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LIFE OF BLUMENBACH

BY

K. F. H. MARX.

THOUGH a very vivid and uneffaceable recollection of the man, who has lately departed from our circle, can never cease to dwell in us, still I may be permitted to sketch with a few strokes a picture of his occupations and his personality, and in that way to strew a flower upon the grave of him who in life was honoured by all of us, but was especially dear to myself.

It was his happy lot to fulfil the office of instructor far beyond the limits of the ordinary age of man, and to direct the affairs of our society for a longer time than any one of those here present can remember. For more than half a century the most important events of this University are bound up with his memory and his name; and the development of one of the greatest and most important branches of science is essentially involved with his undertakings, his accomplishments, and the efforts he made to advance it.

He stood at last like a solitary column from out the ranks of those who had shared his struggles and his enterprises, and had trodden in the same path, or as an old-world pyramid, a stimulating example to us juniors, how nature will sometimes stamp her crowning seal on high mental powers, by adding to them the firmness and long continuance of the outer form.

John Frederick Blumenbach was born at Gotha on the 11th May 1752. His father was a zealous admirer of geography and natural history, and lost no time in arousing a love for them in his son. It will be convenient to insert here a note in his

own handwriting, which I owe to the kindness of the departed, upon the earliest incidents which happened to him while still under the paternal roof, and his earliest promotion on his first entrance into the great world; for it will tell a clearer tale than if I were to turn it into an historical form.

"My father was born at Leipsig, and died at Gotha in 1787, proctor and professor of the gymnasium¹. He owed his scientific culture to two men especially, Menz and Christ, two Leipsig professors of philosophy, and so, indirectly through him, they contributed a great deal to my own. Amongst other things, he owed to the first his love for the history of literature and for the natural sciences, to the second his antiquarian and artistic tastes. And so in this way I also acquired a taste and a love for these branches of knowledge, which I never found to stand in the way of my medical studies, to which in very early days I had addicted myself from natural inclination, and sometimes they were even in that way of great service.

"I began my academical career at Jena, and there I derived nourishment for literature and book-lore from Baldinger, whilst my relation, J. E. I. Walch, the professor of rhetoric, performed the same office for me as to natural history and the so-called archæology. I went from there to Göttingen to fill up some remaining gaps in my medical studies; and my old rector at Gotha, the church-councillor Geisler, gave me a letter for Heyne. As I was giving it to him, I showed him at the same time an antique signet-ring, which I had bought when at school from a goldsmith. Such a taste in a medical student attracted his attention, and this little gem was the first step to the intimate acquaintance which I subsequently enjoyed in so many ways with that illustrious man.

"There resided then at Göttingen professor Chr. W. Büttner,

¹ Besides the more considerable communication in the text Blumenbach has left only a few scattered notices of his life. So far as these have come to my knowledge, I have made good use of them. He had an idea of composing his own biography, and two passages, written by him in his pocket-book, seem to point to this intention. "Many have written their own lives from feelings of sincerity rather than of conceit."—"Without favour or ambition, but induced by the reward of a good conscience."

an extraordinary man, of singularly extensive learning. He had at one time been famous for the great number of languages he was skilled in, but had for many years given up delivering lectures, and was then quite unknown to the students. Just, however, about the time I came, the eldest son of his friend and great admirer, our orientalist, Michaelis, had then begun to study medicine; and his father had enjoined him to do his best and get Büttner to deliver a lecture upon natural history, which in old days he could do very well, and for which he had a celebrated collection. Immediately on my arrival I also was invited to the course, and as the hour was one I had at my disposal, I put my name down, and so came to know the whimsical but remarkable Büttner. The so-called lecture became a mere conversation, where for weeks together not a word was said of natural history. Still he had appointed as a text-book the twelfth edition of the *System of Nature*; though in the whole six months we did not get beyond the mammalia, because of the hundred-and-one foreign matters he used to introduce.

"He began with man, who had been passed over unnoticed in his readings by Walch of Jena, and illustrated the subject with a quantity of books of voyages and travels, and pictures of foreign nations, out of his extensive library. It was thus I was led to write as the dissertation for my doctorate, *On the natural variety of mankind*; and the further prosecution of this interesting subject laid the foundation of my anthropological collection, which has in process of time become everywhere quite famous for its completeness in its way.

"In that very first winter, through Heyne's arrangement, the University undertook the purchase of Büttner's collection of coins and natural history. But in consequence of the unexampled disorder, in which the natural objects had been let lie utterly undistinguished from each other by this most unhandy of men, he was first of all in want of an assistant to arrange and get them ready for delivery. So Heyne said to him, 'Don't you give lectures on natural history? and haven't you got any one among your pupils whom you can employ for that?'

'That I have,' said Büttner, and named me. 'Ah, I know him too;' so the office of assistant was offered to me, and I gladly undertook it without any fee, and found it most instructive.

"Sometime after, when everything had been handed over, and the collection had found a temporary home in the former medical lecture-room, the honourable minister and curator of the University, von Lenthe, came to visit our institute, so these things too had to be shown him, and as the worthy Büttner did not seem quite fit to do it, I was hastily summoned, and acquitted myself so well, that the minister directly he got out took Heyne aside, and said, 'We must not let this young man go.' I took my degree in the autumn of '75, on the anniversary day of the University, and directly afterwards in the ensuing winter I commenced, as private tutor, my first readings on natural history, and during the same term, in February '76, was nominated extraordinary, and afterwards in November '78, ordinary professor of medicine."

