

Johann Friedrich Blumenbach,  
*On the Natural Variety of Mankind*,  
in *The Anthropological Treatises of Johann Friedrich  
Blumenbach* (London, 1865)

The most influential theorist of human variety in the late eighteenth and early nineteenth century, Johann Friedrich (1752–1840) was a physiologist and anatomist who provided the most famous racial typology of his generation. Born at Gotha, Blumenbach studied medicine at Jena where he met and befriended Samuel Thomas Sömmering, who was later to become the most important anatomist in Germany. Blumenbach graduated as a doctor from Göttingen in 1775. In 1776 he was nominated extraordinary, and then in 1778 ordinary, Professor of Medicine. Blumenbach is often regarded as the founder of the science of physical anthropology and it was to this area of natural history that his interests gravitated.

His dissertation *De generis humani varietate naitiva* (On the Natural Variety of Mankind) was published in its first edition in 1775. This treatise attempted to undermine notions of gradation in humankind. Blumenbach stressed the unity of the human family and suggested that comparative anatomy and the comparative study of physiology might enable the scientist to draw the dividing line between specific and variational distinctions. He clearly separated man from the apes, pioneering the 'analogical method' of determining species relations by comparing the physical characteristics of organisms, such as the period of gestation, life span, susceptibility to disease and so on. For Blumenbach, physical variation resulted from environmental and social change, occurring through a process of what he unfortunately described, following Buffon, as 'degeneration'. Surveying the whole range of physical characteristics, but chiefly the skull, Blumenbach separated humanity into four physical or racial varieties: Caucasian, Mongolian, Ethiopian, and American. In the second edition to his work of 1781 he added the racial grouping of Malay thus producing the influential fivefold typology of race that has haunted anthropological and cultural studies until the present day. The third edition of *De generis humani varietate nativa*, much revised and expanded was published in 1795 and is the most complete statement of Blumenbach's anthropology. It was

translated into French by F. Chardel as *De l'unité du genre humain* (Paris, 1804). What gave Blumenbach's work its credibility was its author's skill in and knowledge of comparative anatomy. But it was also Blumenbach's notorious collection of physical data which made his findings appear authoritative. Blumenbach collected a large number of human skulls of different races and nations (he had eighty-two of these in 1795) and used these as the basis of his physiological research. He referred to his collection as his Golgotha and many visitors, including the young S. T. Coleridge who attended his lectures in Göttingen in 1798, saw it. Blumenbach published a descriptive account of over sixty of his crania in *Collectionis suae craniorum diversarum gentium illustratae decades* (1790-1828). Blumenbach argued that the original race of men was white and that all the other races had 'degenerated' from this norm according to climate and environment. Although he regarded the Caucasian race as the most beautiful variety of men, he stressed that degeneration did not involve moral or intellectual descent.

He also had a noted collection of literature by black authors and he was a firm opponent of slavery and the slave trade. His *Beyträge zur Naturgeschichte* or *Contributions to Natural History* (Göttingen, 1806) contains a sustained plea for the full humanity and equality of the negro and enumerates many instances of the scientific and literary excellence of the achievements of black people. Blumenbach's influence on racial thinking in the early nineteenth century was immense and his five fold racial typology remains current. His emphasis on the possibility of determining racial types from physical characteristics, however, was clearly dangerous and open to obvious abuse. After his death his collection of skulls, greatly augmented, was put to use as a nucleus for the development of the kind of Pan-German racist theory which reached its nadir with the Nazis.

Reprinted here are Sections Three and Four of the third edition of *De generis* from a translation by Thomas Bendyshe for the Anthropological Society of London. Section One of the treatise sets out the evidence from the 'analogical method' for considering man as a separate species and Section Two discusses the process of degeneration in the animal kingdom. Plate IV from the work is included which illustrates skulls of Blumenbach's five varieties of humanity.

## SECTION III.

## ON THE CAUSES AND WAYS BY WHICH MANKIND HAS DEGENERATED, AS A SPECIES.

41. *Order of proceeding.* Now let us come to the matter in hand, and let us apply what we have hitherto been demonstrating about the ways in and the causes by which animals in general degenerate, to the native variety of mankind, so as to enumerate one by one the modes of degenerating, and allot to each the particular cause to which it is to be referred. We must begin with the colour of the skin, which although it sometimes deceives, still is a much more constant character, and more generally transmitted than the others<sup>1</sup>, and which most clearly appears in hybrid progeny sprung from the union of varieties of different colour composed of the tint of either parent. Besides, it has a great connection with the colour of the hair and the iris, and a great relation to the temperament of men: and, moreover, it especially strikes everywhere the eyes even of the most ignorant.

42. *Seat of the colour of the skin.* The mucous, commonly called the cellular membrane, about whose most important function in the economy of the human body we have spoken above, affords as it were a foundation to the whole machine. It is interwoven with almost all parts alike, even to the marrow of the bones, and is collected on the outermost surface of the body

<sup>1</sup> Kant, in *Berliner Monatsschrift*, 1785, T. VI. p. 391, and in *Teutschen Merkur*, 1788, P. I. p. 48.

into a thick white universal integument, called the *corium*. By this the rest of the body is surrounded and included; and above all it is penetrated by a most enormous apparatus of cutaneous nerves, lymphatic veins, and finally with a most close and subtle net of sanguiferous vessels.

The nerves communicate sensation to the *corium*, so as to make it the organ of touch, and as it were the sentinel of the whole body. The lymphatic veins make this same *corium* the instrument of absorption and inhalation. But the sanguiferous vessels have most to do with the subject under discussion, as being the constituent parts of the common integuments of the body, and equally with the lungs and the alimentary canal make up the great purifier and chemical laboratory of the human machine; whose surfaces, as will soon be seen, have a good deal to do with giving its colour to the skin. The *corium* is lined with a very tender mucus, which from the erroneous description of its discoverer, is called the *reticulum Malpighii*: this affords a sort of glutinous bond, by which the most external stratum of the integuments, the epidermis, or cuticle, stretching over and protecting the surface of the body, and which in the born man is exposed immediately to the atmospheric air, adheres to the *corium*. The *reticulum*, just like the epidermis, is a most simple structure, entirely destitute of nerves and vessels, differing both of them as much as possible from the nature of the *corium*. They agree themselves in more than one way, so that it seems most probable that these similar parts are allied, or that the exterior cuticle draws its origin in some way from its substratum, the *reticulum*. Besides, each of these allied strata of integuments so make up the *seat of colour*, that in clear-complexioned men, where they are stained with no pigment, they permit the natural roseate whiteness of the *corium* to be seen through: and in brown or coloured men, although the principal cutaneous pigment may adhere to the Malpighian *reticulum*, although the epidermis may be paler, still it will manifestly partake of its tint. The darker the *reticulum* the thicker it is, and the more it approaches the appearance of a membrane peculiar to itself; the more transparent it is on the contrary

the more tender it becomes, and only appears to have the constitution of a diffused mucus.

43. *Racial varieties of colour.* Although the colour of the human skin seems to play in numberless ways between the snowy whiteness of the European girl and the deepest black of the Ethiopian woman of Senegambia<sup>1</sup>; and though not one of these phases is common either to all men of the same nation, or so peculiar to any nation, but what it sometimes occurs in others, though greatly different in other respects; still, in general, all the varieties of national colour seem to be most referable to the five following classes.

1. The white colour holds the first place, such as is that of most European peoples. The redness of the cheeks in this variety is almost peculiar to it: at all events it is but seldom to be seen in the rest.

2. The second is the *yellow, olive-tinge*, a sort of colour half-way between grains of wheat and cooked oranges, or the dry and exsiccated rind of lemons: very usual in the Mongolian nations.

3. The *copper colour* (Fr. *bronzé*) or dark orange, or a sort of iron, not unlike the bruised bark of cinnamon or tanner's bark: peculiar almost to the Americans.

4. *Tawny* (Fr. *basané*), midway between the colour of fresh mahogany and dried pinks or chesnuts: common to the Malay race and the men of the Southern Archipelago.

5. Lastly, the *tawny-black*, up to almost a pitchy blackness (*jet-black*), principally seen in some Ethiopian nations. Though this tawny blackness is by no means peculiar to the Ethiopians, but is to be found added to the principal colour of the skin in others of the most different and the most widely-separated

<sup>1</sup> The indefinite and arbitrary sense in which most authors use the names of colours has caused vast difficulty in all the study of natural history: and will certainly be particularly troublesome in this anthropological disquisition. That I may not be accused of the same fault, I must give notice that I am far from considering such words for example as the English *yellow* and *olive tinge*, &c. which I have subjoined to each of the five principal colours which I have distinguished, as genuine synonyms. All I wanted to do was to show that these words had been used by different authors, and those classical ones, in denoting the national colour of one and the same race.

varieties of mankind: as in the Brazilians, the Californians<sup>1</sup>, the Indians, and the islanders of the Southern Ocean, where, for instance, the New Caledonians in this respect make an insensible transition from the tawny colour of the Otaheitans, through the chesnut-coloured inhabitants of the island of Tongatabu, to the tawny-black of the New Hollanders.

