

PART THREE.

SEXUAL SELECTION IN RELATION TO MAN
AND CONCLUSION.

CHAPTER XIX.

SECONDARY SEXUAL CHARACTERS OF MAN.

WITH mankind the differences between the sexes are greater than in most of the Quadrumana, but not so great as in some, for instance, the mandrill. Man on an average is considerably taller, heavier, and stronger than woman, with squarer shoulders and more plainly pronounced muscles. Owing to the relation which exists between muscular development and the projection of the brows,* the superciliary ridge is generally more marked in man than in woman. His body, and especially his face, is more hairy, and his voice has a different and more powerful tone. In certain races the women are said to differ slightly in tint from the men. For instance, Schweinfurth, in speaking of a negress belonging to the Monbuttoos, who inhabit the interior of Africa a few degrees north of the equator, says, "Like all her race, she had a skin several shades lighter than her husband's, being something of the colour of half-roasted coffee."*(2) As the women labour in the fields and are quite unclothed, it is not likely that they differ in colour from the men owing to less exposure to the weather. European women are perhaps the brighter coloured of the two sexes, as may be seen when both have been equally exposed.

* Schaaffhausen, translation, in *Anthropological Review*, Oct., 1868, pp. 419, 420, 427.

*(2) *The Heart of Africa*, English transl., 1873, vol i., p. 544.

Man is more courageous, pugnacious and energetic than woman, and has a more inventive genius. His brain is absolutely larger, but whether or not proportionately to his larger body, has not, I believe, been fully ascertained. In woman the face is rounder; the jaws and the base of the skull smaller; the outlines of the body rounder, in parts more prominent; and her pelvis is broader than in man;* but this latter character may perhaps be considered rather as a primary than a secondary sexual character. She comes to maturity at an earlier age than man.

* Ecker, translation, in *Anthropological Review*, Oct., 1868, pp. 351-356. The comparison of the form of the skull in men and women has been followed out with much care by Welcker.

As with animals of all classes, so with man, the distinctive characters of the male sex are not fully developed until he is nearly mature; and if emasculated they never appear. The beard, for instance, is a secondary sexual character, and male children are beardless, though at an early age they have abundant hair on the head. It is probably due to the rather late appearance in life of the successive variations whereby man has acquired his masculine characters, that they are transmitted to the male sex alone. Male and female children resemble each other closely, like the young of so many other animals in which the adult sexes differ widely; they likewise resemble the mature female much more closely than the mature male. The female, however, ultimately assumes certain distinctive characters, and in the formation of her skull, is said to be intermediate between the child and the man.* Again, as the young of closely allied though distinct species do not differ nearly so much from each other as do the adults, so it is with the children of the different races of man. Some have even maintained that

race-differences cannot be detected in the infantile skull.*(2) In regard to colour, the new-born negro child is reddish nut-brown, which soon becomes slaty-grey; the black colour being fully developed within a year in the Soudan, but not until three years in Egypt. The eyes of the negro are at first blue, and the hair chestnut-brown rather than black, being curled only at the ends. The children of the Australians immediately after birth are yellowish-brown, and become dark at a later age. Those of the Guarany of Paraguay are whitish-yellow, but they acquire in the course of a few weeks the yellowish-brown tint of their parents. Similar observations have been made in other parts of America.*(3)

* Ecker and Welcker, *ibid.*, pp. 352, 355; Vogt, *Lectures on Man*, Eng. transl., p. 81.

*(2) Schaaffhausen, *Anthropolog. Review*, *ibid.*, p. 429.

*(3) Pruner-Bey, on negro infants as quoted by Vogt, *Lectures on Man*, Eng. transl., 1864, p. 189: for further facts on negro infants, as quoted from Winterbottom and Camper, see Lawrence, *Lectures on Physiology, &c.*, 1822, p. 451. For the infants of the Guarany, see Rengger, *Saugethiere, &c.*, s. 3. See also Godron, *De l'Espece*, tom. ii., 1859, p. 253. For the Australians, Waitz, *Introduction to Anthropology*, Eng. transl., 1863, p. 99.

I have specified the foregoing differences between the male and female sex in mankind, because they are curiously like those of the *Quadrumana*. With these animals the female is mature at an earlier age than the male; at least this is certainly the case in *Cebus azarae*.* The males of most species are larger and stronger than the females, of which fact the gorilla affords a well-known instance. Even in so trifling a character as the greater prominence of the superciliary ridge, the males of certain monkeys differ from the females,* (2) and agree in this respect with mankind. In the gorilla and certain other monkeys, the cranium of the adult male presents a strongly-marked sagittal crest, which is absent in the female; and Ecker found a trace of a similar difference between the two sexes in the Australians.* (3) With monkeys when there is any difference in the voice, that of the male is the more powerful. We have seen that certain male monkeys have a well-developed beard, which is quite deficient, or much less developed in the female. No instance is known of the beard, whiskers, or moustache being larger in the female than in the male monkey. Even in the colour of the beard there is a curious parallelism between man and the *Quadrumana*, for with man when the beard differs in colour from the hair of the head, as is commonly the case, it is, I believe, almost always of a lighter tint, being often reddish. I have repeatedly observed this fact in England; but two gentlemen have lately written to me, saying that they form an exception to the rule. One of these gentlemen accounts for the fact by the wide difference in colour of the hair on the paternal and maternal sides of his family. Both had been long aware of this peculiarity (one of them having often been accused of dyeing his beard), and had been thus led to observe other men, and were convinced that the exceptions were very rare. Dr. Hooker attended to this little point for me in Russia, and found no exception to the rule. In Calcutta, Mr. J. Scott, of the Botanic Gardens, was so kind as to observe the many races of men to be seen there, as well as in some other parts of India, namely, two races of Sikhim, the Bhotias, Hindoos, Burmese, and Chinese, most of which races have very little hair on the face; and he always found that when there was any difference in colour between the hair of the head and the beard, the latter was invariably lighter. Now with monkeys, as has already been stated, the beard frequently differs strikingly in colour from the hair of the head, and in such cases it is always of a lighter hue, being often pure white, sometimes yellow or reddish.* (4)

* Rengger, *Saugethiere, &c.*, 1830, s. 49.

* (2) As in *Macacus cynomolgus* (Desmarest, *Mammalogie*, p. 65), and in *Hylobates agilis* (Geoffroy St-Hilaire and F. Cuvier, *Histoire Nat. des Mammiferes*, 1824, tom. i., p. 2).

* (3) *Anthropological Review*, Oct., 1868, p. 353.

* (4) Mr. Blyth informs me that he has only seen one instance of the beard, whiskers, &c., in a monkey becoming white with old age, as is so commonly the case with us. This, however, occurred in an aged *Macacus cynomolgus*, kept in confinement, whose moustaches were "remarkably long and human-like." Altogether this old monkey presented a ludicrous resemblance to one of the reigning monarchs of Europe, after whom he was universally nicknamed. In certain races of man the hair on the head hardly ever becomes grey; thus Mr. D. Forbes has never, as he informs me, seen an instance with the Aymaras and Quechuas of South America.

In regard to the general hairiness of the body, the women in all races are less hairy than the men; and in some few *Quadrumanas* the under side of the body of the female is less hairy than that of the male.* Lastly, male monkeys, like men, are bolder and fiercer than the females. They lead the troop, and when there is danger, come to the front. We thus see how close is the parallelism between the sexual differences of man and the *Quadrumanas*. With some few species, however, as with certain baboons, the orang and the gorilla, there is a considerably greater difference between the sexes, as in the size of the canine teeth, in the development and colour of the hair, and especially in the colour of the naked parts of the skin, than in mankind.

* This is the case with the females of several species of *Hylobates*; see Geoffroy St-Hilaire and F. Cuvier, *Hist. Nat. des Mamm.*, tom. i. See also, on *H. lar.*, *Penny Cyclopaedia*, vol. ii., pp. 149, 150.

All the secondary sexual characters of man are highly variable, even within the limits of the same race; and they differ much in the several races. These two rules hold good generally throughout the animal kingdom. In the excellent observations made on board the *Novara*,* the male Australians were found to exceed the females by only 65 millim. in height, whilst with the Javans the average excess was 218 millim.; so that in this latter race the difference in height between the sexes is more than thrice as great as with the Australians. Numerous measurements were carefully made of the stature, the circumference of the neck and chest, the length of the back-bone and of the arms, in various races; and nearly all these measurements shew that the males differ much more from one another than do the females. This fact indicates that, as far as these characters are concerned, it is the male which has been chiefly modified, since the several races diverged from their common stock.