Such was Blumenbach's very promising beginning. How he progressed onwards in his scientific and municipal career, how he became in 1784 member of this society, in 1788 aulic councillor, in 1812 perpetual secretary of the physical and mathematical class of this society, in 1815 member of the library committee, in 1816 knight of the Order of the Guelph, and in the same year chief medical councillor, and in 1822 commander of the Order, all that is so well known and so fresh in everybody's recollection, that I need make no further mention of any of those particulars.

Much more appropriate will it be to describe here the direction he followed himself and also imparted to the sciences, his activity as teacher, his relations to the exterior world, and, in a few characteristic outlines, the principal features of his personal appearance and character.

First of all it may fairly be asserted of Blumenbach, that he it was especially, who in Germany drew the natural sciences out of the narrow circle of books and museums, into the wide cheerful stream of life. He made the results of his own persevering researches intelligible and agreeable to every educated

person who was anxious for instruction, and understood very well how to interest the upper classes of society in them, and even to excite them. Taking a comprehensive view over the whole domain of the exertions of natural science, he knew how to select whatever could arouse or sharpen observation, to give a clear prospect of what was in the distance, and to clothe the practical necessities in a pleasing dress. This feeling and tact for the common interest, this inclination for popular exposition and easy comprehension was meantime no obstacle to his solid progress. He laboured away on the most diverse departments of his science with single and earnest application, and arrived at results, which threw light on the darkest corners.

Equipped with classical knowledge, perpetually sharpening and enriching his intellect with continuous reading, and kept in lively intercourse with the first men of his day, he knew how not only to look at the subjects of his attention from new points of view, but also how to invest them with a worthy form of expression and representation.

Besides, he looked upon every result either of his own researches, or those of other people, as seed-corn for better and greater disclosures. He busied himself unceasingly by writing, conversation, and instruction in disseminating them, and endeavouring to fix them in a productive soil. Thus it came to pass, that he soon came to be regarded as the supporter and representative of natural science, and collected crowds of young men about him, and by words as well as deeds continued to exercise an increasing influence upon the entire circle of study for many decades of years.

Blumenbach soon became known to the Society of Sciences as an industrious student of physic, and in the meeting of the 15th January, 1774, he communicated¹ the remarkable discovery he had made (which had been already done by Braun in 1759 at St. Petersburg) of how to freeze quicksilver.

¹ *Götting. gel. Anzeigen.* 1774, st. 13, s. 105—7. Blumenbach himself set little store by this experiment; for he suspected that his friends might be too hasty in considering the fact to be proved.

In 1784 he became member of this Society, and immediately afterwards read his first paper *On the eyes of the Leucæthiopians and the movement of the iris*¹.

It was a happy chance, that his first literary work was concerned with the races of men, and thus physical Anthropology became the centre of the crystallization of his activity.

Few dissertations have passed through so many editions, or procured their author such a wide recognition, as that *On the natural variety of mankind*². It operated as an introduction to the subsequent intermittent publication of the *Decades*³, on the forms of the skull of different people and nations, as well as the foundation of a private collection⁴. This was unique in its way; and princes and the learned alike contributed to its formation by giving everything which could characterize the corporeal formation and the shape of the skull in man. Blumenbach used to call it his "Golgotha," and though they do not often go to a place of skulls, still the curious and the inquisitive of both sexes came there to wonder and reflect.

Perhaps it is worth while remarking that the theme of this earliest work of his youth was likewise that of his last scientific writing, for after the 3rd August, 1833, on the exhibition of an Hippocratic Macrocephalus before the Society, when he communicated his remarks⁵ thereon, he came no more before the public except to read a memoir upon Stromeyer, and to say a few never-to-be-forgotten words at the festival meeting of the centenarian foundation feast.

One of Blumenbach's great endeavours was to illustrate the difference between man and beast; and he insisted particularly

¹ *De oculis Leucæthiopum et iridis motu.* *Comment. Soc. R. Gött.* Vol. VII. p. 29—62.

² *De generis humani nativa varietate.* 1st ed. 1775.

³ The first decade of his collection of skulls of different nations with illustrations appeared in 1790 in Vol. X. of the *Comment. Soc. &c.* The last under the title, *Nova Pentas collectionis suæ craniorum diversarum gentium tanquam complementum priorum decadam exhibita in consensu societatis* 8 Jul. 1826. *Comment. recentior.* Vol. VI. p. 141—8. *Comp. Gött. gel. Anz.* 1826. st. 121, s. 1201—6.

⁴ *Comp. his paper On anthropological collections* in the second edition of his *Beiträge zur Naturgeschichte* 1806. Th. I. s. 55—66.

⁵ *Gött. gel. Anz.* 1833, st. 177, s. 1761. [Edited in this volume. ED.]

upon the importance of the upright walk of man, and the vertical line. He asserted the claims of human nature, as such, to all the privileges and rights of humanity, for, without denying altogether the influence of climate, soil, and heredity, he regarded them in their progressive development, as the immediate consequences of civilization and cultivation. Man was to him "the most perfect of all domesticated animals." What he might become by himself in his natural condition, without the assistance of society, and what would be the condition of his innate conceptions, he showed in his unsurpassable description of the wild or savage Peter von Hameln¹. How the osseous structure of the skull will approximate nearer and nearer to the form of the beast, when unfortunate exterior circumstances and inferior relations have stood in the way of the development of the higher faculties, might be seen in his collection from the cretin's skull, which, not without meaning, lay side by side by that of the orang-utan; whilst, at a little distance off, the surpassingly beautiful shape of that of a female Georgian attracted every one's attention.