44. *Causes of this variety.* The seat of the colour of the skin has now been placed beyond all doubt. The division of the varieties of colour, and their distribution, seem sufficiently plain and perspicuous. But to dig out the *causes* of this variety is the task and the trouble. Authors have laboured most in endeavouring to explain the colour of the Ethiopians, which above all other national colours from the most remote period has struck the eyes of Europeans, and excited their minds to inquire. Nor is it surprising that with that object all sorts of hypotheses should be elaborated, which, however, I pass by unnoticed, as being sufficiently known<sup>2</sup>, and already explained all together by others<sup>3</sup>, and shall go into the details of that opinion alone, which, unless I am much mistaken, seems to come nearest the truth. I think, myself, the proximate cause

<sup>1</sup> On the Brazilians comp. G. Forster on Wilson's *Nachrichten von den Pelew Inseln*, p. 36. On the Californians, Begert, *Nachrichten von Californien*, p. 89.

<sup>2</sup> Buffon attributes most to climate. *Hist. Naturelle*, T. III. p. 526. Zimmermann, *Geograph. Geschichte des Menschen*, T. I. p. 77. Abb. Nauton in *Journal de Physique*, T. XVIII. Sept. 1781. P. Barrere to bile. *Diss. sur la cause physique de la Couleur des Negres*, Perpig. 1741, 12mo. To the blood besides others especially Th. Towns in *Philos. Trans.* T. x. p. 398, who also has doubts about the power of the sun to dye the skin of the Ethiopians. To part of the globules of the blood adhering to the skin the author of the medical question of Paris, an opinion supported on more than one occasion, as by Des Moles in 1742, and by Mounier in 1775. Kant in Engel, *Philos. für die Welt*, P. II. p. 151, to the abundance of iron in the blood of the Ethiopians, precipitated by the transpiration of phosphoric acid on the *rete mucosum*. I say nothing of a sort of mixture of nervous juice and some secret liquid in the nervous and arterial paps of the integuments by which Le Cat, who was a great physiologist as far as dreaming went, imagined that he had explained the blackness of the Ethiopians, in his *Traité de la Couleur de la Peau Humaine*, Amst. 1765, 8vo., or the elongated fibres in the aborigines of Nubia, the dissolution of the red blood, the evaporation of the serum, and the fixed saline particles of the blood, remaining oily and fat in the skin, by all of which Attunonelli, *Elementi di Fisiologia Medica*, Neap. 1787, T. I. p. 140, tries to explain the same thing.

<sup>3</sup> Thus the opinions of the ancients have been collected by B. S. Albinus, *De sede et causa Coloris Athiopum*, Ludg. Batav. 1737, 4to. Those of the moderns by Haller, *Element. Physiolog.* T. v. p. 20. A heap of authors are cited by Krüniz, *Hamburgisch Magazin*, T. XIX. p. 379.

of the adust or tawny colour of the external integuments of the skin, is to be looked for in the abundance of the carbon in the human body, which, when it is excreted with the hydrogen through the corium, and precipitated by the contact of the atmospheric oxygen, becomes imbedded in the Malpighian mucus. Hence it is well known that the national colour of their skin is not congenital even to the Ethiopians themselves, but is acquired by the access of the external air after birth and after the intercourse with the mother, by which the fœtus was nourished, has been taken away.

Besides this, the action of the sanguineous vessels of the corium seems necessary as well for secreting as for storing up the carbon. For if this is disturbed or comes to a stop, an unnatural and diseased colour is everywhere brought upon the skin in dark men just as much as in Ethiopians. But on the other hand, although in a white skin that action of the corium may be stimulated, ephelides and spots of tawny colour occur, and sometimes it is found that it puts on an Ethiopic blackness.

Generally carbon seems to be in greater quantity in the atrabillious; for the connexion of the manufactory of the bile with the common integuments, and those which belong to them, as the hair, is plain: indeed both organs, that is, the liver and the skin, must be considered as by far the principal and mutually co-operating purifiers of the mass of the blood.

Then there is the vast influence of climate upon the action of the liver, which in tropical countries is wonderfully excited and increased by the solar heat. Hence the various kinds of bilious and endemic disorders in the tropics. Hence also the temperament of most inhabitants of tropical countries is choleric and prone to anger. Hence also, what was first observed by physicians<sup>1</sup>, the bilious constitution and habit of Europeans who dwell in India, and especially in the children which are born there. But there is no other climate, in the vehemence and duration of the heat, or in the peculiar chemical constitu-

<sup>1</sup> De Haen, *Prælectiones in Boerhavi Institut. Pathologicae*, T. II. p. 155.

ents that make up the atmosphere there, such as particular winds, and rains, which can be compared to that burning and scorching climate which is to be found on the wet and marshy regions both of eastern and western Africa under the torrid zone. Now the aboriginal Ethiopians have been for a long time and for many series of generations exposed to the action of that climate, since they must without doubt be ranked amongst the most ancient nations of the world<sup>1</sup>. So we must not be surprised if they propagate unadulterated, even under another climate to succeeding generations, the same disposition which has spread such deep and perennial roots in their ancestors from the most distant antiquity. But, on the other hand, from this tenacity and constancy of the constitution of the Ethiopians, this comes out all the clearer, that such a power can only be contracted after a long series of generations, and so it must be considered as a miracle, and against all natural law, if it be true, what we find frequently related that the present descendants of some Portuguese colonists who emigrated to Guinea in the 15th century, have in so short an interval of time, only through the influence of the climate<sup>2</sup>, been able to contract the Ethiopian habit of body.

45. *Final exposition of the causes of the colour of the skin.* What I have summarily and succinctly already laid down about the causes of the colour of the skin is strongly corroborated, on more accurate inquiry, by all sorts of arguments answering most accurately to each other, and taken from actual observation of human nature.

We have discovered from the antiphlogistic chemistry of the French<sup>3</sup> that carbon belongs to the radical elements of the

<sup>1</sup> Those who like may consult three very learned works: Jac. Bryant, *New System of Ancient Mythology*, Vol. 1.; Ja. Bruce, *Journey to the Discovery of the Sources of the Nile*, Vol. 1., and Sir W. Jones, *Diss. in Asiatic Researches*, Vols. 11. and 111.

<sup>2</sup> We all know that black men have been found at the Gambia descended from the original Portuguese. But it seems most probable that their blackness has been derived principally from the union of men with the indigenous Ethiopian women, for this reason, that European women when taken directly from their own country to Guinea can very seldom preserve life there; for the effect of the climate is such as to produce very copious menstruation, which almost always in a short space of time ends in fatal hæmorrhages of the uterus.

<sup>3</sup> See Girtanner, *Anfangsgründe der Antiphlogistischen Chemie*, p. 202.

animal body, and is also the cause of dark colour, whether it be yellow, tawny, or blackish. In order that the animal economy may not be disturbed and endangered by a redundancy of this substance various emunctories have been provided, in which the liver and the skin occupy by no means the lowest place. Pathology, here as elsewhere so often the instructor of physiology, shows together with the phenomena just mentioned, the co-operation of the functions of the bile with the common integuments. For although I do not wish to insist too much on the analogy of jaundice with national tints of the skin, still there are various peculiar phenomena which deserve attention, common to those suffering under the regius morbus, and the nations of colour (so to speak) to which I refer, the fact of the albuminous part of the eye being tinged with yellow, a thing common to tawny nations and specially to the Indians<sup>1</sup>, the Americans<sup>2</sup>, and the Ethiopians<sup>3</sup>. Besides it not unfrequently happens with jaundiced persons, according to the varieties of the disease, that the skin, even after the disorder has been removed, remains always tinged with a different shade, very like the skin of coloured nations<sup>4</sup>. Nor are examples wanting of a genuine sooty blackness being sometimes deposited in atrabilious disorders by a sort of true metamorphosis of the skin<sup>5</sup>. And from the affinity of the bile with fat<sup>6</sup> it is clear that this sort of cherry tint has been observed in tawny peoples<sup>7</sup>. Hence, unless I am mistaken, we must look for the reason why nations

<sup>1</sup> I myself have often observed this in those on this side the Ganges. On those beyond the Ganges see De la Loubere in *Descript. du Royaume de Siam*, T. 1. p. 81. On the Nicobars, Nic. Fontana in *Asiatic Researches*, Vol. 111. p. 151.

<sup>2</sup> On the Caribbees see Rochefort, *Histoire Naturelle des Antilles*, p. 383.

<sup>3</sup> Sömmerring, *Über die Körperliche verschiedenheit des Negers vom Europäer*, p. 11.