* The results were deduced by Dr. Weisbach from the measurements made by Drs. K. Scherzer and Schwarz, see *Reise der Novara: Anthropolog. Theil*, 1867, ss. 216, 231, 234, 236, 239, 269.

The development of the beard and the hairiness of the body differ remarkably in the men of distinct races, and even in different tribes or families of the same race. We Europeans see this amongst ourselves. In the Island of St. Kilda, according to Martin,* the men do not acquire beards until the age of thirty or upwards, and even then the beards are very thin. On the Europaeo-Asiatic continent, beards prevail until we pass beyond India; though with the natives of Ceylon they are often absent, as was noticed in ancient times by Diodorus.* (2) Eastward of India beards disappear, as with the Siamese, Malays, Kalmucks, Chinese, and Japanese; nevertheless, the Ainos,* (3) who inhabit the northernmost islands of the Japan Archipelago, are the hairiest men in the world. With negroes the beard is scanty or wanting, and they rarely have whiskers; in both sexes the

body is frequently almost destitute of fine down.*(4) On the other hand, the Papuans of the Malay Archipelago, who are nearly as black as negroes, possess well-developed beards.*(5) In the Pacific Ocean the inhabitants of the Fiji Archipelago have large bushy beards, whilst those of the not distant archipelagoes of Tonga and Samoa are beardless; but these men belong to distinct races. In the Ellice group all the inhabitants belong to the same race; yet on one island alone, namely Nunemaya, "the men have splendid beards"; whilst on the other islands "they have, as a rule, a dozen straggling hairs for a beard."*(6)

* Voyage to St. Kilda (3rd ed., 1753), p. 37.

*(2) Sir J. E. Tennent, Ceylon, vol. ii., 1859, p. 107.

*(3) Quatrefages, Revue des Cours Scientifiques, Aug. 29, 1868, p. 630; Vogt, Lectures on Man, Eng. trans., p. 127.

*(4) On the beards of negroes, Vogt, Lectures, &c., p. 127; Waitz, Introduct. to Anthropology, Engl. transl., 1863, vol. i., p. 96.

It is remarkable that in the United States (Investigations in Military and Anthropological Statistics of American Soldiers, 1869, p. 569) the pure negroes and their crossed offspring seem to have bodies almost as hairy as Europeans.

*(5) Wallace, The Malay Arch., vol. ii., 1869, p. 178.

*(6) Dr. J. Barnard Davis on Oceanic Races, in Anthropological Review, April, 1870, pp. 185, 191.

Throughout the great American continent the men may be said to be beardless; but in almost all the tribes a few short hairs are apt to appear on the face, especially in old age. With the tribes of North America, Catlin estimates that eighteen out of twenty men are completely destitute by nature of a beard; but occasionally there may be seen a man, who has neglected to pluck out the hairs at puberty, with a soft beard an inch or two in length. The Guarany of Paraguay differ from all the surrounding tribes in having a small beard, and even some hair on the body, but no whiskers.* I am informed by Mr. D. Forbes, who particularly attended to this point, that the Aymaras and Quechuas of the Cordillera are remarkably hairless, yet in old age a few straggling hairs occasionally appear on the chin. The men of these two tribes have very little hair on the various parts of the body where hair grows abundantly in Europeans, and the women have none on the corresponding parts. The hair on the head, however, attains an extraordinary length in both sexes, often reaching almost to the ground; and this is likewise the case with some of the N. American tribes. In the amount of hair, and in the general shape of the body, the sexes of the American aborigines do not differ so much from each other, as in most other races.*(2) This fact is analogous with what occurs with some closely allied monkeys; thus the sexes of the chimpanzee are not as different as those of the orang or gorilla.*(3)

* Catlin, North American Indians, 3rd. ed., 1842, vol. ii., p. 227. On the Guarany, see Azara, Voyages dans l'Amérique Merid., tom. ii., 1809, p. 85; also Rengger, Saugethiere von Paraguay, s. 3.

*(2) Prof. and Mrs. Agassiz (Journey in Brazil, p. 530) remark that the sexes of the American Indians differ less than those of the negroes and of the higher races. See also Rengger, *ibid.*, p. 3, on the Guarany.

*(3) Rutmeyer, Die Grenzen der Thierwelt; eine Betrachtung zu Darwin's Lehre, 1868, s. 54.

In the previous chapters we have seen that with mammals, birds, fishes, insects, &c., many characters, which there is every reason to believe were primarily gained through sexual selection by one sex, have been transferred to the other. As this same form of transmission has apparently prevailed much with mankind, it will save useless repetition if we discuss the origin of characters

peculiar to the male sex together with certain other characters common to both sexes.

Law of Battle.- With savages, for instance, the Australians, the women are the constant cause of war both between members of the same tribe and between distinct tribes. So no doubt it was in ancient times; "nam fuit ante Helenam mulier teterrima belli causa." With some of the North American Indians, the contest is reduced to a system. That excellent observer, Hearne,* says:- "It has ever been the custom among these people for the men to wrestle for any woman to whom they are attached; and, of course, the strongest party always carries off the prize. A weak man, unless he be a good hunter, and well-beloved, is seldom permitted to keep a wife that a stronger man thinks worth his notice. This custom prevails throughout all the tribes, and causes a great spirit of emulation among their youth, who are upon all occasions, from their childhood, trying their strength and skill in wrestling." With the Guanans of South America, Azara states that the men rarely marry till twenty years old or more, as before that age they cannot conquer their rivals.

* A Journey from Prince of Wales Fort, 8vo ed., Dublin, 1796, p. 104. Sir J. Lubbock (Origin of Civilisation, 1870, p. 69) gives other and similar cases in North America. For the Guanans of South America see Azara, Voyages, &c., tom. ii., p. 94.

Other similar facts could be given; but even if we had no evidence on this head, we might feel almost sure, from the analogy of the higher Quadrumana,* that the law of battle had prevailed with man during the early stages of his development. The occasional appearance at the present day of canine teeth which project above the others, with traces of diastema or open space for the reception of the opposite canines, is in all probability a case of reversion to a former state, when the progenitors of man were provided with these weapons, like so many existing male Quadrumana. It was remarked in a former chapter that as man gradually became erect, and continually used his hands and arms for fighting with sticks and stones, as well as for the other purposes of life, he would have used his jaws and teeth less and less. The jaws, together with their muscles, would then have been reduced through disuse, as would the teeth through the not well understood principles of correlation and economy of growth; for we everywhere see that parts, which are no longer of service, are reduced in size. By such steps the original inequality between the jaws and teeth in the two sexes of mankind would ultimately have been obliterated. The case is almost parallel with that of many male ruminants, in which the canine teeth have been reduced to mere rudiments, or have disappeared, apparently in consequence of the development of horns. As the prodigious difference between the skulls of the two sexes in the orang and gorilla stands in close relation with the development of the immense canine teeth in the males, we may infer that the reduction of the jaws and teeth in the early male progenitors of man must have led to a most striking and favourable change in his appearance.

* On the fighting of the male gorillas, see Dr. Savage, in Boston Journal of Natural History, vol. v., 1847, p. 423. On *Presbytis entellus*, see the Indian Field, 1859, p. 146.

There can be little doubt that the greater size and strength of man, in comparison with woman, together with his broader shoulders, more developed muscles, rugged outline of body, his greater courage and pugnacity, are all due in chief part to inheritance from his half-human male ancestors. These characters would, however, have been preserved or even augmented during the long ages of man's savagery, by the success of the strongest and boldest men, both in the general struggle for life and in their contests for wives; a success

which would have ensured their leaving a more numerous progeny than their less favoured brethren. It is not probable that the greater strength of man was primarily acquired through the inherited effects of his having worked harder than woman for his own subsistence and that of his family; for the women in all barbarous nations are compelled to work at least as hard as the men. With civilised people the arbitrament of battle for the possession of the women has long ceased; on the other hand, the men, as a general rule, have to work harder than the women for their joint subsistence, and thus their greater strength will have been kept up.