X At the time when the negroes and the savages were still considered as half animals, and no one had yet conceived the idea of the emancipation of the slaves, Blumenbach raised his voice, and showed that their psychical qualities were not inferior to those of the European, that even amongst the latter themselves the greatest possible differences existed, and that opportunity alone was wanting for the development of their higher faculties².

Blumenbach had no objection to a joke, especially when it injured no one, or when the subject in hand could be elucidated thereby, and with this view he wrote a paper on *Human and Porcine Races*³.

¹ *Beitr. zur Naturg.* Th. II. s. 1—44.

² *Götting. Magazin*, 1781, st. 6, s. 409—425, *On the capacities and manners of the Savages*.

³ Lichtenberg and Voigt, *Magazin für das neueste aus der Physik*, B. VI. Gotha, 1789, st. 1. s. 1.

Man always was and continued to be his chief subject, not from a transcendental point of view, which he gave up to the philosophers and theologians, but man as he stands in the visible world. Not only did he contribute essentially to his better comprehension and treatment, but it was not very easy for any one to surpass him in practical knowledge of men.

Natural history, not the description of nature, was the aim he placed before him. With Bacon he considered that as the first subject of philosophy. He understood how to indicate the peculiarity of the subject with a few characteristic strokes; and showed also how the inner¹ properties, relations, and attributes of the individual were connected with each other, and their connexion and position to the whole. With this view he busied himself actively on organic and also on animal nature. Nor was he a stranger to the study of geology and mineralogy, as is clear from De Luc's letters² to Blumenbach, besides what he himself communicated about Hutton's theory of the earth, and his paper on the impressions in the bituminous marl-slates at Riegelsdorf³.

The name of Blumenbach must certainly be recorded amongst those who have signally contributed through the research and discovery of the traces of the old world to the history of the condition of our earth and of its earliest inhabitants. He, too, it was who, long before any others, prepared a collection of fossils for the illustration and systematic knowledge of the remains of the preadamite times⁴.

¹ He worked long at a *History of Natural History*, but he never gave any of it to the public. That he had reflected on the possibility of a *Philosophy of Natural History* may be seen, amongst other proofs, by a letter to Moll in his *Communications*, Abth. I. 1829, s. 60.

² *Magaz. für das neu. aus der Physik*, B. VIII. st. 4. 1793. Comp. Gött. gel. Anz. 1799, st. 135, s. 1348.

³ In Köhler's *bergmannisch. Journ.* Freyberg, 1791, Jahrg. IV. B. I. s. 151—6. Blumenbach proved that though they were the marks of a mammal, they were not those of a child, and therefore no anthropoliths.

⁴ The fossil genus *Oxyporus*, which is found in amber, and was represented by Gravehoorst in *Monographia Coleopterorum Micropterorum*, Götting. 1806, 8vo. p. 235, exists also in Blumenbach's collection. Speaking of the last, that author says, "I wish Blumenbach would give us a description of the numerous insects preserved in amber, which he possesses, and compare them with the allied insects of the present day. His well-known genius for natural history, so long and so

In 1790 he wrote *Contributions to the Natural History of the Primitive World*¹. He devoted two papers before the society to the remains with which he was acquainted of that oldest epoch, principally from the neighbouring country². He also expressed an opinion upon the connection of the knowledge of petrifications with that of geology, thinking by that means a more accurate knowledge of the relative age of the different strata of the earth's crust might be obtained³, and he was the first who set this branch of study going. On the occasion of a Swiss journey he drew particular attention to those fossils, whose living representatives are still to be found in the same country, to those whose representatives exist, but in very distant regions of the earth, and to those of which no true representative has yet been found in the existing creation⁴. Later on he elucidated the so-called fossil human bones in Guadeloupe⁵.

His views on opinions of that kind, as also on more comprehensive considerations, such as *On the gradation in nature*⁶, or, *On the so-called proofs of design*⁷, generally like to abide within the limits of experience, and the conclusions which may fairly

justly famous, might furnish us with some well-weighed and sound hypothesis on the origin and formation of amber."

¹ *Magaz. ib.*, B. VI. st. 4, s. 1—17.

² *Specimen archaeologie telluris terrarumque imprimis Hannoveranarum*, 1801. *In den Comment.* Vol. XV. p. 132—156. *Spec. alterum* 1813. Vol. III. recent. p. 3—24.

³ *On the succession in time of the different Earth-catastrophes.* *Beitr. zur Naturg.* 2nd ed. 1806, Th. I. s. 113—123. One of the most competent judges on this subject, namely, Link, in his work *The Primeval World and Antiquity elucidated by Natural Science*, which he dedicates to his teacher, says in the preface, that the representation of the primeval world, as quite different from that of the present, is due to the science of Blumenbach and Cuvier. To the same effect Von Hoff, who is well entitled to a voice in this matter, expresses himself (*Thoughts on Blumenbach's Services to Geology*. Gotha, 1862, s. 3.): "Amongst naturalists Blumenbach is the first who assigned to a knowledge of petrifications its true position in the foundation of Geology. He considered them as the most necessary helps to that study. He asserted with determination, that from a knowledge of petrifications, and especially from an acquaintance with the different position of fossils, the most important results for the cosmogenical part of mineralogy might be expected."

⁴ Lichtenberg and Voigt's *Mag. &c.* 1788, B. V. s. 13—24.

⁵ *Gött. gel. Anz.* 1815, st. 177, s. 1753.