<sup>4</sup> See Strack, *Observationes de Febribus Intermittentibus*, l. 111. c. 2, *de ictero ex Febre Intermittente*. "I have seen," says he, p. 194, "from such a jaundice that an olive coloured skin, just like that of Asiatics, has remained in the children. Another person has become almost as black as an Indian from fever. The whole body of another has preserved a black complexion, as if he had been born from an Indian father and an European mother; but like such he had the soles of his feet and the palms of his hands white," &c.

<sup>5</sup> Lorry, *De Melancholia*, T. 1. p. 273.

<sup>6</sup> Fourcroy, *Philosophie Chimique*, p. 111.

<sup>7</sup> Observed in the Ethiopians by J. Fr. Meckel, *Histoire de l'Academie des Sciences de Berlin*, 1753, p. 92, and by Sömmerring, *l. c.* p. 43.

who feed copiously on animal oil not only smell of it, but also contract a dark colour of skin<sup>1</sup>; while the more elegant Otaheitanans on the contrary, who try to be of a pale colour, live every year for some months on the bread-fruit alone, to the use of which they attribute great virtue in whitening the skin<sup>2</sup>; although part of that effect must be attributed to the fact that during the same period they remain at home, covered with clothes, and never go out. How great an influence abstinence from the free and open air has in giving whiteness to the skin, our own experience teaches us every year, when in spring very elegant and delicate women show a most brilliant whiteness of skin, contracted by the indoor life of winter. Whilst those who are less careful in this way, after they have exposed themselves freely to the summer sun and air, lose that vernal beauty before the arrival of the next autumn, and become sensibly browner<sup>3</sup>.

If then under one and the same climate the mere difference of the annual seasons has such influence in changing the colour of the skin<sup>4</sup>, is there anything surprising in the fact that climates, in the sense defined above (s. 34), according to their diversity

<sup>1</sup> Cranz, *Historie von Grönland*, T. i. p. 178, attributes the tawny skin of the Greenlanders to their particularly oily diet. Sloane declares, *Voyage to Jamaica*, Vol. i. Introd. p. 18, and Vol. ii. p. 331, that the skin of Europeans in the East Indies becomes yellow from copious meals of dishes prepared from the calipash of turtles.

<sup>2</sup> See the account of the surgeon Anderson in Cook's *Voyage to the Northern Hemisphere*, Vol. ii. p. 147.

<sup>3</sup> From the cloud of witnesses who have observed the same well-known effect of the mode of life in other parts of the world, I will quote only one, Poirét, about the Moors in *Voyage en Barbarie*, p. 31. "The Moors are by no means naturally black, spite of the proverb, though many writers think so; they are born white and remain white all their lives, when their business does not expose them to the heat of the sun. In the towns the women are of such a brilliant whiteness that they eclipse most Europeans; but the Mauritanian mountaineers, burnt unceasingly by the sun and always half-naked, become, even from infancy, of a brown colour, which comes very near to that of soot."

<sup>4</sup> A few examples out of many will suffice. We know the Biscayan women are of a brilliant white, those of Granada on the contrary brownish, so that in this southern province the pictures of the Virgin Mary are painted of the same national colour as is observed by Ol. Toree, *Reise nach Surate*, p. 9. We are told expressly about the Malabars, that their black colour approaches nearer to tawny and yellow the further they dwell towards the north, in *Tranquebarischen Missions-Berichten*, Contin. xxii. p. 896. The Ethiopians on the north shore of the Senegal are tawny, on the south, black. See with others Barbot in Churchill's *Collection of Voyages*, T. v. p. 34.

should have the greatest and most permanent influence over national colour: everywhere within the limits of a few degrees of geographical latitude, and still more when a multifarious concourse of the causes<sup>1</sup> above-mentioned has occurred even under the same latitude, a manifest difference in the colour of the inhabitants may be observed<sup>2</sup>.

46. *Creoles*. The same power of affecting colour, about which we are speaking, is shown very clearly in *Creoles*, under which name (so frequently improperly confounded even by good authors<sup>3</sup> with the word *Mulattos*) in a narrower sense<sup>4</sup> we understand those men born indeed either in the East or the West<sup>5</sup> Indies, but of *European parents*. In these the face and colour are so constant and impossible to be mistaken, breathing as it were of the south, and particularly besides the hair and the almost burning eyes, that the most brilliant in other respects and most beautiful women may easily be distinguished by those peculiar characters from others, even their relatives, if these are born in Europe<sup>6</sup>. Nor does this appear only in Europeans, but also in

<sup>1</sup> Marsden, *History of Sumatra*, p. 43, notices the effect of sea-air upon the skin, and so Wallis in Hawkesworth's *Collection of Voyages*, Vol. i. p. 260. Hartsink, that of woods, *Beschryving van Guinea*, T. i. p. 9. Bouguer of mountains, *Figure de la Terre*, Intr. p. 101, de Pinto of the altitude of the country, in Robertson's *Hist. of America*, Vol. ii. p. 403.

<sup>2</sup> On this point Zimmermann has some deep and learned remarks when discussing the problem why we do not find Ethiopians in America also in equatorial regions. *Geograph. geschichte des Menschen*, T. i. p. 86.

<sup>3</sup> As Thomas Hyde in the notes to Abr. Peritso, *Itinera mundi*, in Ugolini, *Thesaurus Antiquitatum Sacrarum*, T. vii. p. 141.

<sup>4</sup> This word originated with the Ethiopian slaves transported in the sixteenth century to the mines in America, who first of all called their own children who were born there, *Criollos* and *Criollas*: this name was afterwards borrowed from the Spaniards, and imposed upon their children born in the new world. See Garcilasso, *Del Origen de los Incas*, p. m. 255. Now this word has been extended in the East Indies to the domestic animals which are not indigenous in America, but have been transplanted there by Europeans. Oldendorp, *Geschichte der Mission auf den Caraib. Inseln*, T. i. p. 232.

<sup>5</sup> On these *Creoles* of the Antilles, see the curious and elaborate works of Girtanner, *über die Französische Revolution*, T. i. p. 60—72, 2nd ed.

<sup>6</sup> Hawkesworth's *Collection of Voyages*, T. iii. p. m. 374. "If two natives of England marry in their own country and afterwards remove to our settlements in the West Indies, the children that are conceived and born there will have the complexion and cast of countenance that distinguish the *Creole*; if they return, the children conceived and born afterwards will have no such characteristics," &c.

Asiatics who are born in the East Indies from Persian or Mongolian parents who have emigrated there<sup>1</sup>.

47. *Mulattos, &c.* Remarkable too is the constancy with which offspring born from parents of different colours present a middle tint made up as it were from that of either parent. For although we read everywhere of single specimens of hybrid infants born from the union (s. 37) of different *varieties* of this sort, who have been of the colour of one or other parent alone<sup>2</sup>; still, generally speaking, the course of this mixture is so consistently hereditary, that we may suspect the accuracy of James Bruce about the Ethiopians of some countries in the kingdom of Tigre, who keep their black colour unadulterated, although some of the parents were of one colour and some of another; or about the Arabians, who beget white children with the female Ethiopians like the father alone<sup>3</sup>. But as the hybrids of this sort of origin from parents of various colours are distinguished by particular names, it will be worth while to exhibit them here arranged in synoptical order.

A. *The first generation.* The offspring of Europeans and Ethiopians are called *Mulattos*<sup>4</sup>. Of Europeans and Indians, *Mestizos*<sup>5</sup>. Of Europeans and Americans also *Mestizos*<sup>6</sup> or *Mestinde*<sup>7</sup>, or *Metifs*<sup>8</sup>, or *Mamlucks*<sup>9</sup>. Of Ethiopians and Americans *Zambos*<sup>10</sup>; by those called also *Mulattos*<sup>11</sup>, *Lobos*<sup>12</sup>, *Curibocas* and *Kabuglos*<sup>13</sup>. All these present an appearance and colour compounded of either parent, and that more or less

<sup>1</sup> See Hodges's *Travels in India*, p. 3.

<sup>2</sup> Comp. Jac. Parsons in *Philos. Trans.*, Vol. LV. p. 47.

<sup>3</sup> *Journey to the Sources of the Nile*, Vol. III. p. 106, and Vol. IV. p. 470. See the remarks of Tychemen at T. v. p. 357.

<sup>4</sup> See a law-suit which turned upon the habit and characters of mulattos in Klein, *Annalen der Gesetzgebung in den Preussischen Staaten*, T. VII. p. 116.

<sup>5</sup> See the figure of the Cingalese Mestizo in de Bruin, *Reizen over Moskovic*, p. m. 358, and of the Ternatense though less remarkable in Valentyn, *Oud en Nieuw Oost-Indien*, T. I. P. 2, p. 18.

<sup>6</sup> Garcilasso, "Por dezir que somos mezclados de ambas Naciones."

<sup>7</sup> Twiss' *Travels through Portugal and Spain*, p. 332, from pictures seen by him at Malaga.