Difference in the Mental Powers of the two Sexes.- With respect to differences of this nature between man and woman, it is probable that sexual selection has played a highly important part. I am aware that some writers doubt whether there is any such inherent difference; but this is at least probable from the analogy of the lower animals which present other secondary sexual characters. No one disputes that the bull differs in disposition from the cow, the wild-boar from the sow, the stallion from the mare, and, as is well known to the keepers of menageries, the males of the larger apes from the females. Woman seems to differ from man in mental disposition, chiefly in her greater tenderness and less selfishness; and this holds good even with savages, as shewn by a well-known passage in Mungo Park's Travels, and by statements made by many other travellers. Woman, owing to her maternal instincts, displays these qualities towards her infants in an eminent degree; therefore it is likely that she would often extend them towards her fellow-creatures. Man is the rival of other men; he delights in competition, and this leads to ambition which passes too easily into selfishness. These latter qualities seem to be his natural and unfortunate birthright. It is generally admitted that with woman the powers of intuition, of rapid perception, and perhaps of imitation, are more strongly marked than in man; but some, at least, of these faculties are characteristic of the lower races, and therefore of a past and lower state of civilisation.

The chief distinction in the intellectual powers of the two sexes is shewn by man's attaining to a higher eminence, in whatever he takes up, than can woman- whether requiring deep thought, reason, or imagination, or merely the use of the senses and hands. If two lists were made of the most eminent men and women in poetry, painting, sculpture, music (inclusive both of composition and performance), history, science, and philosophy, with half-a-dozen names under each subject, the two lists would not bear comparison. We may also infer, from the law of the deviation from averages, so well illustrated by Mr. Galton, in his work on Hereditary Genius, that if men are capable of a decided pre-eminence over women in many subjects, the average of mental power in man must be above that of woman.

Amongst the half-human progenitors of man, and amongst savages, there have been struggles between the males during many generations for the possession of the females. But mere bodily strength and size would do little for victory, unless associated with courage, perseverance, and determined energy. With social animals, the young males have to pass through many a contest before they win a female, and the older males have to retain their females by renewed battles. They have, also, in the case of mankind, to defend their females, as well as their young, from enemies of all kinds, and to hunt for their joint subsistence. But to avoid enemies or to attack them with success, to capture wild animals, and to fashion weapons, requires the aid of the higher mental faculties, namely, observation, reason, invention, or imagination. These various faculties will thus have been continually put to the test and selected during manhood; they will, moreover, have been strengthened by use during this same period of life. Consequently in accordance with the principle often alluded to, we might expect that they would at least tend to be transmitted chiefly to the male offspring at the corresponding period of manhood.

Now, when two men are put into competition, or a man with a woman,

both possessed of every mental quality in equal perfection, save that one has higher energy, perseverance, and courage, the latter will generally become more eminent in every pursuit, and will gain the ascendancy.* He may be said to possess genius- for genius has been declared by a great authority to be patience; and patience, in this sense, means unflinching, undaunted perseverance. But this view of genius is perhaps deficient; for without the higher powers of the imagination and reason, no eminent success can be gained in many subjects. These latter faculties, as well as the former, will have been developed in man, partly through sexual selection, - that is, through the contest of rival males, and partly through natural selection, that is, from success in the general struggle for life; and as in both cases the struggle will have been during maturity, the characters gained will have been transmitted more fully to the male than to the female offspring. It accords in a striking manner with this view of the modification and re-inforcement of many of our mental faculties by sexual selection, that, firstly, they notoriously undergo a considerable change at puberty,* (2) and, secondly, that eunuchs remain throughout life inferior in these same qualities. Thus, man has ultimately become superior to woman. It is, indeed, fortunate that the law of the equal transmission of characters to both sexes prevails with mammals; otherwise, it is probable that man would have become as superior in mental endowment to woman, as the peacock is in ornamental plumage to the peahen.

* J. Stuart Mill remarks (The Subjection of Women, 1869, p. 122), "The things in which man most excels woman are those which require most plodding, and long hammering at single thoughts." What is this but energy and perseverance?

* (2) Maudsley, Mind and Body, p. 31.

It must be borne in mind that the tendency in characters acquired by either sex late in life, to be transmitted to the same sex at the same age, and of early acquired characters to be transmitted to both sexes, are rules which, though general, do not always hold. If they always held good, we might conclude (but I here exceed my proper bounds) that the inherited effects of the early education of boys and girls would be transmitted equally to both sexes; so that the present inequality in mental power between the sexes would not be effaced by a similar course of early training; nor can it have been caused by their dissimilar early training. In order that woman should reach the same standard as man, she ought, when nearly adult, to be trained to energy and perseverance, and to have her reason and imagination exercised to the highest point; and then she would probably transmit these qualities chiefly to her adult daughters. All women, however, could not be thus raised, unless during many generations those who excelled in the above robust virtues were married, and produced offspring in larger numbers than other women. As before remarked of bodily strength, although men do not now fight for their wives, and this form of selection has passed away, yet during manhood, they generally undergo a severe struggle in order to maintain themselves and their families; and this will tend to keep up or even increase their mental powers, and, as a consequence, the present inequality between the sexes.*

* An observation by Vogt bears on this subject: he says, "It is a remarkable circumstance, that the difference between the sexes, as regards the cranial cavity, increases with the development of the race, so that the male European excels much more the female, than the negro the negress. Welcker confirms this statement of Huschke from his measurements of negro and German skulls." But Vogt admits (Lectures on Man, Eng. transl., 1864, p. 81) that more observations are requisite on this point.

Voice and Musical Powers.- In some species of Quadrumana there is

a great difference between the adult sexes, in the power of their voices and in the development of the vocal organs; and man appears to have inherited this difference from his early progenitors. His vocal cords are about one-third longer than in woman, or than in boys; and emasculation produces the same effect on him as on the lower animals, for it "arrests that prominent growth of the thyroid, &c., which accompanies the elongation of the cords."* With respect to the cause of this difference between the sexes, I have nothing to add to the remarks in the last chapter on the probable effects of the long-continued use of the vocal organs by the male under the excitement of love, rage and jealousy. According to Sir Duncan Gibb,*⁽²⁾ the voice and the form of the larynx differ in the different races of mankind; but with the Tartars, Chinese, &c., the voice of the male is said not to differ so much from that of the female, as in most other races.

* Owen, *Anatomy of Vertebrates*, vol. iii., p. 603.

*⁽²⁾ *Journal of the Anthropological Society*, April, 1869, pp. lvii. and lxxi.

The capacity and love for singing or music, though not a sexual character in man, must not here be passed over. Although the sounds emitted by animals of all kinds serve many purposes, a strong case can be made out, that the vocal organs were primarily used and perfected in relation to the propagation of the species. Insects and some few spiders are the lowest animals which voluntarily produce any sound; and this is generally effected by the aid of beautifully constructed stridulating organs, which are often confined to the males. The sounds thus produced consist, I believe in all cases, of the same note, repeated rhythmically;* and this is sometimes pleasing even to the ears of man. The chief and, in some cases, exclusive purpose appears to be either to call or charm the opposite sex.

* Dr. Scudder, "Notes on Stridulation," in *Proc. Boston Soc. of Nat. Hist.*, vol. xi., April, 1868.

The sounds produced by fishes are said in some cases to be made only by the males during the breeding-season. All the air-breathing Vertebrata, necessarily possess an apparatus for inhaling and expelling air, with a pipe capable of being closed at one end. Hence when the primeval members of this class were strongly excited and their muscles violently contracted, purposeless sounds would almost certainly have been produced; and these, if they proved in any way serviceable, might readily have been modified or intensified by the preservation of properly adapted variations. The lowest vertebrates which breathe air are amphibians; and of these, frogs and toads possess vocal organs, which are incessantly used during the breeding-season, and which are often more highly developed in the male than in the female. The male alone of the tortoise utters a noise, and this only during the season of love. Male alligators roar or bellow during the same season. Every one knows how much birds use their vocal organs as a means of courtship; and some species likewise perform what may be called instrumental music.