⁶ *Beitr. zur Naturg.* 2nd ed. 1806, Th. I. s. 106—112.

⁷ *Ib.* s. 123.

be deduced therefrom. Brilliant hypotheses, subtle and imaginary combinations, phantastic analogies, were not to his taste.

If it can be said of any scientific work of modern times, that its utility has been incalculable, such a sentence must be pronounced on Blumenbach's *Handbook of Natural History*¹. Few cultivated circles or countries are ignorant of it. It contains in a small space a marvellous quantity of well-arranged material, and every fresh edition² announced the progress of its author. Still in spite of the effort after a certain grade of perfection the skill is unmistakeable, with which only the actual is set forth; and with which by a word, or a remark, attention is directed to what is truly interesting, agreeable, and useful, and an incentive given to further study.

Not only did Blumenbach well know how to set out the whole domain of this study in a simple, easily comprehensible and transparent way, so as to utilize it for instruction; but he also, by bringing to its assistance allied occupations, obtained new points of view, and enlarged its boundaries.

His *Contributions to Natural History*³, and his ten numbers of *Representations of Subjects of Natural History*⁴, have by interesting translations, prudent selection, and accuracy in handling the subjects, done profitable service in the extension and foundation of this science. He took special pains to throw light on doubtful questions, and to clear up overshadowing and difficult undertakings in natural history from old monuments of art⁵, and the traditions of the poets⁶. He looked on the migra-

¹ It appeared first in 1779.

² The publishers alone issued 12, the last in 1830, not including the re-issues and the translations into almost all civilized languages.

³ The first part appeared in 1790, the second in 1811. They contained the following essays: Part I. On variability in creation. A glance at the primeval world. On anthropological collections. On the division of mankind into five principal races. On the gradation in nature. On the so-called proofs of design. Part II. On the *homo sapiens ferus*. On the Egyptian mummies.

⁴ 1796—1810.

⁵ *Specimen hist. nat. antiquæ artis operibus illustr. eaq. vicissim illustr.*, 1803. *Comment.* Vol. XVI. p. 169—198.

⁶ *Sp. hist. nat. ex auctor. class. præsertim poetis illustr. eaq. vic. illustr.*, 1815. *Comm. recent.* Vol. III. p. 62—78. *Comp. Gött. gel. Anz.*, 1815, st. 205, s. 2033—2040.

tions of animals and their appearance at different times, and their wide dispersion in enormous numbers as a great, but not necessarily insoluble riddle; and he contributed his mite also to the future solution of this weighty question¹.

Blumenbach was blamed somewhat here and there for following with little divergence the artificial classification of Linnæus. But this conservatism was not the consequence either of convenience, or want of knowledge, but from the conviction that the time for a natural system was not yet come. That he felt the want of such a system is plain, because as early as 1775 he sketched out² an attempt at a natural arrangement of the mammalia, according to which attention is paid not to single, or a few, but to every outward mark of distinction, and the whole organization of the animals.

His communications, *On the Loves of Animals*³, and *On the Natural History of Serpents*⁴, display not only the critical, but the judicious observer. Manifold interest attaches to his remarks on the kangaroo⁵, which he kept for a long time alive in his house, on the pipa⁶, and on the tape-worm⁷.

Blumenbach was thoroughly penetrated with the truth, that we are only then in a proper position to understand the appearances of the present, when we attempt to clear up as far as possible their condition in the beginning, and from early times down to the present. He considered archæology and history not only as the foundations of true knowledge, but also as the sources of the purest pleasures. He was not afraid of being reproached with encroaching upon foreign ground⁸, for he knew his own moderation: nor did he shrink from the trouble of seeking and collecting, for he had too often had experience

¹ *De anim. colon. sive sponte migr., sive casu aut studio ab hom. aliis. transl., Comm. recent. Vol. v. p. 101—116. Comp. Gött. gel. Anz., 1820, st. 57, s. 561—68.*

² *Gött. gel. Anz. st. 147, s. 1257—1259.*

³ *Gött. Magaz. 1781, s. 93—107.*

⁴ *Magaz. für das n. aus der phys., B. v. st. 1, 1788, s. 1—13.*

⁵ *Ib. 1792, B. vii. st. 4, s. 19—24.*

⁶ *Gött. gel. Anz. 1784, st. 156, s. 1553—1555.*

⁷ *Ib. 1774, st. 154, s. 1313—1386.*

⁸ He approved of Seneca; "I often pass into the enemy's camp, not as a deserter, but as a spy."

that though the roots of a solid undertaking may be bitter, the fruit may be sweet. Besides he knew well how, by keeping at a distance from useless distractions, and by internal collectiveness and regulated arrangement of work, to bring together in one much that lay widely separated.

X Some years after he had written his paper *On the Teeth of the Old Egyptians, and on Mummies*¹, he had an opportunity during his stay in London on the 18th February, 1791, of opening six mummies, and derived considerable reputation from his communication² to Banks on the results he obtained therefrom. He took his part also in the opinion³ pronounced by the Society of Sciences of that day on Sickler's new method of unfolding the Herculaneum manuscripts, which he had invented.

He showed that our granite answers to the syenite of Pliny⁴. He possessed a collection of ancient kinds of stone to illustrate the history of the art of antiquity, on which account his opinion was often consulted on the determination of doubtful antiques, for example, those given out as such made of soap-stone⁵.