<sup>8</sup> Labat, *Voyage aux isles de l'Amérique*, T. II. p. 132.

<sup>9</sup> De Hauterive, *Hist. de l'Acad. des Sc. de Paris*, 1724, p. 18.

<sup>10</sup> Gily, *Storia Americana*, T. IV. p. 320.

<sup>11</sup> Garcilasso, *l. c.*

<sup>12</sup> Twiss, *l. c.*

<sup>13</sup> Maregrav, *Tractatus Brasiliae*, p. 12.

brownish or muddy, with scarcely any redness visible in the cheeks. The hair of Mulattos is generally curly, that of the rest straight, of almost all black; the iris of the eye is brown.

B. *The second generation.* Mulattos forming unions with each other produce *Casquas*<sup>1</sup>; Europeans and Mulattos *Tercerons*<sup>2</sup>, which others call *Quarterons*<sup>3</sup>, others *Moriscos*<sup>4</sup> and *Mestizos*<sup>5</sup>. The countenance and hair of all is that of Europeans, the skin very lightly stained with a brownish tint, and the cheeks ruddy. The lips of the female mouth and pudenda violet coloured; the scrotum of the male blackish. The Ethiopians with the Mulattos produce *Griffs*<sup>6</sup>, called by others *Zambo Mulattos*<sup>7</sup>, and by others *Cabros*<sup>8</sup>. The Europeans with the Indian Mestizos, *Castissi*<sup>9</sup>. Those born of Europeans and American Mestizos are called *Quarterons*<sup>10</sup> or *Quatralvi*<sup>11</sup>, and by the Spaniards also *Castissi*<sup>12</sup>. Those born of the Americans themselves and their Mestizos are called *Tresalvi*<sup>13</sup>. Those of the Americans and the Mulattos are also called *Mestizos*<sup>14</sup>. Those of Europeans and Zambos or Lobos of the first generation are called indifferently *Mulattos*<sup>15</sup>. Those of the Americans and these same Zambos or Lobos *Zqmbaigi*<sup>16</sup>. The progeny of the Zambos or Lobos themselves are called contemptuously by the Spaniards *Cholos*<sup>17</sup>.

C. *The third generation.* Some call those who are born of Europeans and Tercerons *Quaterons*<sup>18</sup>, others *Ochavons*<sup>19</sup>, or *Octavons*, and the Spaniards *Alvinos*<sup>20</sup>. In these it is asserted

<sup>1</sup> De Hauterive, *l. c.* <sup>2</sup> Long, *History of Jamaica*, T. II. p. 260.

<sup>3</sup> Aublet, *Histoire des Plantes de la Guiane*, T. II. App. p. 122. <sup>4</sup> Twiss.

<sup>5</sup> Moreton's *Manners and Customs in the West India Islands*, p. 123.

<sup>6</sup> De Hauterive, *l. c.* <sup>7</sup> *Hist. of Jamaica*, *l. c.*

<sup>8</sup> Bomare, *Dictionnaire d'Histoire Naturelle*, ed. 4, T. IX. Art. Nègre.

<sup>9</sup> *Tranquebarische Missions-Berichte*, Contin. XXXIII. p. 919.

<sup>10</sup> Gumilla, *Orinoco Illustrado*, T. I. p. 83.

<sup>11</sup> Garcilasso, *l. c.*, "to show that they are one-fourth Indian, and three-fourths Spanish." <sup>12</sup> Twiss.

<sup>13</sup> Garcilasso, "to show that they are three parts Indian and one part Spanish."

<sup>14</sup> *Hist. of Jamaica*.

<sup>15</sup> Fermin, *Sur l'Econ. Animale*, T. I. p. 179.

<sup>16</sup> Twiss.

<sup>17</sup> Garcilasso, "Cholo is a word of the islands of Barlovento, meaning the same as Dog; and the Spaniards use it by way of contempt or reproach."

<sup>18</sup> *History of Jamaica*. The offspring of Quaterons of this kind from Tercerons of the second generation are called *Tente-enel-cyre*.

<sup>19</sup> Gumilla, *l. c.* p. 86.

<sup>20</sup> Twiss.

by the most acute observers that no trace of their Ethiopian origin can be found<sup>1</sup>. Those of Mulattos and Tercerons *Saltatras*<sup>2</sup>. Of Europeans and Castissi, *Postissi*<sup>3</sup>. Of Europeans and American Quarterons of the second generation *Octavons*<sup>4</sup>. Of Quarterons and American Mestizos of the first generation, *Coyotas*<sup>5</sup>. Of Griffs and Zambo Mulattos with Zambos of the first generation *Giveros*<sup>6</sup>. Of Zambaigis and Mulattos *Cambujos*<sup>7</sup>. There are those who extend even into the fourth generation this kind of pedigree, and say that those born from Europeans from Quarterons of the third generation are called *Quinterons*<sup>8</sup>, in Spanish *Puchuelas*<sup>9</sup>, but this name is also applied to those who are born of Europeans and American *Octavons*<sup>10</sup>. But that the slightest permanent vestige of their mixed origin<sup>11</sup> is to be found in productions like these, after what we have been told by most credible eye-witnesses about the men of the third generation, that as to colour and constitution they are exactly like the aboriginal Europeans, is a thing that seems almost incredible.

48. *Brown skin variegated with white spots.* What I said above (s. 44) about the action of the sanguiferous vessels of the corium in excreting the carbon, which is afterwards precipitated by the addition of oxygen, is singularly confirmed by the instances of dark-coloured men, especially Ethiopians, whose skin, and that too not always from their first tender infancy<sup>12</sup>, is distinguished by spots of a snowy whiteness (Fr. *négres-pies*; Eng. *piebald negroes*).

I saw an Ethiopian of this kind at London, by name John Richardson, a servant of T. Clarke, who exhibited there (in Exeter Change), live exotic animals as shows and also for sale.

<sup>1</sup> Aublet. <sup>2</sup> *Hist. of Jamaica.* <sup>3</sup> *Tranquebarische Missions-Berichte, l. c.*

<sup>4</sup> Gumilla, *l. c.* p. 13. <sup>5</sup> Twiss. <sup>6</sup> *History of Jamaica.*

<sup>7</sup> Twiss. <sup>8</sup> *Hist. of Jamaica.*

<sup>9</sup> Gumilla, p. 86. <sup>10</sup> *Id.* p. 83.

<sup>11</sup> Thus those born from the Coyotes of the third generation and the Americans are called *Harnizos*; from the Cambujos and Mulattos, *Albarassados*; finally, Twiss, whom I have so often quoted before, calls those born from the last and Mulattos, *Barzinos*.

<sup>12</sup> W. Byrd, in *Philos. Trans* Vol. XIX. p. 781, mentions the instance of an Ethiopian boy in whom the spots did not appear till his fourth year, and in process of time began to increase in size.

The young man was perfectly black except in the umbilical and epigastric region of the abdomen, and in the middle part of either leg, that is the knees, with the adjoining regions of the thigh and the tibia, which were remarkable for a most brilliant and snowy whiteness, and were themselves again distinguished by black scattered spots, like those of a panther. His hair was also parti-coloured. For the middle part of his sinciput descending in an acute angle from the vertex towards the forehead was white, not however like the regions of the skin we have been speaking of, but a little snowy with a tinge of yellow. The rest of the hair was, as is usually the case with Ethiopians, curly; and this curliness still continues unaltered up to this time, in a specimen of each kind of hair which I obtained from the man himself more than two years ago. I had also a picture taken of the man, which on comparison with three others equally of Ethiopians, which I have by me, a boy and two girls, shows that in all, the regions of the abdomen and legs were more or less white, but that the hands and feet, that is, those parts which with the groin are the first to grow black in newborn Ethiopians, were perfectly tawny, and that in all the disposition of the white regions was thoroughly symmetrical. The gums, to go on to that also, in the man I saw, the tongue and all the jaws, were of an equable and beautiful red.

Both the parents of the man I am speaking of, as of all the other spotted Ethiopians<sup>1</sup> of whom I have found descriptions, were perfectly black, so that the conjecture of Buffon seems badly founded when he attributes such offspring to the union of Ethiopians and Leucaethiopian women, when suffering under a diseased affection of the skin and the eyes, about which I shall take an opportunity of speaking more particularly below.