In the class of mammals, with which we are here more particularly concerned, the males of almost all the species use their voices during the breeding-season much more than at any other time; and some are absolutely mute excepting at this season. With other species both sexes, or only the females, use their voices as a love-call. Considering these facts, and that the vocal organs of some quadrupeds are much more largely developed in the male than in the female, either permanently or temporarily during the breeding-season; and considering that in most of the lower classes the sounds produced by the males, serve not only to call but to excite or allure the female, it is a surprising fact that we have not as yet any good evidence that these organs are used by male mammals to

charm the females. The American *Mycetes caraya* perhaps forms an exception, as does the *Hylobates agilis*, an ape allied to man. This gibbon has an extremely loud but musical voice. Mr. Waterhouse states,* "It appeared to me that in ascending and descending the scale, the intervals were always exactly half-tones; and I am sure that the highest note was the exact octave to the lowest. The quality of the notes is very musical; and I do not doubt that a good violinist would be able to give a correct idea of the gibbon's composition, excepting as regards its loudness." Mr. Waterhouse then gives the notes. Professor Owen, who is a musician, confirms the foregoing statement, and remarks, though erroneously, that this gibbon "alone of brute mammals may be said to sing." It appears to be much excited after its performance. Unfortunately, its habits have never been closely observed in a state of nature; but from the analogy of other animals, it is probable that it uses its musical powers more especially during the season of courtship.

* Given in W. C. L. Martin's General Introduction to Natural History of Mamm. Animals, 1841, p. 432; Owen, Anatomy of Vertebrates, vol. iii, p. 600.

This gibbon is not the only species in the genus which sings, for my son, Francis Darwin, attentively listened in the Zoological Gardens to *H. leuciscus* whilst singing a cadence of three notes, in true musical intervals and with a clear musical tone. It is a more surprising fact that certain rodents utter musical sounds. Singing mice have often been mentioned and exhibited, but imposture has commonly been suspected. We have, however, at last a clear account by a well-known observer, the Rev. S. Lockwood,* of the musical powers of an American species, the *Hesperomys cognatus*, belonging to a genus distinct from that of the English mouse. This little animal was kept in confinement, and the performance was repeatedly heard. In one of the two chief songs, "the last bar would frequently be prolonged to two or three; and she would sometimes change from C sharp and D, to C natural and D, then warble on these two notes awhile, and wind up with a quick chirp on C sharp and D. The distinctness between the semitones was very marked, and easily appreciable to a good ear." Mr. Lockwood gives both songs in musical notation; and adds that though this little mouse "had no ear for time, yet she would keep to the key of B (two flats) and strictly in a major key." ... "Her soft clear voice falls an octave with all the precision possible; then at the wind up, it rises again into a very quick trill on C sharp and D."

* American Naturalist, 1871, p. 761.

A critic has asked how the ears of man, and he ought to have added of other animals, could have been adapted by selection so as to distinguish musical notes. But this question shows some confusion on the subject; a noise is the sensation resulting from the co-existence of several aerial "simple vibrations" of various periods, each of which intermits so frequently that its separate existence cannot be perceived. It is only in the want of continuity of such vibrations, and in their want of harmony inter se, that a noise differs from a musical note. Thus, an ear to be capable of discriminating noises- and the high importance of this power to all animals is admitted by every one- must be sensitive to musical notes. We have evidence of this capacity even low down in the animal scale; thus, crustaceans are provided with auditory hairs of different lengths, which have been seen to vibrate when the proper musical notes are struck.* As stated in a previous chapter, similar observations have been made on the hairs of the antennae of gnats. It has been positively asserted by good observers that spiders are attracted by music. It is also well known that some dogs howl when hearing particular tones.*(2) Seals apparently appreciate music, and their

Fondness for it "was well known to the ancients, and is often taken advantage of by the hunters at the present day."*(3)

* Helmholtz, *Theorie Phys. de la Musique*, 1868, p. 187.

*(2) Several accounts have been published to this effect. Mr.

Peach writes to me that an old dog of his howls when B flat is sounded on the flute, and to no other note. I may add another instance of a dog always whining, when one note on a concertina, which was out of tune, was played.

*(3) Mr. R. Brown, in *Proc. Zool. Soc.*, 1868, p. 410.

Therefore, as far as the mere perception of musical notes is concerned, there seems no special difficulty in the case of man or of any other animal. Helmholtz has explained on physiological principles why concords are agreeable, and discords disagreeable to the human ear; but we are little concerned with these, as music in harmony is a late invention. We are more concerned with melody, and here again, according to Helmholtz, it is intelligible why the notes of our musical scale are used. The ear analyses all sounds into their component "simple vibrations," although we are not conscious of this analysis. In a musical note the lowest in pitch of these is generally predominant, and the others which are less marked are the octave, the twelfth, the second octave, &c., all harmonies of the fundamental predominant note; any two notes of our scale have many of these harmonic over-tones in common. It seems pretty clear then, that if an animal always wished to sing precisely the same song, he would guide himself by sounding those notes in succession, which possess many overtones in common- that is, he would choose for his song, notes which belong to our musical scale.

But if it be further asked why musical tones in a certain order and rhythm give man and other animals pleasure, we can no more give the reason than for the pleasantness of certain tastes and smells. That they do give pleasure of some kind to animals, we may infer from their being produced during the season of courtship by many insects, spiders, fishes, amphibians, and birds; for unless the females were able to appreciate such sounds and were excited or charmed by them, the persevering efforts of the males, and the complex structures often possessed by them alone, would be useless; and this it is impossible to believe.

Human song is generally admitted to be the basis or origin of instrumental music. As neither the enjoyment nor the capacity of producing musical notes are faculties of the least use to man in reference to his daily habits of life, they must be ranked amongst the most mysterious with which he is endowed. They are present, though in a very rude condition, in men of all races, even the most savage; but so different is the taste of the several races, that our music gives no pleasure to savages, and their music is to us in most cases hideous and unmeaning. Dr. Seemann, in some interesting remarks on this subject,* "doubt whether even amongst the nations of western Europe, intimately connected as they are by close and frequent intercourse, the music of the one is interpreted in the same sense by the others. By travelling eastwards we find that there is certainly a different language of music. Songs of joy and dance-accompaniments are no longer, as with us, in the major keys, but always in the minor." Whether or not the half-human progenitors of man possessed, like the singing gibbons, the capacity of producing, and therefore no doubt of appreciating, musical notes, we know that man possessed these faculties at a very remote period. M. Lartet has described two flutes made out of the bones and horns of the reindeer, found in caves together with flint tools and the remains of extinct animals. The arts of singing and of dancing are also very ancient, and are now practised by all or nearly all the lowest races of man. Poetry, which may be considered as the offspring of song, is likewise so ancient, that many persons have felt astonished that it should have arisen during the earliest ages of which we have any record.

* Journal of Anthropological Society, Oct., 1870, p. clv. See also the several later chapters in Sir John Lubbock's Prehistoric Times, 2nd ed., 1869, which contain an admirable account of the habits of savages.

We see that the musical faculties, which are not wholly deficient in any race, are capable of prompt and high development, for Hottentots and Negroes have become excellent musicians, although in their native countries they rarely practise anything that we should consider music. Schweinfurth, however, was pleased with some of the simple melodies which he heard in the interior of Africa. But there is nothing anomalous in the musical faculties lying dormant in man: some species of birds which never naturally sing, can without much difficulty be taught to do so; thus a house-sparrow has learnt the song of a linnet. As these two species are closely allied, and belong to the order of Insessores, which includes nearly all the singing-birds in the world, it is possible that a progenitor of the sparrow may have been a songster. It is more remarkable that parrots, belonging to a group distinct from the Insessores, and having differently constructed vocal organs, can be taught not only to speak, but to pipe or whistle tunes invented by man, so that they must have some musical capacity. Nevertheless it would be very rash to assume that parrots are descended from some ancient form which was a songster. Many cases could be advanced of organs and instincts originally adapted for one purpose, having been utilised for some distinct purpose.* Hence the capacity for high musical development which the savage races of man possess, may be due either to the practice by our semi-human progenitors of some rude form of music, or simply to their having acquired the proper vocal organs for a different purpose. But in this latter case we must assume, as in the above instance of parrots, and as seems to occur with many animals, that they already possessed some sense of melody.

