every architect knows that the designing of the facade is not the only thing he has to do in designing a building; why, then, should he not let the public know what he does and how he does it, and make his exhibitions practical schools in practical architecture, instead of simply exhibitions of facades, or pretty or ugly things — for such is the way of architecture — as the case might be.

When many older bodies fail in this respect, and keep on failing year after year, it is not to be expected that the Brooklyn Institute should make a beginning by inaugurating this much needed reform. As architectural exhibitions go the first attempt was a very good one, but it is well to keep in mind that it was not, really, an architectural exhibition, but an exhibition of facades. While this is perfectly true it contained, for its size, rather more detail drawings of a certain kind than have many more ambitious undertakings. There are several plans for the Protestant Episcopal Cathedral in New York with sections and other details, and a group of detailed drawings in the competition for the Brooklyn Savings Bank are especially attractive for the full manner in which they illustrate their subject. The greater the proportion of such drawings in our architectural exhibitions, the greater their success, and the more will the people realize the true nature and uses of architecture.

In the introduction to the catalogue the Brooklyn Institute lays down a wise programme, "occasional gatherings of the best results and suggestions." The programme is wise enough, and right enough, but unfortunately it is one of those things that can never be carried out. It depends, of course, upon the meaning attached to the word "best." If it is used in the sense of good, it is an unwise limitation, since an architectural exhibition that would consist only of the best of good buildings would be extremely limited. If it is used in the sense of the best that modern work affords it is simply repeating what would evidently follow from an exhibition arranged by architects. Unfortunately, no architectural exhibition can consist only of the best buildings; there is so much that cannot be classed as such that a too rigid scrutiny would deprive such a collection of many important examples of the newest work. Unfortunately, too, it is also true that the importance of an enterprise is no criterion for the excellence of its architecture. New York has seen many noteworthy structures erected which were disgraces both to the architects and those financially responsible for them. Even the Brooklyn exhibition contained drawings of large undertakings which all lovers of a higher architecture must regret to see carried into execution.

Some things necessarily hamper exhibition committees. The public naturally expect to see drawings of great buildings in first-class architectural exhibitions, and it is for the public the exhibitions are held and from it their support should come, if it does not. It is simply one of the architectural conditions that cannot be ignored and that will lower the standards of our architecture and our architectural exhibitions until a broader and more discriminating taste is manifested in the people generally. Then indeed will architectural exhibitions be a success and a pleasure, a source of instruction and delight, a record of past progress, and an inspiration to newer conquests.

BARR FERREE.

CURRENT NOTES ON ANTHROPOLOGY. — V.

[Edited by D. G. Brinton, M.D., LL.D.]

Criminal Anthropology.

ONE of the most actively cultivated and also one of the most immediately practical branches of anthropology is that which occupies itself with criminals.

It may conveniently be presented as consisting of three departments, one of observation, the second of explanation, and the third of application. The first takes note of the anatomical and physiological peculiarities of criminals, their psychology, the diseases to which they are most liable, their nationality and ancestry, their nutrition, the environment in which they have lived, etc. The second undertakes the more difficult task of explaining these peculiarities, relying principally on the laws of heredity, atavism, congenital tendencies, early impressions and pathological sequelæ. The third, basing itself on the inferences thus drawn, aims to suggest such modifications in penal laws, and in the management of reform schools and houses of detention as will minimize the objectionable results indicated.

Anthropologists believe that this is the only method of procedure to deal intelligently with the great and growing problem of criminality. On ascertained facts of this nature, philanthropists and legislators must hereafter base their efforts, if they would attain the best results. To those who would like to pursue the subject, two works may be recommended, both published in Paris last year — Dr. X. Francotte, "L'Anthropologie Criminelle," and Dr. Lombroso, "L'Anthropologie Criminelle et ses Recents Progrès," while Dr. Thomas Wilson of the Smithsonian Institution has recently issued an excellent review and summary of the subject.

The Origin of the Alphabet.

We may well excuse Plato for crediting the legend that the letters of the alphabet were disclosed to man by the gods themselves. Certain it is that down till to-day we have reached no positive data as to their origin. It appears that the old notion that the Phœnicians discovered them must be abandoned. Dr. Eduard Glaser, whose long and arduous researches into the epigraphy of Southern Arabia promise to throw an unexpected light on a large tract of ancient history, expresses himself (in *Das Ausland*, December, 1891) quite positively that it is in Arabia we must search for the beginnings of this marvellous invention, and probably in Southern Arabia. There, perhaps nearly three thousand years B.C., the ancestors of the Minæans and Sabeans appear to have developed several related phonetic alphabets, from some one of which the so-called Phœnician was descended. Dr. Glaser has obtained copies of some of these as yet undeciphered inscriptions, probably more than four thousand years old.

What seems sure is, that though the early Egyptian hieroglyphic writing may have suggested the alphabet, the Egyptians themselves never developed it. What is more remarkable, and it seems to me has not received sufficient attention, is the gradual degeneration of the early Egyptian phonetic hieroglyphic system into one mainly ideographic and symbolic in the late demotic writing. The signs in the latter have often no more relation to sound than have the symbols of Chinese script. Thus, three points between two vertical lines, | . . . | , means, in the demotic, "man;" but it was in no way understood to represent the sounds which were in the word, *roemt*, man, in the spoken dialect.

This degeneracy gradually arose from changes in the phonology of the tongue, while the hieroglyphic signs were

continued unchanged. It is of course nothing new to Egyptologists; but to the ethnographer and the historian of the arts it is a noteworthy instance of retrogression in one of the most useful and highly prized inventions ever made by man, and that in a country of continuous and unbroken culture.