Care must always be taken that the spots we are speaking about, and which can only be distinguished by a snowy white-

<sup>1</sup> See a print of a girl of this kind in Buffon, *Suppl. T. iv. Tab. 2, p. 565.* This, unless I am mistaken, is the same which has been described at length by Gumilla, *Orinoco Illustrado*, T. 1. p. 109. Other instances of this kind of Ethiopians are found in La Mothe, *Bibliothèque Impartiale*, Apr. 1752. See D. Morgan in *Transactions of the Philosophical Society at Philadelphia*, Vol. II. p. 392.



ness from the rest of the skin, the epidermis being in other respects unaffected, be not improperly confounded with those by which the whole integument is covered, which are to be recognized not so much by a different colour as by a degradation of the texture of the corium itself, which becomes rough, and as it were scaly or scurvy. Writers have observed this kind of cutaneous disorder particularly amongst the Malabars<sup>1</sup>, and the Tschulymik Tartars<sup>2</sup>. But these snowy, equable and smooth spots which only occur in a disordered action of the smallest vessels of the corium, are by no means confined to the Ethiopians, but sometimes occur amongst our own people. I have myself had the opportunity of observing two instances of this kind in German men, one a young man, the other more than sixty years old. The skin of each was brownish, studded here and there with very white spots of different sizes. In neither were these congenital, but had appeared suddenly and spontaneously in one during infancy, in the other in manhood.

49. *Similar remarkable mutations of the colour of the skin.* As these instances I have just been mentioning seem to demonstrate the power of the smaller vessels of the corium in modifying the colour of the skin; so there are other phenomena which often occur, and point in this direction, by which, unless I am much mistaken, those conjectures I made above (s. 44, 45) about the abundance of carbon, and the impressions of the Malpighian mucus being as it were the proximate cause of that colour, are well illustrated.

Above all others I shall consider in this place the singular change of colour so often observed in European women<sup>3</sup>, in some

<sup>1</sup> *Tranquebarische Missions-Berichte*, Cont. XXI. p. 741, compare the disorder to leprosy.

<sup>2</sup> See Strahlenberg, *Nord-östlich Europa und Asien*, p. 166, who suspects them to be the same Tartar horde which went under the name of *Piegaja* or *Pestaja orda*. J. G. Gmelin attributes it to disease, *Reise durch Sibirien*, pref. T. II. and J. Bell to some scorbutic affection, *Travels from St Petersburg to diverse parts of Asia*, Vol. I. p. 218.

<sup>3</sup> "In many women the under part of the body (the abdomen) and the rings about the breasts (that is the teats) when they are ill, become quite black." Camper, *Klein Schrift*, T. I. P. I. p. 47. "In our own time a similar metamor-

of whom, and those in other respects particularly white, at the time of pregnancy a larger or smaller number of the parts of the body are darkened with a coaly blackness, which however gradually disappears again after child-birth, when the original clearness is restored to the body. The solution of this puzzling problem is to be found in the application of modern chemistry to the physiology of pregnancy. When the woman is not pregnant the moderate portion of carbon of her own body is easily excreted by superfluous cutaneous perspiration; but in a pregnant woman, besides her own share, another quantity accrues from the foetus, which immersed in ammonial liquid does not as yet breathe. Thus the blood of the mother becomes too much laden with the carbon arising from two human bodies joined as it were in one, so that all of it cannot as usual be excreted with the perspiration of the mother: so part of it is precipitated in the Malpighian mucus, and there remains, tinging the skin, until the child being delivered, the original equilibrium between the carbon of her own body and the perspiring vessels of the skin is restored; and the epidermis, which with the mucus lying under it is constantly destroyed by degrees and again renewed at last, recovers its natural whiteness.

In different circumstances the same reason seems to hold good in so many instances of Europeans, in whom the different parts of the body are unnaturally affected by a smoky blackness; since here also it may be referred to a congestion of carbon. Thus, for instance, a similar blackness is observable in women who never menstruate<sup>1</sup>. So also in other atrabilious

phosis has been renewed annually in the person of a lady of distinction, of a good complexion, and a very white skin. As soon as she was pregnant, she began to get brown, and towards the end of her time she became a true negress. After her deliveries the black colour disappeared little by little, her original whiteness returned, and her progeny had no trace of blackness." Bomare, *l. c.* Art. *Nègre*. Le Cat, *l. c.* in many places; for ex. p. 141. "A peasant of the environs of Paris, a nurse by profession, had the belly regularly quite black at every pregnancy, and that colour disappeared after delivery." "Another always had the left leg black on those occasions," &c. So also Lorry, *De Melancholia*, T. I. p. 298, &c.

<sup>1</sup> Comp. Jaa. Yonge in *Philosoph. Trans.* Vol. XXVI. p. 425.

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men<sup>1</sup>, especially of the lowest sort, and those who suffer from cachexia caused by want and dirt. This is often the case too in scurvy<sup>2</sup>, &c. On the other hand we know by experience that the blackness of the Ethiopians is not so constant but what it sometimes is rendered paler, or even changed quite into a white colour. It has been recorded that Ethiopians, when they have changed their climate in early infancy, and from that time forward have inhabited a temperate zone, have gone on getting paler by degrees<sup>3</sup>. The same thing happens also somewhat quicker to the same negroes when they suffer under severe disorders<sup>4</sup>. Many instances also are to be found where, apart from any particular state of health, the natural blackness of the Ethiopian skin has sensibly and spontaneously been changed into a whiteness, such as that of Europeans<sup>5</sup>.

50. *Some other national properties of skin.* Besides colour, other singular qualities are often attributed to the skin of some nations, about which I must say a few words at all events. Amongst these there is that smoothness and softness of skin which has been compared to silk, and has been noticed

<sup>1</sup> I have in my anatomical collection a specimen of the integuments of the abdomen of a beggar who died here some years ago, which does not yield at all in blackness to the skin of the Ethiop. Others too have shown many instances of that kind in Europeans. See for ex. Haller, *Element. Physiol.* T. v. p. 18. Ludwig, *Epistole ad Hallerum scripte*, T. I. p. 393. De Riet, *De organo tactus*, p. 13. Albinus, *De sede et causa coloris Ethiopum*, p. 9. Klinkosch, *De cuticula*, p. 46. Sömmerring, *Über die körperl. verschiedenheit des Negers vom Europäer*, p. 48. Comp. Loschge in *Naturforscher*, P. XXIII. p. 214. *ib.* P. XVI. p. 170, for the description of some brown (*Dunkelbraun*) spots of different size, some of the diameter of a span, observed in a man then sixty years old, in whom they appeared when young during a quartan fever.

<sup>2</sup> Comp. besides others, Jo. Narborough's *Voyage to the Straits of Magellan*, p. m. 64. "Their legs and thighs are turned as black as a hat," &c. So also Phillip's *Voyage to Botany Bay*, p. 229.

<sup>3</sup> "There is a cobbler of this nation still living at Venice, whose blackness, after a great many years, (for he came to this country a boy) has so sensibly diminished, that he seems like one suffering from a slight jaundice." Caldani, *Institut. Physiol.* p. 151, ed. 1786. Comp. also Pechlin, *De habitu et colore Ethiopum*, p. 128, and Oldendorp, T. I. p. 406.

<sup>4</sup> "I have seen them of so light a colour that it was difficult to distinguish them from a white man of a bad complexion." Labat, *Relation d'Afrique occidentale*, T. II. p. 260. And Klinkosch, *l. c.* p. 48.

<sup>5</sup> Comp. Jas. Bate in *Philosoph. Trans.* Vol. LI. P. I. p. 175.

by writers in many nations, as the Caribs<sup>1</sup>, the Ethiopian<sup>2</sup>, the Otaheitans<sup>3</sup> and even the Turks<sup>4</sup>. It is clear that in all these it depends either upon a more tender epidermis, or a thicker stratum of the Malpighian mucus. The cause of the coldness to the touch which has been observed in the skin of various nations of Africa<sup>5</sup> and the East Indies<sup>6</sup> seems different, and must be referred rather to the chemical affinities of the body and the atmospheric elements. Here also is to be considered that insensible perspiration of Sanctorius, which is accompanied in some nations with a peculiar smell, as in the Caribs<sup>7</sup>, Ethiopians<sup>8</sup>, and others; in the same way that in some varieties of domestic animals, as among dogs, the Egyptian, among horses, those of a reddish-white are well known to have a specific and peculiar perspiration<sup>9</sup>.

51. *Consensus of the hair and skin.* As the hair, especially that of the head, is generated and nourished by the common integuments, so it has invariably a great and multifarious agreement with them. Hence, those variegated Ethiopians we spoke of have also hair of different colour. Men whose white skin is marked with ephelitic spots have red hair<sup>10</sup>. Besides,

<sup>1</sup> "Their flesh is very dark and soft; when you touch their skin, it feels like satin." Biet, *Voyage de la France Equinoxiale*, p. 352.

<sup>2</sup> Pechlin, *l. c.* p. 54, and Sömmerring, *l. c.* p. 45.

<sup>3</sup> "Their skin is most delicately smooth and soft." Hawkes. *Coll.* T. II. p. m. 187.

<sup>4</sup> "The wife of every labourer or rustic in Asia (Turkey) has a skin so soft that you seem to touch a fine velvet." Belon, *Obs.* p. m. 198.