* Since this chapter was printed, I have seen a valuable article by Mr. Chauncey Wright (North American Review, Oct., 1870, page 293), who, in discussing the above subject, remarks, "There are many consequences of the ultimate laws or uniformities of nature, through which the acquisition of one useful power will bring with it many resulting advantages as well as limiting disadvantages, actual or possible, which the principle of utility may not have comprehended in its action." As I have attempted to shew in an early chapter of this work, this principle has an important bearing on the acquisition by man of some of his mental characteristics.

Music arouses in us various emotions, but not the more terrible ones of horror, fear, rage, &c. It awakens the gentler feelings of tenderness and love, which readily pass into devotion. In the Chinese annals it is said, "Music hath the power of making heaven descend upon earth." It likewise stirs up in us the sense of triumph and the glorious ardour for war. These powerful and mingled feelings may well give rise to the sense of sublimity. We can concentrate, as Dr. Seemann observes, greater intensity of feeling in a single musical note than in pages of writing. It is probable that nearly the same emotions, but much weaker and far less complex, are felt by birds when the male pours forth his full volume of song, in rivalry with other males, to captivate the female. Love is still the commonest theme of our songs. As Herbert Spencer remarks, "music arouses dormant sentiments of which we had not conceived the possibility, and do not know the meaning; or, as Richter says, tells us of things we have not seen and shall not see." Conversely, when vivid emotions are felt and expressed by the orator, or even in common speech, musical cadences and rhythm are instinctively used. The negro in Africa when excited often bursts forth in song; "another will reply in song, whilst the company, as if touched by a musical wave, murmur a chorus in perfect unison."* Even monkeys express strong feelings in different

tones- anger and pain by high notes.*(2) The sensations and ideas thus excited in us by music, or expressed by the cadences of oratory, appear from their vagueness, yet depth, like mental reversions to the emotions and thoughts of a long-past age.

* Winwood Reade, *The Martyrdom of Man*, 1872, p. 441, and *African Sketch Book*, 1873, vol. ii., p. 313.

*(2) Rengger, *Saugethiere von Paraguay*, s. 49.

All these facts with respect to music and impassioned speech become intelligible to a certain extent, if we may assume that musical tones and rhythm were used by our half-human ancestors, during the season of courtship, when animals of all kinds are excited not only by love, but by the strong passions of jealousy, rivalry, and triumph. From the deeply-laid principle of inherited associations, musical tones in this case would be likely to call up vaguely and indefinitely the strong emotions of a long-past age. As we have every reason to suppose that articulate speech is one of the latest, as it certainly is the highest, of the arts acquired by man, and as the instinctive power of producing musical notes and rhythms is developed low down in the animal series, it would be altogether opposed to the principle of evolution, if we were to admit that man's musical capacity has been developed from the tones used in impassioned speech. We must suppose that the rhythms and cadences of oratory are derived from previously developed musical powers.* We can thus understand how it is that music, dancing, song, and poetry are such very ancient arts. We may go even further than this, and, as remarked in a former chapter, believe that musical sounds afforded one of the bases for the development of language.*(2)

* See the very interesting discussion on the "Origin and Function of Music," by Mr. Herbert Spencer, in his collected Essays, 1858, p. 359. Mr. Spencer comes to an exactly opposite conclusion to that at which I have arrived. He concludes, as did Diderot formerly, that the cadences used in emotional speech afford the foundation from which music has been developed; whilst I conclude that musical notes and rhythm were first acquired by the male or female progenitors of mankind for the sake of charming the opposite sex. Thus musical tones became firmly associated with some of the strongest passions an animal is capable of feeling, and are consequently used instinctively, or through association when strong emotions are expressed in speech. Mr. Spencer does not offer any satisfactory explanation, nor can I, why high or deep notes should be expressive, both with man and the lower animals, of certain emotions. Mr. Spencer gives also an interesting discussion on the relations between poetry, recitative and song.

*(2) I find in Lord Monboddo's *Origin of Language*, vol. i., 1774, p. 469, that Dr. Blacklock likewise thought "that the first language among men was music, and that before our ideas were expressed by articulate sounds, they were communicated by tones varied according to different degrees of gravity and acuteness."

As the males of several quadrumanous animals have their vocal organs much more developed than in the females, and as a gibbon, one of the anthropomorphous apes, pours forth a whole octave of musical notes and may be said to sing, it appears probable that the progenitors of man, either the males or females or both sexes, before acquiring the power of expressing their mutual love in articulate language, endeavoured to charm each other with musical notes and rhythm. So little is known about the use of the voice by the *Quadrumana* during the season of love, that we have no means of judging whether the habit of singing was first acquired by our male or female ancestors. Women are generally thought to possess sweeter voices than men, and as far as this serves as any guide, we may infer that they first acquired musical powers in order to attract the other sex.* But if so, this

must have occurred long ago, before our ancestors had become sufficiently human to treat and value their women merely as useful slaves. The impassioned orator, bard, or musician, when with his varied tones and cadences he excites the strongest emotions in his hearers, little suspects that he uses the same means by which his half-human ancestors long ago aroused each other's ardent passions, during their courtship and rivalry.

* See an interesting discussion on this subject by Haeckel, *Generelle Morphologie*, B. ii., 1866, s. 246.

The Influence of Beauty in determining the Marriages of Mankind. - In civilised life man is largely, but by no means exclusively, influenced in the choice of his wife by external appearance; but we are chiefly concerned with primeval times, and our only means of forming a judgment on this subject is to study the habits of existing semi-civilised and savage nations. If it can be shewn that the men of different races prefer women having various characteristics, or conversely with the women, we have then to enquire whether such choice, continued during many generations, would produce any sensible effect on the race, either on one sex or both according to the form of inheritance which has prevailed.

It will be well first to shew in some detail that savages pay the greatest attention to their personal appearance.* That they have a passion for ornament is notorious; and an English philosopher goes so far as to maintain that clothes were first made for ornament and not for warmth. As Professor Waitz remarks, "however poor and miserable man is, he finds a pleasure in adorning himself." The extravagance of the naked Indians of South America in decorating themselves is shewn "by a man of large stature gaining with difficulty enough by the labour of a fortnight to procure in exchange the chica necessary to paint himself red."*(2) The ancient barbarians of Europe during the Reindeer period brought to their caves any brilliant or singular objects which they happened to find. Savages at the present day everywhere deck themselves with plumes, necklaces, armlets, ear-rings, &c. They paint themselves in the most diversified manner. "If painted nations," as Humboldt observes, "had been examined with the same attention as clothed nations, it would have been perceived that the most fertile imagination and the most mutable caprice have created the fashions of painting, as well as those of garments."

* A full and excellent account of the manner in which savages in all parts of the world ornament themselves, is given by the Italian traveller, Professor Mantegazza, *Rio de la Plata, Viaggi e Studi*, 1867, pp. 525-545; all the following statements, when other references are not given, are taken from this work. See, also, Waitz, *Introduction to Anthropology*, Eng. transl., vol. i., 1863, p. 275, et passim. Lawrence also gives very full details in his *Lectures on Physiology*, 1822. Since this chapter was written Sir J. Lubbock has published his *Origin of Civilisation*, 1870, in which there is an interesting chapter on the present subject, and from which (pp. 42, 48) I have taken some facts about savages dyeing their teeth and hair, and piercing their teeth.

*(2) Humboldt, *Personal Narrative*, Eng. transl., vol. iv., p. 515; on the imagination shewn in painting the body, p. 522; on modifying the form of the calf of the leg, p. 466.

In one part of Africa the eyelids are coloured black; in another the nails are coloured yellow or purple. In many places the hair is dyed of various tints. In different countries the teeth are stained black, red, blue, &c., and in the Malay Archipelago it is thought shameful to have white teeth "like those of a dog." Not one great country can be named, from the polar regions in the north to New Zealand in the south, in which the aborigines do not tattoo

themselves. This practice was followed by the Jews of old, and by the ancient Britons. In Africa some of the natives tattoo themselves, but it is a much more common practice to raise protuberances by rubbing salt into incisions made in various parts of the body; and these are considered by the inhabitants of Kordofan and Darfur "to be great personal attractions." In the Arab countries no beauty can be perfect until the cheeks "or temples have been gashed."* In South America, as Humboldt remarks, "a mother would be accused of culpable indifference towards her children, if she did not employ artificial means to shape the calf of the leg after the fashion of the country." In the Old and New Worlds the shape of the skull was formerly modified during infancy in the most extraordinary manner, as is still the case in many places, and such deformities are considered ornamental. For instance, the savages of Colombia*(2) deem a much flattened head "an essential point of beauty."