The Native Written Language of Easter Island.

In the last published report of the United States National Museum, Washington, is a very interesting description of a visit to Easter Island in 1886 by Paymaster W. J. Thomson of the ship Mohican, U.S.N. He describes the platforms, stone images, arts, and language of the natives, aiding the reader by numerous photogravures. In these points his report is full, but not especially new. Where he does go ahead of all previous voyagers is in his information about the remarkable written language which it has long been known the natives of this island had invented, and in which they were accustomed to record their legends. The inscriptions were usually upon slabs or paddles of toromiro wood, a tree indigenous to the island. The figures are of equal height and extend in regular lines along the sides and edges of the piece of wood.

With great difficulty, and finally only by recalling the ancient adage, *in vino veritas*, did Mr. Thomson succeed in persuading an old islander to read some of the inscriptions. He is able, therefore, to show us five of them, the originals in photogravure, with translations into the native tongue of the islanders, and this text rendered into English. It is a most praiseworthy piece of ethnographic study, and should put an end to the nonsense which has long periodically appeared about this island and its inhabitants.

The figures are shown to be "pictorial symbols, carrying their signification in the image they represent." Many objects are treated conventionally, and all are depicted about the same size, thus imparting the aspect of linear uniformity. The subjects treated are family histories, traditions, and lists of the gods, the figures merely serving as pictorial reminders of the names and facts.

In all these respects the inscriptions are in no wise different and not a whit superior to those found on the "meday sticks" of the Algonquin Indians. Neither indicates a high degree of culture, and the line of their evolution is clear enough. As we might expect, the full vocabulary printed by Mr. Thomson shows the natives of the island to speak a well-marked Polynesian dialect, and they seem to have differed from the other Pelynesians in nothing but a somewhat higher developed taste for graphic and glyptic design.

The Thegiha and Klamath Languages.

Two publications have recently been issued by the Bureau of Ethnology, Washington, which should attract the attention of students of the American aborigines. Both are in the series called "Contributions to North American Ethnology."

One is entitled "The Thegiha Language," by James Owen Dorsey. The Thegiha is a member of the Siouan or Dakota stock, and is spoken by the Ponkas and Omahas. The portly volume of 794 quarto pages is filled with a large number of myths, stories, and letters in the language, accompanied by interlinear and free translations, grammatic notes and explanations. A second volume is promised containing a detailed grammar and dictionary.

The work on the Klamath language, which is nearly the same as the Modoc, is by A. S. Gatschet. It is in two quarto volumes of 711 pages each. The first contains an ethnographic sketch of the tribe especially interesting for its mythology, 200 pages of text and 500 pages of grammar; the second volume is the dictionary. The Klamath is described as a synthetic language, inclining to polysyntheticism in the inflection of nouns and the derivation of verbs. Its tendency to incorporation is well marked.

Both these laborious works are exceedingly well done, and reflect great credit on their authors. One must regret, however, that different phonetic alphabets have been adopted. Dorsey employs that of the Bureau of Ethnology, Gatschet that which he calls "my scientific alphabet, based on the original pronunciation of the letters;" not always very scientific, as may be judged from the fact that he gives as identical the *u* sound in English *nude*, German *uhr*, French *cour*. Mr. Gatschet must have learned his English where they call dukes "dooks."

THE GROWTH OF CHILDREN.

IN his recent paper on the growth of children in the Twenty-Second Annual Report of the State Board of Health of Massachusetts, page 479 ff, Dr. H. P. Bowditch has called attention to the fact that the curves representing the distribution of cases in those years during which growth continues is asymmetrical, so that the average and median values, (the one corresponding to the point above and below which one-half the total number of cases are found) do not coincide. An examination of the original tables on which this statement is based (The Growth of Children, Eighth Annual Report of the State Board of Health of Massachusetts, 1877, Table 4 ff.), brings out the asymmetry of the curves represented by these figures very clearly, and proves that the difference between the average and median values is not accidental. Dr. Bowditch calls also attention to the fact that the variability of the series first increases and later on decreases.

The causes of these phenomena will be considered in the following lines. When considering statures and weights of adults of a certain region, we find them generally arranged symmetrically around the average which has the maximum frequency. The tables showing the values of these measurements from year to year prove that growth is irregular, being more rapid in the beginning and becoming slower as the adult stage is nearly reached. When we consider children of a certain age, we may say that they will not all be in the same state of development. Some will have reached a point just corresponding to their age, while others will be a little backward, and others still a little in advance of their age. Consequently the values of their measurements will not exactly correspond to those of their age. We may assume that the difference between their stage of development and that belonging to their exact age is due to accidental causes, so that just as many will be less developed as farther developed than the average child of a particular age. Or: there will be as many children on a stage of development corresponding to that of their age plus a certain length of time as corresponding to that of their age minus a certain length of time.

The number of children who have a certain amount of deviation may be assumed to be arranged in a probability curve, so that the average of all the children will be exactly on the stage of development belonging to their age.

At a period when the rate of growth is decreasing rapidly, those children whose growth is retarded will be farther remote from the value belonging to their age than those whose growth is accelerated. As the numbers above and below the average are equal, those with retarded growth will have a greater influence upon the average than those whose growth is accelerated, therefore the average value of the measurement of all the children of a certain age will be too low when the rate of growth is decreasing, and too high when it is increasing.

These considerations may be expressed in mathematical form as follows: —

In the adult, the relative frequency of the deviation x from the