He had himself, principally with a view to natural history and the varieties of man, a collection of beautiful engravings and pictures, and set great store besides on the woodcuts in old works which give representations of animals⁶, for in that way the proper position of observing the art of that time is easily arrived at. And so also he endeavoured to become better acquainted with "the first anatomical wood-cuts," and drew attention to them, when otherwise they would have remained quite unnoticed⁷.

After a careful comparison of the objects of ancient art, with

¹ Gött. Mag. 1780, Jahrg. I. s. 109—139.

² Philos. Trans. 1794. [The original MS. of this paper is in the library of the Anthropol. Soc. of London. Ed.] His letter to Sir Joseph Banks was printed in the third edition of the *De Generis Hum. r. n.* 1795. The subject is thoroughly treated of by him in the *Beitr. zur Naturg.* Th. II. s. 45—144.

³ Gött. gel. Anz. 1814, st. 200, s. 1993.

⁴ Ib. 1819, s. 1208. Blumenbach gave his views before in the second part of the edition of *Natural History* in 1780, on the proper distinction of the kinds of stones employed by the ancients.

⁵ Gött. gel. Anz. 1811, s. 2050.

⁶ Gött. Magaz. 1781, st. 4, s. 136—156.

⁷ Baldinger, *Neues Mag. für Aerzte*, 1781, B. III. s. 135—140.

which he was acquainted, his opinion¹ was that we ought to be chary in our praise of the anatomical knowledge of the artists of antiquity, but that their accuracy in the representation of characteristic expression had not been sufficiently appreciated.

In the history of literature Blumenbach emulated his original and pattern, Albert Von Haller, whose acquaintance he had made when studying at Göttingen, by sending to him at Berne a book², on the suggestion of Heyne, which Haller had mentioned in one of his works as unknown to him, and which he had picked up at an auction³. Later in the day he often furnished him with many additions and supplements to the already published volumes of the *Practical Medical Library*⁴.

Among the bibliographical labours of that great writer Blumenbach esteemed most highly the *Bibliotheca Anatomica*. In his own pocket copy he wrote down especially all the volumes and editions of it which were at that time to be found in the royal library, and to the first volume he added a supplement.

He wrote a preface⁵ to Haller's *Journal of Medical Literature*, in which his services as critic received their due.

✕ However little value the body of physicians generally attach to literary performances, still there is no doubt that most of them are acquainted with Blumenbach's *Introduction to the Literary History of Medicine*⁶. With a prudent selection, precision, and brevity the whole field of medicine, quite up to the end of the preceding century, is there described in a comprehensive survey⁷.

¹ *De veterum artificum anatomicæ peritiæ laude limitanda, celebranda verò eorum in characterè gentilitio exprimendo accuratione*. The treatise itself was never printed, but on its contents comp. *Gött. gel. Anz.* 1823, st. 125, s. 1241.

² *Observationum anatomicarum collegii privati Amstelodamensis Pars altera*. Amst. 1673. 12mo.

³ Haller's answer is dated 28th March, 1775.

⁴ Baldinger's *N. Magaz. für Aerzte*, 1780, B. II. s. 33.

⁵ Besides this perhaps scarcely any one was so well acquainted with all the writings of that most famous of Göttingen teachers as Blumenbach. He learnt much from the collection of letters to and from Haller, for there he found, among many other remarkable observations for the history of medicine, the mode of curing deafness by piercing the tympanum. *Gött. gel. Anz.* 1806, st. 147, s. 1459.

⁶ Theil 2. Bern. 1790.

⁷ *Introductio in historiam medicinæ literariam*, 1786.

× On the occasion of the fifty-year Jubilee of our University he brought together all the literary performances of the medical professors of Göttingen in a catalogue¹, which had equally the effect of serving as a memorial to them, and as a cause of emulation to their successors.

He frequently celebrated the memorials of distinguished men, especially in his *Medical Library*², that almost insurpassable journal, and then as secretary of our Society, in which capacity he worthily fulfilled this painful duty over his departed colleagues, in the memorial orations over Richter (1812), Crell (1816), Oslander (1822), Bouterwek (1828), Mayer (1831), Mende (1832), and Stromeyer (1835).

His *Honourable mention of Regimental-Surgeon Johann Ernst Wreden*³ is so far of importance for the history of the career of medicine, as that long-forgotten surgeon was the first on the continent, and that in Hanover, to introduce inoculation for the small-pox.

The lover of literature should not pass unnoticed his *Notice of the Meibomian Collection of Medical MSS. preserved in the Göttingen Library*⁴.

What has already been done goes some way to place Blumenbach's merits and excellence in a right light. But the most important of all have not been mentioned yet, and from their exposition it will be clear how many things were united in one man, of which each by itself would have gone far to confer reputation upon the possessor.

The branches of learning in which the name of Blumenbach shines forth without ceasing are physiology and comparative anatomy. What he performed both by word of mouth and by his writings in these departments, will all the less easily be

× ¹ *Synopsis systematica scriptorum, quibus inde ab inauguratione Academiæ Georgiæ Augustæ usque ad solemniam istius inaugurationis semisæcularia disciplinam suam augere et ornare studuerunt professores medici Göttingenses*, 1788.

² B. I—III. 1783—1795.

³ *Annalen der Braunsch. Lüneb. Churlande*. 1789, Jahrg. III. st. 2, s. 389—396.

⁴ In his *Medicin. Biblioth.* B. I, s. 368—377.

forgotten by his fatherland, because foreign countries first took a liking to these studies through him, and expressed their gratitude not only to him, but above all to German erudition.