* The Nile Tributaries, 1867; The Albert N'yanza, 1866, vol. i., p. 218.

*(2) Quoted by Prichard, Physical History of Mankind, 4th ed., vol. i., 1851, p. 321.

The hair is treated with especial care in various countries; it is allowed to grow to full length, so as to reach to the ground, or is combed into "a compact frizzled mop, which is the Papuan's pride and glory."* In northern Africa "a man requires a period of from eight to ten years to perfect his coiffure." With other nations the head is shaved, and in parts of South America and Africa even the eyebrows and eyelashes are eradicated. The natives of the Upper Nile knock out the four front teeth, saying that they do not wish to resemble brutes. Further south, the Bakotas knock out only the two upper incisors, which, as Livingstone*(2) remarks, gives the face a hideous appearance, owing to the prominence of the lower jaw; but these people think the presence of the incisors most unsightly, and on beholding some Europeans, cried out, "Look at the great teeth!" The chief Sebituani tried in vain to alter this fashion. In various parts of Africa and in the Malay Archipelago the natives file the incisors into points like those of a saw, or pierce them with holes, into which they insert studs.

* On the Papuans, Wallace, The Malay Archipelago, vol. ii., p. 445. On the coiffure of the Africans, Sir S. Baker, The Albert N'yanza, vol. i., p. 210.

*(2) Travels, p. 533.

As the face with us is chiefly admired for its beauty, so with savages it is the chief seat of mutilation. In all quarters of the world the septum, and more rarely the wings of the nose are pierced; rings, sticks, feathers, and other ornaments being inserted into the bores. The ears are everywhere pierced and similarly ornamented, and with the Botocudos and Lenguas of South America the hole is gradually so much enlarged that the lower edge touches the shoulder. In North and South America and in Africa either the upper or lower lip is pierced; and with the Botocudos the hole in the lower lip is so large that a disc of wood, four inches in diameter, is placed in it. Mantegazza gives a curious account of the shame felt by a South American native, and of the ridicule which he excited, when he sold his tembeta, - the large coloured piece of wood which is passed through the hole. In central Africa the women perforate the lower lip and wear a crystal, which, from the movement of the tongue, has "a wriggling motion, indescribably ludicrous during conversation." The wife of the chief of Latooka told Sir S. Baker* that Lady Baker "would be much improved if she would extract her four front teeth from the lower jaw, and wear the long pointed polished crystal in her under lip." Further south with the Makalolo, the upper lip is perforated, and a large metal and bamboo ring, called a pelele, is worn in the hole.

This caused the lip in one case to project two inches beyond the tip of the nose; and when the lady smiled, the contraction of the muscles elevated it over her eyes. 'Why do the women wear these things?' the venerable chief, Chinsurdi, was asked. Evidently surprised at such a stupid question, he replied, 'For beauty! They are the only beautiful things women have; men have beards, women have none. What kind of a person would she be without the pelele? She would not be a woman at all with a mouth like a man, but no beard.'*(2)

* The Albert N'Yanza, 1866, vol. i., p. 217.

*(2) Livingstone, British Association, 1860; report given in the Athenaeum, July 7, 1860, p. 29.

Hardly any part of the body, which can be unnaturally modified, has escaped. The amount of suffering thus caused must have been extreme, for many of the operations require several years for their completion, so that the idea of their necessity must be imperative. The motives are various; the men paint their bodies to make themselves appear terrible in battle; certain mutilations are connected with religious rites, or they mark the age of puberty, or the rank of the man, or they serve to distinguish the tribes. Amongst savages the same fashions prevail for long periods,* and thus mutilations, from whatever cause first made, soon come to be valued as distinctive marks. But self-adornment, vanity, and the admiration of others, seem to be the commonest motives. In regard to tattooing, I was told by the missionaries in New Zealand that when they tried to persuade some girls to give up the practice, they answered, "We must just have a few lines on our lips; else when we grow old we shall be so very ugly." With the men of New Zealand, a most capable judge*(2) says, "to have fine tattooed faces was the great ambition of the young, both to render themselves attractive to the ladies, and conspicuous in war." A star tattooed on the forehead and a spot on the chin are thought by the women in one part of Africa to be irresistible attractions.*(3) In most, but not all parts of the world, the men are more ornamented than the women and often in a different manner; sometimes, though rarely, the women are hardly at all ornamented. As the women are made by savages to perform the greatest share of the work, and as they are not allowed to eat the best kinds of food, so it accords with the characteristic selfishness of man that they should not be allowed to obtain, or use the finest ornaments. Lastly, it is a remarkable fact, as proved by the foregoing quotations, that the same fashions in modifying the shape of the head, in ornamenting the hair, in painting, tattooing, in perforating the nose, lips, or ears, in removing or filing the teeth, &c., now prevail, and have long prevailed, in the most distant quarters of the world. It is extremely improbable that these practices, followed by so many distinct nations, should be due to tradition from any common source. They indicate the close similarity of the mind of man, to whatever race he may belong, just as do the almost universal habits of dancing, masquerading, and making rude pictures.

* Sir S. Baker (*ibid.*, vol. i., p. 210) speaking of the natives of central Africa says, "Every tribe has a distinct and unchanging fashion for dressing the hair." See Agassiz (*Journey in Brazil*, 1868, p. 318) on invariability of the tattooing of Amazonian Indians.

*(2) Rev. R. Taylor, *New Zealand and its Inhabitants*, 1855, p. 152.

*(3) Mantegazza, *Viaggi e Studi*, p. 542.

Having made these preliminary remarks on the admiration felt by savages for various ornaments, and for deformities most unsightly in our eyes, let us see how far the men are attracted by the appearance of their women, and what are their ideas of beauty. I have heard it maintained that savages are quite indifferent about the beauty of their women, valuing them solely as slaves; it may therefore be well to observe that this conclusion does not at all agree with the care

which the women take in ornamenting themselves, or with their vanity. Burchell* gives an amusing account of a bush-woman who used as much grease, red ochre, and shining powder "as would have ruined any but a very rich husband." She displayed also "much vanity and too evident a consciousness of her superiority." Mr. Winwood Reade informs me that the negroes of the west coast often discuss the beauty of their women. Some competent observers have attributed the fearfully common practice of infanticide partly to the desire felt by the women to retain their good looks.*⁽²⁾ In several regions the women wear charms and use love-philters to gain the affections of the men; and Mr. Brown enumerates four plants used for this purpose by the women of north-western America.*⁽³⁾

* Travels in South Africa, 1824, vol. i., p. 414.

*⁽²⁾ See, for references, Gerland, *Über das Aussterben der Naturvölker*, 1868, ss. 51, 53, 55; also Azara, *Voyages, &c.*, tom. ii., p. 116.

*⁽³⁾ On the vegetable productions used by the north-western American Indians, see *Pharmaceutical Journal*, vol. x.

Hearne,* an excellent observer, who lived many years with the American Indians, says, in speaking of the women, "Ask a northern Indian what is beauty, and he will answer, a broad flat face, small eyes, high cheek-bones, three or four broad black lines across each cheek, a low forehead, a large broad chin, a clumsy hook nose, a tawny hide, and breasts hanging down to the belt." Pallas, who visited the northern parts of the Chinese empire, says, "those women are preferred who have the Mandschu form; that is to say, a broad face, high cheek-bones, very broad noses, and enormous ears";*⁽²⁾ and Vogt remarks that the obliquity of the eye, which is proper to the Chinese and Japanese, is exaggerated in their pictures for the purpose, as it "seems, of exhibiting its beauty, as contrasted with the eye of the red-haired barbarians." It is well known, as Huc repeatedly remarks, that the Chinese of the interior think Europeans hideous, with their white skins and prominent noses. The nose is far from being too prominent, according to our ideas, in the natives of Ceylon; yet "the Chinese in the seventh century, accustomed to the flat features of the Mongol races, were surprised at the prominent noses of the Cingalese; and Thsang described them as having 'the beak of a bird, with the body of a man.'"