<sup>5</sup> Bruce's *Voyage to the Sources of the Nile*, T. II. p. 552, T. IV. p. 471 and 489.

<sup>6</sup> On the Indians see Kant in Engel, *Philosophie für die Welt*, P. II. p. 154. On the inhabitants of Sumatra, Marsden, p. 41.

<sup>7</sup> "They all have a strong and disagreeable smell. I know nothing which can give an idea of it. When anything smells like it, they say in the Antilles, 'a smell of Carib,' which shows the difficulty of expressing it." Thibault de Charwalon, *Voyage à la Martinique*, p. 44.

<sup>8</sup> Comp. Schotte *On the synochus atrabiliosa*, p. 104. *Hist. of Jamaica*, II. pp. 352, 425.

<sup>9</sup> So Pausanias in his *Phocica* tells us that the Ozolians, an indigenous people, of Locris, smelt disgustingly on account of something in the air. Comp. Lavater, *Physiognom. Fragmente*, T. IV. p. 263. And J. F. Ackerman, *De discrimine sexuum præter genitalia*, p. 10.

<sup>10</sup> Among ourselves the thing is very common. It has been observed also among the most distant nations; as in the island Otaba of the Pacific ocean. See J. R. Forster, *Bemerkungen auf seiner reise um die welt*, p. 205. Many inhabitants of

there is a remarkable correspondence of the hair with the whole constitution and temperament of the body. This, too, we learn from pathological phenomena, such for example as that those who have yellow hair (*blondins*), in consequence of the tenderer and more impressible cellular texture, break out more easily in rashes and similar eruptions; whilst those who have black hair are almost always of a costive and atrabilious temperament, so much so that it has long since been observed that far the greater number of men in mad hospitals and jails have black hair.

52. *Principal national varieties of hair.* In general, the national diversity of hair seems capable of being reduced to four principal varieties:

1. The first of a brownish or nutty colour (*cendré*), shading off on the one side into yellow, on the other into black: soft, long, and undulating. Common in the nations of temperate Europe; formerly particularly famous among the inhabitants of ancient Germany<sup>1</sup>.

2. The second, black, stiff, straight, and scanty; such as is common to the Mongolian and American nations.

3. The third, black, soft, in locks, thick and exuberant; such as the inhabitants of most of the islands of the Pacific Ocean exhibit.

4. The fourth, black and curly, which is generally compared to the wool of sheep; common to the Ethiopians.

Thus, a general division of this kind may be made, which is not without its use. That it is no more a purely natural division than other divisions of the national varieties of human races, is not necessary to dwell upon here. This I will show, though it is quite unnecessary, by one or two arguments, namely, that curliness is not peculiar to the Ethiopians, nor blackness to the three varieties I put in the last place. Some

Timur are of a copper colour with red hair; see Van Hogendorp in *Verhandelingen van het Bataviaasch Genootschap*, T. I. p. m. 319. Marcgrav saw an African woman with an undoubted red skin and red hair, *Tractatus Brasiliæ*, p. 12.

<sup>1</sup> Conring, *De habitus corporum Germanicorum antiqui ac novi causis*, p. 85.

races of Ethiopians are found with long hair<sup>1</sup>; other copper-coloured nations again have curly hair<sup>2</sup>, like that of the Ethiopians. There are others, the New Hollanders, whose hair, as I see from the specimens I have in hand, holds so perfectly the middle place between the curliness of the Ethiopians and the locks of the inhabitants of the islands in the Pacific Ocean, that a wonderful difference of opinion is to be found in the accounts of expeditions from the first Dutch ones of the last century to the very latest of the English, as to which variety of hair it should be considered to belong. As to the various colour of hairs, occurring amongst those nations also, who generally have black hair, it is sufficient to cite good witnesses, who say that red hair is frequently found in the three other varieties I reckoned besides the first.

53. *The iris of the eye conforms to the colour of the hair.* We have seen that the hair coincides with the common integuments of the body. Aristotle<sup>3</sup> had, however, long ago taught that the colour of the eyes followed that of the skin. Those whose colour was white had grey eyes; black, black eyes. Thus very often amongst ourselves new-born infants have grey eyes and light hair, which afterwards in those who become dark (*brunet*), is slowly and as it were simultaneously darkened also. In old men as the hair grows white the pigment of the internal eye loses much of its usual dark colour. In the Leucæthiopians, about whom I shall speak more particularly below, as the hair passes from a yellowish tinge to white, so the pigment of the eye is clearly nothing, and hence a pale rosy kind of iris.

It is remarkable that in no case at all is there any variation in the eyes of animals, except in those who vary in the colour of their skin and hair, as we know to be the case not only in men and horses, which was the opinion of the ancients, but also

<sup>1</sup> Comp. Bruce on the Gallas, *Journey, &c.* Vol. II. p. 214. As to the inhabitants of the kingdom of Bornou, *Proceedings of the Association*, p. m. 201.

<sup>2</sup> The inhabitants of the Duke of York's Island not far from the New Ireland of the Southern Ocean. See J. Hunter's *Historical Journal of the Transactions at Port Jackson, &c.* p. 233: "they are of a light copper colour, the hair is woolly."

<sup>3</sup> *Problemat.* s. 10. p. 416, ed. Casaub.

in other principally domestic animals. Very often also the iris is variegated with more than one colour in those animals whose skin is variegated. This was first observed in parti-coloured dogs<sup>1</sup>. I have noticed something like it in sheep and horses, but in no animal so plainly as in rabbits. Grey<sup>2</sup> rabbits who have kept their natural wild colour have the iris quite black, whereas the parti-coloured ones, whose skin is spotted with black and white, have the iris manifestly spotted in the same way. Those which are quite white, and like Leucæthiopians, have, as is well known, the iris of a pale red.

54. *Principal colours of eyes.* Aristotle, whom I just quoted, divided well the primary colours of the iris of the human eye into three; first, blue; second, dark orange, called goats' eyes (*yeux de chèvres*<sup>3</sup>); third, dark brown. All these three as they occur everywhere in individuals of one and the same nation, so also are they to be noticed as more constant and as it were racial in different families of the same continent within the limits of a few degrees of geographical latitude. Hence Linnæus<sup>4</sup> attributes those among the Swedish population to the Gothic race, who have white hair, with the iris of the eye of a dark-blue colour; to the Finnic, those with yellow hair and dark iris; to the Lapp, finally, those with black hair and blackish iris. Blue eyes equally with yellow hair were formerly considered as natural characteristics of the ancient Germans. But they are found everywhere amongst the most widely separated nations<sup>4</sup>. The very black irides of the Ethiopians are such that, especially in living subjects, they cannot be distinguished, excepting when very close, from the pupil itself<sup>5</sup>.

55. *National face.* I now turn naturally enough from the

<sup>1</sup> Comp. Molinelli in *Commentar. instituti Bonon.* T. III. p. 281.

<sup>2</sup> There is a middle colour between grey and orange of a strange greenish tint, and as it were grass green, which is to be seen in men who have fiery hair, and skin much spotted with freckles. Comp. that singular book Portius, *Sin. De coloribus oculorum*, Florentii, 1550, 4to.

<sup>3</sup> *Fauna Suecica*, p. 1.

<sup>4</sup> I have collected the instances in my notes to J. Bruce, *Reise zu den Quellen des Nils.* T. v. p. 239.

<sup>5</sup> Thus must be understood the words of J. G. Walter, *De venis oculi*, p. 23. "The Ethiopian has no iris," &c.

eyes to the rest of the face, the diversities of which are all over the world so great and so remarkable in individuals that it is little short of a miracle to find even two who cannot be distinguished from each other, and are, as they say, cast in the same mould. Besides it is certain that this difference of faces may be observed not only in Europeans but also among barbarous nations<sup>1</sup>. Yet, however true all this may be, it is not the less undoubtedly a fact that every different variety of mankind (and everywhere, even in the inhabitants of single provinces<sup>2</sup>) all over the world has a racial face peculiar to each of them by which it may be easily distinguished from the remaining varieties.

56. *Racial varieties of the face.* I have made an attempt, after assiduously comparing a quantity of prints of foreigners made for me from the life by skilled artists, and after seeing myself a great number of men in the markets which are principally frequented by foreigners, to reduce these racial varieties of the face into certain classes. And unless I am much mistaken, although open to particular exceptions, still they will come close to natural truth if they are reduced in the following way to five, as models and principal forms of the other diversities of small moment:

1st. Face oval, straight, the parts moderately marked. The forehead smooth. Nose narrow, slightly hooked, or at all events somewhat high. The jugal bones in no way prominent. Mouth small, lips (especially the lower) gently pronounced. Chin full, round. In general that kind of face, which, accord-

<sup>1</sup> Thus on the aborigines of the Friendly Islands that most sagacious observer, W. Anderson: "their features are very various, in so much that it is scarcely possible to fix on any general likeness by which to characterize them, unless it be a fulness at the point of the nose, which is very common. But, on the other hand, we met with hundreds of truly European faces, and many genuine Roman noses amongst them." Cook's last voyage, Vol. I. p. 380. Other instances of this kind observed amongst Ethiopians and Americans will be spoken of below. On the other hand the similarity of individual Europeans with the Ethiopians or Mongolians is so common as to have passed into a proverb.