The obscure learning of generation, nutrition, and reproduction received light and critical elucidation from him. If after the lapse of sixty years since he first strenuously employed his mind to sift the existing materials and make particular investigations, more comprehensive results than he expected have been obtained, still it is but just to observe, that his ideas have certainly been expanded and here and there connected, but have not in any way been controverted.

On the 9th of May, 1778, his observations upon green hydræ, then in the act of reproduction, first led him to the comprehension, and afterwards to the further investigation of the incredible activity of the powers of nature in the circle of organized life. In 1780 appeared his essay *On the Formative Force and its Influence on Generation and Reproduction*¹; and the next year the monograph, *On the Formative Force and on the Operations of Generation*². At the same time he expressed himself *On an uncommonly simple method of Propagation*³,—namely, on that of the conferva in wells, whose mode of propagation he had discovered on the 18th of February, 1781.

He sent in on the 25th of May a short reply to the question proposed by the Academy of St. Petersburg, *On the Force of Nutrition*⁴, which he wrote on the preceding day, and obtained half the prize. He wrote some remarks on Troja's experiments on the production of new bone⁵. On the occasion of

¹ Gött. Mag. 1780, s. 247—266.

² 1781. Then in the *Comment. T. VIII. p. 41—68: De nisu formativo et generationis negotio.* 1785. In all living creatures there is a peculiar, inherent, live-long active energy, which first of all causes them to put on their definite appearance, then to preserve it, and if it should be disturbed, as far as possible to restore it. The theory of development from spermatie animalcule, or by means of panspermy, he showed is without foundation. [A translation of this treatise by Dr Crichton was published in 1792, London, 12mo. ED.]

³ Gött. Mag. 1781, st. 1, s. 80—89.

⁴ *De nutritione ultra vasa.* The prize was awarded Dec. 4, 1788. The essays sent in were 24. *Nova Acta Sc. Petropol. T. VI. 1790: Histoire. Comp. Zwei abhandl. über die Nutritionskraft,* K. F. Wolf, St. Petersburg. 1789. (The second is by C. F. Born.)

⁵ Richter's *Chir. Bibliothek*, B. VI. st. 1, 1782, s. 107.

The Generation of the Eye of a Water-Lizard, he communicated in a sitting of this Society¹ the fact that he had amputated four-fifths of the apple of the eye, and a *new eye* had been produced.

With clear insight and unusual experience he distinguished the anomalous² and morbid aberrations of the formative force, and showed³ how *The Artificial or Accidental Mutilations in Animals degenerate in Process of Time into Hereditary Marks*. His studies upon the formative force were taken up by great thinkers, and were made use of, though with alterations of expression and manner of representation, as foundations for further developments, by Kant⁴ in his *Critique of the Understanding*, Fichte in the *System of Morality*, Schelling in the *Soul of the World*, and Goethe in the *Morphology*. From this he derived particular satisfaction, as it was a proof of their solidity and productiveness.

His *Elements of Physiology*⁵ is remarkable not less for the elegance of its language, than, like all his books, for a well-selected display of reading, and the profusion of his own observations.

He busied himself much⁶ with the investigation, whether a peculiar vital energy ought to be attributed to the blood, or not. And also with the origin of the black colour of the negroes⁷. He confirmed the principal discovery of Galvani,

¹ Gött. gel. Anz. 1785, st. 47, s. 465.

² *De anomalis et vitiosis quibusdam visus formativi aberrationibus*, 1812. *Comment. recent.* Vol. II. p. 3—20.

³ *Magazin für das N. aus der Physik.* 1789, B. VI. st. 1, s. 13.

⁴ With reference to Kant's manner of expression, he remarked (*Gött. gel. Anz.* 1800, st. 62, s. 612), "that the ornithorynchus affords a speaking example of the formative force, as showing the connection of those two principles, the mechanical and the teleological, in the exhibition of an end being also a product of nature."

⁵ *Institutiones Physiologicae*, 1787. Amongst the many editions and translations of this work, Blumenbach set the most value upon the edition of Elliotson's translation, published by Bentley, London, 1814; because this was the first book which was ever printed entirely by a machine. *Comp. Gött. gel. Anz.* 1818, st. 172, s. 1713.

⁶ *De vi vitali sanguinis*, 1787. *Comment.* Vol. IX. p. 1—13. And again on the appearance of the posthumous work of John Hunter *On the Blood*, on the occasion of the degree of seven candidates in 1795, the argument he gave was *De vi vitali sanguini deneganda, vita autem propria solidis quibusdam corp. hum. partibus adserenda curæ iteratæ*.

⁷ *De gen. hum. var. nat.* p. 122. ed. 3.

reposing on his own observations¹. With respect to the eyes of the Leucæthiopians² and the movement of the iris, he took great pains to ascertain their probable reasons by collecting and criticizing the experiences of others, and by personal observation. On the 23rd Aug. 1782, he examined two Albinos at Chamouni.

In 1784 he discovered³, during the dissection of the eye of a seal, the remarkable property by means of which these animals are enabled to shorten or lengthen the axis of the eyeball at pleasure, so that they can see clearly just as well under the water as in the air, two mediums of very different density. He was the first⁴ who accurately distinguished the nature and destination of the frontal sinuses, as also their condition in disease. He showed the intersection of the optic nerves to be a settled fact⁵. He would not adopt the belief in a muscular coat of the gall-bladder⁶. With regard to the protrusion of the eyes in the case of persons beheaded, he drew attention to the fact that the phenomenon was not, as in the case of those who have been hanged, caused entirely by congestion⁷. On the opportunity of a communication *On a ram which gives milk*⁸, he expressed himself on the presence of milk in the breasts of men, and attempted an explanation.