* A Journey from Prince of Wales Fort, 8vo. ed., 1796, p. 89.

*⁽²⁾ Quoted by Prichard, *Physical History of Mankind*, 3rd ed., vol. iv., 1844, p. 519; Vogt, *Lectures on Man*, Eng. transl., p. 129. On the opinion of the Chinese on the Cingalese, E. Tennent, *Ceylon*, 1859, vol. ii., p. 107.

Finlayson, after minutely describing the people of Cochin China, says that their rounded heads and faces are their chief characteristics; and, he adds, "the roundness of the whole countenance is more striking in the women, who are reckoned beautiful in proportion as they display this form of face." The Siamese have small noses with divergent nostrils, a wide mouth, rather thick lips, a remarkably large face, with very high and broad cheek-bones. It is, therefore, not wonderful that "beauty, according to our notion, is a stranger to them. Yet they consider their own females to be much more beautiful than those of Europe."*

* Prichard, as taken from Crawford and Finlayson, *Phys. Hist. of Mankind*, vol. iv., pp. 534, 535.

It is well known that with many Hottentot women the posterior part of the body projects in a wonderful manner; they are steatopygous; and Sir Andrew Smith is certain that this peculiarity is greatly admired by the men.* He once saw a woman who was considered a beauty, and

she was so immensely seated behind, that when seated on level ground she could not rise, and had to push herself along until she came to a slope. Some of the women in various negro tribes have the same peculiarity; and, according to Burton, the Somal men are said to choose their wives by ranging them in a line, and by picking her out who projects farthest a tergo. Nothing can be more hateful to a negro than the opposite form."*(2)

* Idem illustrissimus viator dixit mihi praecinctorium vel tabulam foeminae, quod nobis teterrimum est, quondam permagno aestimari ab hominibus in hac gente. Nunc res mutata est, et censent talem conformationem minime optandam esse.

*(2) The Anthropological Review, November, 1864, p. 237. For additional references, see Waitz, Introduction to Anthropology, Eng. transl., 1863, vol. i., p. 105.

With respect to colour, the negroes rallied Mungo Park on the whiteness of his skin and the prominence of his nose, both of which they considered as "unsightly and unnatural conformations." He in return praised the glossy jet of their skins and the lovely depression of their noses; this they said was "honeymoon," nevertheless they gave him food. The African Moors, also, "knitted their brows and seemed to shudder" at the whiteness of his skin. On the eastern coast, the negro boys when they saw Burton, cried out, "Look at the white man; does he not look like a white ape?" On the western coast, as Mr. Winwood Reade informs me, the negroes admire a very black skin more than one of a lighter tint. But their horror of whiteness may be attributed, according to this same traveller, partly to the belief held by most negroes that demons and spirits are white, and partly to their thinking it a sign of ill-health.

The Banyai of the more southern part of the continent are negroes, but "a great many of them are of a light coffee-and-milk colour, and, indeed, this colour is considered handsome throughout the whole country"; so that here we have a different standard of taste. With the Kaffirs, who differ much from negroes, "the skin, except among the tribes near Delagoa Bay, is not usually black, the prevailing colour being a mixture of black and red, the most common shade being chocolate. Dark complexions, as being most common, are naturally held in the highest esteem. To be told that he is light-coloured, or like a white man, would be deemed a very poor compliment by a Kaffir. I have heard of one unfortunate man who was so very fair that no girl would marry him." One of the titles of the Zulu king is, "You who are black."* Mr. Galton, in speaking to me about the natives of S. Africa, remarked that their ideas of beauty seem very different from ours; for in one tribe two slim, slight, and pretty girls were not admired by the natives.

* Mungo Park's Travels in Africa 4to., 1816, pp. 53, 131. Burton's statement is quoted by Schaaffhausen, Archiv. fur Anthropologie, 1866, s. 163. On the Banyai, Livingstone, Travels, p. 64. On the Kaffirs, the Rev. J. Shooter, The Kafirs of Natal and the Zulu Country, 1857, p. 1.

Turning to other quarters of the world; in Java, a yellow, not a white girl, is considered, according to Madame Pfeiffer, a beauty. A man of Cochin China "spoke with contempt of the wife of the English Ambassador, that she had white teeth like a dog, and a rosy colour like that of potato-flowers." We have seen that the Chinese dislike our white skin, and that the N. Americans admire "a tawny hide." In S. America, the Yuracaras, who inhabit the wooded, damp slopes of the eastern Cordillera, are remarkably pale-coloured, as their name in their own language expresses; nevertheless they consider European women as very inferior to their own.*

* For the Javans and Cochin-Chinese, see Waitz, Introduct. to

Anthropology, Eng. transl., vol. i., p. 305. On the Yuracaras, A. d'Orbigny, as quoted in Prichard, *Physical History of Mankind*, vol. v., 3rd ed., p. 476.

In several of the tribes of North America the hair on the head grows to a wonderful length; and Catlin gives a curious proof how much this is esteemed, for the chief of the Crows was elected to this office from having the longest hair of any man in the tribe, namely ten feet and seven inches. The Aymaras and Quechuas of S. America, likewise have very long hair; and this, as Mr. D. Forbes informs me, is so much valued as a beauty, that cutting it off was the severest punishment which he could inflict on them. In both the northern and southern halves of the continent the natives sometimes increase the apparent length of their hair by weaving into it fibrous substances. Although the hair on the head is thus cherished, that on the face is considered by the North American Indians "as very vulgar," and every hair is carefully eradicated. This practice prevails throughout the American continent from Vancouver's Island in the north to Tierra del Fuego in the south. When York Minster, a Fuegian on board the *Beagle*, was taken back to his country, the natives told him he ought to pull out the few short hairs on his face. They also threatened a young missionary, who was left for a time with them, to strip him naked, and pluck the hair from his face and body, yet he was far from being a hairy man. This fashion is carried so far that the Indians of Paraguay eradicate their eyebrows and eyelashes, saying that they do not wish to be like horses.*

* *North American Indians*, by G. Catlin, 3rd ed., 1842, vol. i., p. 49; vol. ii, p. 227. On the natives of Vancouver's Island, see Sproat, *Scenes and Studies of Savage Life*, 1868, p. 25. On the Indians of Paraguay, Azara, *Voyages*, tom. ii., p. 105.

It is remarkable that throughout the world the races which are almost completely destitute of a beard dislike hairs on the face and body, and take pains to eradicate them. The Kalmucks are beardless, and they are well known, like the Americans, to pluck out all straggling hairs; and so it is with the Polynesians, some of the Malays, and the Siamese. Mr. Veitch states that the Japanese ladies "all objected to our whiskers, considering them very ugly, and told us to cut them off, and be like Japanese men." The New Zealanders have short, curled beards; yet they formerly plucked out the hairs on the face. They had a saying that "there is no woman for a hairy man"; but it would appear that the fashion has changed in New Zealand, perhaps owing to the presence of Europeans, and I am assured that beards are now admired by the Maories.*

* On the Siamese, Prichard, *ibid.*, vol. iv., p. 533. On the Japanese, Veitch in *Gardeners' Chronicle*, 1860, p. 1104. On the New Zealanders, Mantegazza, *Viaggi e Studi*, 1867, p. 526. For the other nations mentioned, see references in Lawrence, *Lectures on Physiology, &c.*, 1822, p. 272.

On the other hand, bearded races admire and greatly value their beards; among the Anglo-Saxons every part of the body had a recognised value; "the loss of the beard being estimated at twenty shillings, while the breaking of a thigh was fixed at only twelve."* In the East men swear solemnly by their beards. We have seen that Chinsurdi, the chief of the Makalolo in Africa, thought that beards were a great ornament. In the Pacific the Fijian's beard is "profuse and bushy, and is his greatest pride"; whilst the inhabitants of the adjacent archipelagoes of Tonga and Samoa are "beardless, and abhor a rough chin." In one island alone of the Ellice group "the men are heavily bearded, and not a little proud thereof."*(2)

* Lubbock, *Origin of Civilisation*, 1870, p. 321.

* (2) Dr. Barnard Davis quotes Mr. Prichard and others for these facts in regard to the Polynesians, in *Anthropolog. Review*, April, 1870, pp. 185, 191.