<sup>2</sup> On this point Libavius, an author by no means to be despised, says two hundred years ago: "The aspect of the Thuringians is one thing; that of the Saxons another; and that of the Suevi another, and nearly every village has its own, so that if you chose to study the subject, you could nearly tell a man's country by his appearance."

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ing to our opinion of symmetry, we think becoming and beautiful. This same kind of face constitutes, as it were, a medium which may fall off by degeneration into two exactly opposite extremes, of which the one displays a wide and the other an elongated face. Each of these two includes again two different varieties, which can best be distinguished from each other when seen in profile. For then one of these varieties shows the nose and the remaining parts somewhat indistinct, and, as it were, running into one another. In the other they appear deeper, so to say, cut out, and, as it were, projecting angularly. Thus we come to form the four remaining varieties besides that first mean type.

A. *One pair with the face developed in width:—*

2nd. Face wide, at the same time flat and depressed; the parts, therefore, indistinct and running into one another. Interspace between the eyes, or glabella, smooth, very wide. Nose flattened. Cheeks usually rounded, projecting outwards. Opening of the eyelids narrow, linear (*yeux bridés*). Chin, somewhat prominent. This is the countenance common to the Mongolian nations (*the Tartar face* from the common figure of speech which we shall touch on below, confounding the Tartars with the Mongolians).

3rd. Face also wide and cheeks prominent, though not flat or depressed, but the parts when seen in profile more worked and, as it were, deeply cut out. Forehead low. Eyes deeply set. Nose somewhat turned up, but prominent. This is the face of most Americans.

B. *Pair of varieties of the face elongated below:—*

4th. Narrow face, prominent below. Forehead short, wrinkled. Eyes very prominent (*à fleur-de-tête*). Nose thick and half confused with the extended cheeks (*le nez spaté*). Lips (especially the upper) full and swelling. Jaws stretched out. Chin falling back. This is *the Guinea face*.

5th. Face less narrow, somewhat prominent below, when seen in profile the parts more projecting and distinct from each other. Nose full, somewhat broad, as it were diffuse, end thick

(*bottled*). Mouth large. This is the face of the Malay, especially of the inhabitants of the islands of the Southern Ocean.

57. *Causes of the racial face.* First of all, notice must be taken that I am not going to speak here of the countenance, taken in a physiognomical sense, (*look, expression,*) as an index of the temperament, which is however itself sometimes racial, and peculiar to some nations, and may be derived from a common source. In that way it is probable that to their diet you may attribute the placid countenance of the abstemious Brahmins and Banyans of India, and the atrocious aspect, on the other hand, of the man-eating Botocudos<sup>1</sup> of Brazil; or you may instance religion by the examples of the pious and devoted countenance by which especially the softer sex is distinguished in some countries of southern Europe (in the vernacular *Madonna faces*); or cultivation and luxury, in which the soft and effeminate Otaheitans so much excel the manly and powerful New Zealanders.

But our business is with the causes of the racial face, that is, of the countenance itself and the proportion and direction of its parts, all of which we see to be peculiar and characteristic to the different varieties of mankind. The mere discussion, however, of these causes is overwhelmed with such difficulties that we can only follow probable conjectures. I am persuaded, myself, that climate is the principal cause of the racial face, on three grounds especially; 1st, we see the racial face so universal in some populations under a particular climate, and always exactly the same in men of different classes and modes of life, that it can scarcely be referred to any other cause. There are the Chinese, for example, amongst whom a sort of flattened face is just as characteristic as a symmetrical and particular beauty is common amongst us Europeans to the English and inhabitants of Majorca<sup>2</sup>.

2nd. Unless I am mistaken there are instances of peoples who after they have changed their localities and have migrated

<sup>1</sup> I owe my account of this most ferocious and anthropophagous race to two Portuguese Brazilians, de Camara and d'Andrada.

<sup>2</sup> *Mémoires du Cardinal de Retz*, T. III. p. 343.

elsewhere, in process of time have changed also their original form of countenance for a new one, peculiar to the new climate. Thus the Yakutes have been referred to a Tartar origin by most authors on northern antiquities. Careful eye-witnesses assert that now their face is Mongolian, and I myself see it plainly in the skull of a Yakute, with which the munificence of Baron von Asch has enriched my anthropological collection<sup>1</sup>. Something of the same kind will be observed below about the Americans of either coldest zone (s. 88). I have already shown that the Creoles sprung from English parents and ancestors in the Antilles, have finally exchanged to some extent the native British countenance for one more like the aborigines of America, and have acquired their deep-set eyes and their more prominent cheeks<sup>2</sup>.

Egypt, however, and India this side the Ganges afford us the clearest examples of all. For as this peninsula has been frequently subdued by the most different nations, because the first conquerors becoming effeminated by living in such a soft climate were at last conquered by other and stronger northern nations who came after them, so also their appearance seems as it were to have accommodated itself to the new climate. In fact, we only know the racial aspect of the old possessors of India and their manifest characteristics from the most ancient works of Indian art, I mean those stupendous statues, which are carved out in a wonderful way in the subterranean temples of the islands of Salsette and Elephanta, wonderful copies of which I saw at London, both in the British Museum, as amongst the antiquarian treasures of the polished C. Townley<sup>3</sup>. The more modern conquerors of India, that is, the Mongolians, have lost much of their original features under a new climate, and approached nearer the Indian type, of which I have had ocular experience from the Indian pictures shown me by John Walsh, a most learned man on Indian antiquity.

As to the racial face of the ancient Egyptians, I am much surprised that some famous archæologists, and those most learned

<sup>1</sup> *Decas craniorum altera*, p. 11.

<sup>2</sup> *History of Jamaica*, Vol. II. p. 261.

<sup>3</sup> *Archæologia*, Vol. VII. Tab. 25, 26, 27.

in Egyptian art, have been able to attribute one and the same common countenance to all alike<sup>1</sup>; when a careful contemplation and comparison of these monuments has easily taught me to distinguish three sorts of face amongst them. The first like the Ethiopian; the second the Indian; and the third, into which both of the others have by the progress of time and the effect of the specific and peculiar climate of Egypt degenerated, spongy and flaccid in appearance, with short chin, and somewhat prominent eyes<sup>2</sup>.

3rd. We see nations which are reputed to be but colonies of one and the same stock have contracted in different climates different racial faces. Thus the Hungarians are considered to be of the same primitive stock as the Lapps<sup>3</sup>. The latter living in the furthest North have acquired the face so peculiar to the most northern nations, whereas the former living in the temperate zone, in the neighbourhood of Greece and Turkey, have gained a more elegant form of face.

Every one knows that much in all these cases must be attributed to the marriages between different nations, and I myself intend soon to say something about their influence in changing the racial face. Still it seems most probable that the influence of climate alone is very great on this point, especially when we add what was noticed above about the causes and ways in which brute animals degenerate.

To find out the reason why one climate turns out this and another that kind of racial face seems extremely difficult; yet most sagacious men have made the attempt when endeavouring to explain the face of different nations; as Kant upon the Mongolian<sup>4</sup> and Volney upon the Ethiopian<sup>5</sup>. That accessory

<sup>1</sup> Winkelmann, *Description des pierres gravées de Stosch*. p. 10, and elsewhere. D'Hancarville, *Recherches sur l'origine des arts de la Grèce*, Tom. I. p. 300.

<sup>2</sup> I have said more about this triple character of the ancient art of Egyptian monuments in *Philosoph. Trans.* 1794, P. II. p. 191.

<sup>3</sup> Comp. Ol. Rudbeck, Jun., *Analogia linguæ Finnicæ cum Ungarica*, at the end of *Specim. usus linguæ Gothicæ*, Upsal. 1717, 4to, p. 77; and amongst other recent writers, J. Hager, *Neue Beweise der verwandtschaft der Ungarn mit den Lappländern*, Wien, 1794, 8vo.

<sup>4</sup> In Engel, *Philosoph. für die Welt*, T. II. p. 146.

<sup>5</sup> *Voyage en Syrie et en Egypte*, T. I. p. 74. "In fact I see that the face of the

causes sometimes endemic to peculiar climates, such as constant clouds of gnats, may do something towards contracting the natural face of the inhabitants, may be gathered from the observation of Dampier about the inhabitants of the south of New Holland<sup>1</sup>.

I am not sure whether the opinion of our Leibnitz about the similitude of nations to the indigenous animals of the country is to be interpreted as referring to the influence of climate on the conformation of man and brute animals alike; as it seems that the Lapps recall the face of the bear, the Negroes of the ape, of which also the people of the extreme East likewise partake<sup>2</sup>.