His *History and Description of the Bones of the Human Body*⁹, in which this naturally dry subject is treated in the most interesting way and from fresh points of view, will always retain an enduring value.

His *Handbook of Comparative Anatomy*¹⁰ was the first of its kind, not only in Germany but throughout the learned

¹ Gött. gel. Anz. 1793, st. 32, s. 320.

² *De oculis Leucæthiopum et iridis motu*. 1784. *Comm.* Vol. VII. pp. 29—62. *Comp. Gött. gel. Anz.* 1784, st. 175. *Med. Bibliothek.* B. II. s. 537—47.

³ *Comment.* Vol. VII. 1784, p. 46. *Handbuch der vergl. Anat.* Aufl. 3, s. 401.

⁴ *Prolus. anat. de sinibus frontal.* 1779. His thesis on becoming ordinary Professor. *Comp. Gött. gel. Anz.* 1779, s. 913—916.

⁵ Gött. gel. Anz. 1793, st. 34, s. 334.

⁶ *Ib.* 1806, st. 135, s. 1352.

⁷ *Abhandl. der phys. med. societ. zu Erlangen.* 1810, Th. I. s. 471.

⁸ *Hannover Mag.* 1787, st. 48, s. 753—762.

⁹ First in 1786, then in 1806.

¹⁰ First in 1805.

world. Before his time there was no book on the totality of this branch of learning; he was the first to find a place for it in the circle of subjects of instruction. One of his earliest communications was upon *Alcyonellæ in the Göttingen ponds*¹. Then he furnished a running comparison between the warm and cold-blooded animals², and afterwards between the warm-blooded viviparous and oviparous animals³. Nor can we pass over in silence his remarks upon the structure of the *Ornithorynchus*⁴, on the bill⁵ of the duck and toucan, and on the sack in the reindeer's neck⁶.

Inasmuch as Blumenbach regarded physiology as the true foundation of the science of medicine, it is not difficult to perceive from what point of view his contributions to practical medicine are to be criticized: besides, he let slip no opportunity of proving his sympathy in that particular direction. Thus he gave his opinions on the frequency of ruptures in the Alps⁷; on nostalgia⁸, on melancholy⁹ and suicide in Switzerland; on the expulsion of a scolopendra electrica¹⁰ from the nose; and on a case of water in the head of seventeen years' standing¹¹. He also contributed to the extension of the science of medicine by experiments¹² with gases on live animals, and by the communication¹³ of a new sort of dragon's blood from Botany Bay on

¹ *Gött. Mag.* 1780, s. 117—127.

² *Specim. physiol. comp. inter animantia calidi et frigidi sanguinis*, 1786. *Comm.* Vol. VIII. pp. 69—100.

³ *Spec. phys. comp. int. anim. cal. sang. vivip. et ovip.* 1788. *Comm.* Vol. IX. pp. 108—129. *Comp. Gött. gel. Anz.* 1789, st. 8, s. 73—77. In this treatise he also gave his views upon the appearance of yellow corpuscles in the unimpregnated ovum; on the formation of the double heart; on the period when the ribs are produced in the embryo.

⁴ *De Ornithorynchi paradoxi fabrica observ. quædam anat. Mem. de la soc. med. d'Emulation*, T. IV. Paris, 1779, pp. 320—323. *Gött. gel. Anz.* 1800, s. 609—612.

⁵ *Spec. phys. comp. int. anim. cal. sang. vivip. et ovip.* 1789.

⁶ *Gött. gel. Anz.* 1783, st. 7, s. 68.

⁷ In his *Medic. Bibliothek.* B. I. s. 725.

⁸ *Ib.* s. 732. *Comp. Schlözer's Correspondence*, Th. III. 1778, s. 231.

⁹ *Med. Bib.* B. II. s. 163—173.

¹⁰ Feuer-assel. *Comp. J. L. Welge, Diss. de morbis sinuum frontaliæ.* Götting. 1786, 4to. § IV. p. 10.

¹¹ "über den sogenannten Wagler'schen." *Med. Bib.* B. III. s. 616—639.

¹² *Med. Bib.* B. I. s. 173.

¹³ *Contributions to the Materia Medica from the University Museum of Göttingen.* *Ib.* B. I. s. 166—171.

the east coast of New Holland, and by a description of the true Winter's bark.

Blumenbach's reputation as a learned man was so great, that every hint of his was considered and followed up, as that *On the best methods of putting together collectanea and extracts*¹; and his works, especially his handbooks, stood in such esteem, that authors and booksellers² alike considered a preface from him as the best recommendation for their works. In this way he introduced Cheselden's *Anatomy*³, Neergard's⁴ *Comparative Anatomy and Physiology of the Digestive Organs*, and Gilbert Blane's⁵ *Elements of Medical Logic*.

I must take notice here of one branch of learning, in which Blumenbach had scarce his like, I mean his familiarity with voyages and travels. All the books of the sort in the library of this place he had read through over and over again, and made extracts of, and prepared a triple analysis, namely, one arranged geographically, a chronological and an alphabetical one. To this occupation, as he frequently took occasion to mention, he owed no small part of his knowledge; and for his researches in natural history and ethnography it was a most solid foundation.