We thus see how widely the different races of man differ in their taste for the beautiful. In every nation sufficiently advanced to have made effigies of their gods or of their deified rulers, the sculptors no doubt have endeavoured to express their highest ideal of beauty and grandeur.* Under this point of view it is well to compare in our mind the Jupiter or Apollo of the Greeks with the Egyptian or Assyrian statues; and these with the hideous bas-reliefs on the ruined buildings of Central America.

* Ch. Comte has remarks to this effect in his *Traite de Legislation*, 3rd ed., 1837, p. 136.

I have met with very few statements opposed to this conclusion. Mr. Winwood Reade, however, who has had ample opportunities for observation, not only with the negroes of the west coast of Africa, but with those of the interior who have never associated with Europeans, is convinced that their ideas of beauty are on the whole the same as ours; and Dr. Rohlf's writes to me to the same effect with respect to Bornu and the countries inhabited by the Pullo tribes. Mr. Reade found that he agreed with the negroes in their estimation of the beauty of the native girls; and that their appreciation of the beauty of European women corresponded with ours. They admire long hair, and use artificial means to make it appear abundant; they admire also a beard, though themselves very scantily provided. Mr. Reade feels doubtful what kind of nose is most appreciated; a girl has been heard to say, "I do not want to marry him, he has got no nose"; and this shows that a very flat nose is not admired. We should, however, bear in mind that the depressed, broad noses and projecting jaws of the negroes of the west coast are exceptional types with the inhabitants of Africa. Notwithstanding the foregoing statements, Mr. Reade admits that negroes "do not like the colour of our skin; they look on blue eyes with aversion, and they think our noses too long and our lips too thin." He does not think it probable that negroes would ever prefer the most beautiful European woman, on the mere grounds of physical admiration, to a good-looking negress.*

* The *African Sketch Book*, vol. ii., 1873, pp. 253, 394, 521. The Fuegians, as I have been informed by a missionary who long resided with them, consider European women as extremely beautiful; but from what we have seen of the judgment of the other aborigines of America, I cannot but think that this must be a mistake, unless indeed the statement refers to the few Fuegians who have lived for some time with Europeans, and who must consider us as superior beings. I should add that a most experienced observer, Capt. Burton, believes that a woman whom we consider beautiful is admired throughout the world. *Anthropological Review*, March, 1864, p. 245.

The general truth of the principle, long ago insisted on by Humboldt,* that man admires and often tries to exaggerate whatever characters nature may have given him, is shown in many ways. The practice of beardless races extirpating every trace of a beard, and often all the hairs on the body affords one illustration. The skull has been greatly modified during ancient and modern times by many nations; and there can be little doubt that this has been practised, especially in N. and S. America, in order to exaggerate some natural and admired peculiarity. Many American Indians are known to admire a head so extremely flattened as to appear to us idiotic. The natives on the northwestern coast compress the head into a pointed cone; and it is their constant practice to gather the hair into a knot on the top of the head, for the sake, as Dr. Wilson remarks, "of increasing the apparent elevation of the favourite conoid form." The inhabitants of

Arakhan admire a broad, smooth forehead, and in order to produce it, they fasten a plate of lead on the heads of the new-born children. On the other hand, "a broad, well-rounded occiput is considered a great beauty" by the natives of the Fiji Islands.*⁽²⁾

* Personal Narrative, Eng. transl., vol. iv., p. 518, and elsewhere. Mantegazza, in his *Viaggi e Studi*, strongly insists on this same principle.

*⁽²⁾ On the skulls of the American tribes, see Nott and Gliddon, *Types of Mankind*, 1854, p. 440; Prichard, *Physical History of Mankind*, vol. i., 3rd ed., p. 321; on the natives of Arakhan, *ibid.*, vol. iv., p. 537. Wilson, *Physical Ethnology*, Smithsonian Institution, 1863, p. 288; on the Fijians, p. 290. Sir J. Lubbock (*Prehistoric Times*, 2nd ed., 1869, p. 506) gives an excellent resume on this subject.

As with the skull, so with the nose; the ancient Huns during the age of Attila were accustomed to flatten the noses of their infants with bandages, "for the sake of exaggerating a natural conformation." With the Tahitians, to be called long-nose is considered as an insult, and they compress the noses and foreheads of their children for the sake of beauty. The same holds with the Malays of Sumatra, the Hottentots, certain Negroes, and the natives of Brazil.* The Chinese have by nature unusually small feet;*⁽²⁾ and it is well known that the women of the upper classes distort their feet to make them still smaller. Lastly, Humboldt thinks that the American Indians prefer colouring their bodies with red paint in order to exaggerate their natural tint; and until recently European women added to their naturally bright colours by rouge and white cosmetics; but it may be doubted whether barbarous nations have generally had any such intention in painting themselves.

* On the Huns, Godron, *De l'Espece*, tom. ii., 1859, p. 300. On the Tahitians, Waitz, *Anthropology*, Eng. transl., vol. i., p. 305. Marsden, quoted by Prichard, *Phys. Hist. of Mankind*, 3rd edit., vol. v., p. 67. Lawrence, *Lectures on Physiology*, p. 337.

*⁽²⁾ This fact was ascertained in the *Reise der Novara: Anthropolog. Theil.*, Dr. Weisbach, 1867, s. 265.

In the fashions of our own dress we see exactly the same principle and the same desire to carry every point to an extreme; we exhibit, also, the same spirit of emulation. But the fashions of savages are far more permanent than ours; and whenever their bodies are artificially modified, this is necessarily the case. The Arab women of the Upper Nile occupy about three days in dressing their hair; they never imitate other tribes, "but simply vie with each other in the superlativeness of their own style." Dr. Wilson, in speaking of the compressed skulls of various American races, adds, "such usages are among the least eradicable, and long survive the shock of revolutions that change dynasties and efface more important national peculiarities."* The same principle comes into play in the art of breeding; and we can thus understand, as I have elsewhere explained,*⁽²⁾ the wonderful development of the many races of animals and plants, which have been kept merely for ornament. Fanciers always wish each character to be somewhat increased; they do not admire a medium standard; they certainly do not desire any great and abrupt change in the character of their breeds; they admire solely what they are accustomed to, but they ardently desire to see each characteristic feature a little more developed.

* Smithsonian Institution, 1863, p. 289. On the fashions of Arab women, Sir S. Baker, *The Nile Tributaries*, 1867, p. 121.

*⁽²⁾ *The Variation of Animals and Plants under Domestication*, vol. i., p. 214; vol. ii., p. 240.

The senses of man and of the lower animals seem to be so constituted that brilliant colours and certain forms, as well as harmonious and rhythmical sounds, give pleasure and are called beautiful; but why this should be so we know not. It is certainly not true that there is in the mind of man any universal standard of beauty with respect to the human body. It is, however, possible that certain tastes may in the course of time become inherited, though there is no evidence in favour of this belief: and if so, each race would possess its own innate ideal standard of beauty. It has been argued* that ugliness consists in an approach to the structure of the lower animals, and no doubt this is partly true with the more civilised nations, in which intellect is highly appreciated; but this explanation will hardly apply to all forms of ugliness. The men of each race prefer what they are accustomed to; they cannot endure any great change; but they like variety, and admire each characteristic carried to a moderate extreme.*(2) Men accustomed to a nearly oval face, to straight and regular features, and to bright colours, admire, as we Europeans know, these points when strongly developed. On the other hand, men accustomed to a broad face, with high cheek-bones, a depressed nose, and a black skin, admire these peculiarities when strongly marked. No doubt characters of all kinds may be too much developed for beauty. Hence a perfect beauty, which implies many characters modified in a particular manner, will be in every race a prodigy. As the great anatomist Bichat long ago said, if every one were cast in the same mould, there would be no such thing as beauty. If all our women were to become as beautiful as the Venus de' Medici, we should for a time be charmed; but we should soon wish for variety; and as soon as we had obtained variety, we should wish to see certain characters a little exaggerated beyond the then existing common standard.

* Schaaffhausen, Archiv. fur Anthropologie, 1866, s. 164.

*(2) Mr. Bain has collected (Mental and Moral Science, 1868, pp. 304-314) about a dozen more or less different theories of the idea of beauty; but none is quite the same as that here given.