Besides the climate we find it stated that the kind of life sometimes contributes to the racial form of face, as in the instance of the Ethiopians, whose thick nose and swelling lips are always attributed to the way in which, whilst in their infancy, they are generally carried on the backs of their mothers, who give them suck whilst they pound millet, or during their hard and heavy tasks<sup>3</sup>.

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Negroes indicates exactly that state of contraction which seizes our own countenance, when it is struck by the light and a strong reflection of heat. Then the eye-brow frowns; the cheek bones become elevated, the eyelid closes, the mouth is pinched up. Cannot this contraction which is perpetually taking place in the bare and warm country of the Negroes, become the peculiar characteristic of their faces?"

<sup>1</sup> "Their eyelids are always half-closed to prevent the gnats getting into their eyes. Hence it happens, that being incommoded by these insects from their infancy, they never open their eyes like other people." T. II. p. 169.

<sup>2</sup> Feller, *Otium Hanoveranum*, p. 150. I will add here, on account of the resemblance of the argument, a passage from Marsden, *History of Sumatra*, p. 173: "Some writer has remarked that a resemblance is usually found between the disposition and qualities of the beasts proper to any country, and those of the indigenous inhabitants of the human species, where an intercourse with foreigners has not destroyed the genuineness of their character. The Malay may be compared to the buffalo and the tiger. In his domestic state he is indolent, stubborn, and voluptuous as the former, and in his adventurous life, he is insidious, blood-thirsty and rapacious as the latter. Thus the Arab is said to resemble his camel, and the placid Gentoo his cow."

<sup>3</sup> Comp. besides many others, Barbot in Churchill's *Collection of Voyages*, Vol. v. p. 36. "The wives of the better sort of men being put to no such hard labour as the meaner, it has been observed that their children have not generally such flat noses as the others; whence it may be inferred that the noses of these poor infants are flattened by being so long carried about on their mothers' backs, because they must be continually beating on them when the motion of their arms or bodies is

In various barbarous nations also, such as the Ethiopians<sup>1</sup>, the Brazilians<sup>2</sup>, Caribs<sup>3</sup>, the Sumatrans<sup>4</sup>, and the inhabitants of the Society Islands in the Southern Ocean<sup>5</sup>, it is placed beyond all doubt by the testimony of eye-witnesses most worthy of credit that considerable force is used to depress and, as it were, subdue into shape the noses of the new-born infants; although perhaps it is going too far in what they say about the bones of the nose being broken or dislocated in this way<sup>6</sup>.

It is however scarcely necessary to recollect that the natural conformation of the nose can only be exaggerated by this violent and long continued compression of the nose when soft, but can in no wise be made thus originally, since it is well known that the racial face may be recognized even in aborigines.

Finally, these kinds of racial face just like the colour of the skin, become mingled, and as it were run together in the offspring from the unions of different varieties of mankind, so that the children present a countenance which is a mean between either parent. Hence the mixed appearance of the Mulattos; hence the progeny of the Cossacks<sup>7</sup> and the Kirghis<sup>8</sup> becomes sensibly deformed by marriages with the Calmucks, whereas the offspring of the Nogay Tartars is rendered more beautiful through unions with the Georgians<sup>9</sup>.

The ancient Germans<sup>10</sup> gave formerly instances of the unadulterated countenance of nations unaffected by any union with any other nation, and to-day the genuine Zingari, inhabitants

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anything violent; especially when they are beating or pounding their millet every morning, which is the constant task of the women of inferior rank."

<sup>1</sup> Besides a forest of other evidence see *Report of the Lords of the Committee of Council for the Consideration of the Slave Trade*, 1789, fol. P. 1. fol. C. ib.

<sup>2</sup> Lery, *Voyage en la terre du Brésil*, p. m. 98, 265.

<sup>3</sup> De la Borde, *Relation des Caraïbes*, in the smaller collection of M. Thevenot, Paris, 1674, 4to, p. 29.

<sup>4</sup> Marsden, *History of Sumatra*, p. 38.

<sup>5</sup> J. R. Forster, *Bemerkungen auf seiner reise um die Welt*, pp. 482, 516.

<sup>6</sup> Comp. Kolbe, *Beschreibung des vorgebürges der guten Hoffnung*, p. 567.

<sup>7</sup> *Decas craniorum prima*, p. 18.

<sup>8</sup> *Decas craniorum altera*, p. 8.

<sup>9</sup> Peyssonel, *Sur le commerce de la Mer Noire*, T. I. p. 177.

<sup>10</sup> Tacitus, *De moribus Germanorum*, c. 4.

of Transylvania<sup>1</sup> do the same; and above all the nation of the Jews, who, under every climate, remain the same as far as the fundamental configuration of face goes<sup>2</sup>, remarkable for a racial character almost universal, which can be distinguished at the first glance even by those little skilled in physiognomy, although it is difficult to limit and express by words<sup>3</sup>.

58. *Racial form of skulls.* That there is an intimate relation between the external face and its osseous substratum is so manifest<sup>4</sup>, that even a blind man, if he has any idea of the vast difference by which the Mongolian face differs from the Ethiopian, can undoubtedly, by the mere touch, at once distinguish the skull of the Calmuck from that of the Negro. Nor would you persuade even the most ignorant person to bend over the head of one or other of them as he might over those after whose models the divine works of ancient Greece were sculptured. This, I say, is clear and evident so far as the general habit goes.

But it might have been expected that a more careful anatomical investigation of genuine skulls<sup>5</sup> of different nations would throw a good deal of light upon the study of the variety of mankind; because when stripped of the soft and changeable parts they exhibit the firm and stable foundation of the head, and can be conveniently handled and examined, and considered under different aspects and compared together. It is clear from a comparison of this kind that the forms of skulls take all sorts of

<sup>1</sup> *Decas craniorum altera*, p. 3.

<sup>2</sup> Hence it is generally considered as the highest proof of the art of the Dutch engraver, Bernh. Picart, that in his well known work, *Cérémonies et coutumes religieuses*, he has represented an immense number of Jews, as far as the lineaments of the face go, each differing from one another, yet all bearing the racial character, and most clearly distinguished from the men intermingled with them of other nations.

<sup>3</sup> The great artist Benj. West, President of the Royal Academy of Arts, with whom I conversed about the racial face of the Jews, thought that it above all others had something particularly goat-like about it, which he was of opinion lay not so much in the hooked nose as in the transit and conflux of the septum which separates the nostrils from the middle of the upper lip.

<sup>4</sup> Comp. Sir Thos. Brown's *Discourse of the Sepulchral Urns found in Norfolk*, p. m. 13. This sagacious author was the first, as far as I know, who attended to the racial form of the Ethiopian skull: "it is hard to be deceived in the distinction of Negro skulls."

<sup>5</sup> The rules and criteria which I use for this object in forming an opinion upon skulls are laid down in my *Decas prima collectionis craniorum*, p. 5.

license in individuals, just as the colour of skins and other varieties of the same kind, one running as it were into the other by all sorts of shades, gradually and insensibly: but that still, in general, there is in them a constancy of characteristics which cannot be denied, and is indeed remarkable, which has a great deal to do with the racial habit, and which answers most accurately to the nations and their peculiar physiognomy. That constancy has induced some eminent anatomists from the time of Andr. Spigel<sup>1</sup> to set up a certain rule of dimensions to which as to a scale the varieties of skulls might be referred and ranked; amongst which, above all others, the facial line of the ingenious Camper deserves special mention<sup>2</sup>.

59. *Facial line of Camper.* He imagined, on placing a skull in profile, two right lines intersecting each other. The first was to be a horizontal line drawn through the external auditory meatus and the bottom of the nostrils. The second was to touch that part of the frontal bone above the nose, and then to be produced to the extreme alveolar limbus of the upper jaw. By the angle which the intersection of these two lines would make, this distinguished man thought that he could determine the difference of skulls as well in brute animals as in the different nations of mankind.

60. *Remarks upon it.* But, if I am correct, this rule contains more than one error. First: what indeed is plain from those varieties of the racial face I was speaking of (s. 56), this universal facial line at the best can only be adapted to those varieties of mankind which differ from each other in the direction of the jaws, but by no means to those who, in exactly the contrary way, are more remarkable for their lateral differences.

Secondly: it very often happens that the skulls of the most different nations, who are separated as they say by the whole heaven from one another, have still one and the same direction of the facial line: and on the other hand many skulls of one and the same race, agreeing entirely with a common disposition, have

<sup>1</sup> *De corporis humani fabrica*, p. m. 17.

<sup>2</sup> See *Kleinere Schriften*, T. I. P. 1. p. 15, and *Naturgeschichte des Orang-utan*, pp. 181, 212; and his separate book, *Über den natürlichen unterschied der gesichtszüge*, &c.