He himself had made but few long journeys⁶ in proportion, only through a part of Switzerland⁷ and Holland to England, or rather to London⁸, which afterwards he used to say was to the sixth part of the world; and a diplomatical one to Paris, in order, during the time of the kingdom of Westphalia, to

¹ Ib. B. III. s. 547.

² He wrote a preface to Gmelin's *Geschichte der thierisch. u. mineral. gifte*. Erfurt, 1805.

³ German by A. F. Wolf. Götting. 1789.

⁴ Berlin, 1806. In the preface Blumenbach speaks of the influence of Comparative Anatomy on the philosophic study of natural history in general, and on the physiology of the human body and the medical knowledge of beasts in particular.

⁵ Göttingen, 1819.

⁶ When he wanted to take a journey for recreation, he liked going to the widowed Princess Christiane von Waldeck at Arolsen, who had proved herself very useful to him; or to Pyrmont, or to Gotha, Rehburg, Weimar, and Dresden.

⁷ In 1783.

⁸ In 1791—92.

propitiate the good will of Napoleon for the University, on which occasion De Lacepede was his advocate and guide. He kept a journal on his travels, in which he made short notes of all that was worth noticing. Up to this time very few of these very multifarious remarks have been made public¹.

He published a translation of the medical observations in the second part of Ives' *Travels*²; he wrote a Preface to the first part of the *Collection of Rare Travels*³, and a Preface and Remarks to Volkmann's translation of Bruce's *Travels*⁴.

It is not perhaps too much to assert, what I may be allowed to say here, that the desire which was aroused in many most distinguished men to undertake great expeditions for the sake of natural history, and the results, which have accrued in consequence to the knowledge of the earth and of mankind, were particularly prompted through the medium of Blumenbach. Hornemann⁵, Alex. von Humboldt, Langsdorf, Seetzen, Röntgen, Sibthorp, Prince Max von Neuwied, were and are his grateful pupils.

Amongst the unknown, or, at all events, the insufficiently appreciated services of Blumenbach to literature belong his beyond measure numerous reviews, which he continued to write for a long series of years, not only in the *Bibliothek*, which he edited himself, but also particularly in the *Göttingische gelehrte Anzeiger*, on all the books in his various provinces. His first criticism was upon Xenocrates, *On the Aliment in Aquatic Animals*, in 1773, in Walch's *Philological Library*⁶.

¹ Remarks on some travels in Waldeck collected in Schlözer's *Brief-wechsel*, Th. III. 1778, st. 16, s. 229—237. Then: *Some Remarks upon Natural History on the occasion of a Swiss journey*. In *Magaz. für das neueste aus der Physik*, B. IV. st. 3, 1787, s. 1; B. V. st. 1, 1778, s. 13.

² The remaining part of this *Voyage to India* was translated by Dohm. Leipz. 1775.

³ Memmingen, 1789.

⁴ Leipzig, 1790, in five volumes.

⁵ On July 2, 1794 Hornemann first of all expressed a wish to his teacher to travel into the interior of Africa. Zach's *Geogr. Ephem.* B. I. Weimar, 1798, s. 116—120, s. 368—371, and in B. III. s. 193. Blumenbach gave a public notice of this active young man and of the fortunate completion of his plan.

⁶ B. II. st. 6, s. 533. Blumenbach corrected and added to the edition of Xenocrates *περι τῆς ἀπο τῶν ἐνυδρῶν τροφῆς* by Franz.

He himself had in the beginning to experience how unfairly and carelessly reviews are often scribbled off¹. He always adhered to the rule of separating the man from the thing, and tried to make his judgment as objective as possible, and not to pervert the scientific judgment-seat with which he was entrusted to gratifying his personal likes or dislikes. His reviews may be known by their convincing brevity, their clear exposition of the essential points, the witticisms scattered here and there, and the instructive observations and remarks of the writer.

One of his manuscript observations is worthy of notice, which I found in a pocket-book that he once allowed me to examine, because it explains to some extent how the facility and power of finishing off work of this kind became in a certain sense habitual to him. It is as follows: 'In church, which we continually attended, I was always obliged whilst at school to write down an abstract of the sermon. This has been since of the greatest utility to me in my reading, extracting, reviewing, and in many matters of business, &c., for it has enabled me to detect the essential point with rapidity, to exhibit it, and briefly to express it again.'

Although Blumenbach beyond all others was involved in few literary feuds², and it did not easily happen that any of his reviews occasioned him any complaint³ or enmity, still he could not help frequently calling things by their right names, and displaying false celebrities in their nakedness⁴.

And now we must turn our attention from Blumenbach the author, to the Göttingen professor, to whose lecture-rooms youth

¹ When his *Handbook of Natural History* had been not only awkwardly but inconsiderately criticized, he wrote his *On a literary incident worth notice, which unfortunately is no rarity in Gött. Mag.* 1780, s. 467—484.

² On one with his old colleague Meiners, comp. *Beitr. zur Naturg.* Aufl. 1. 1790, Th. I. s. 62.

³ His criticism on Kampf's new method of curing the most obstinate disorders of the abdomen (*Med. Bibl.* B. II. st. 1), was however taken ill by him, but afterwards was the subject of open thanks to Blumenbach, in the second edition of that book, Leipz. 1786, s. 366.

⁴ As in the review of Sander's *Travels.* *Gött. gel. Anz.* 1784, st. 27.

and age alike pressed, in order to receive words of lasting instruction from the wit and humour which overflowed from his mouth.

The undivided approval, which was paid to his discourses, underwent no diminution in his extreme old age, and he gave up teaching, not because either the wish or the power failed him, or because he suffered any diminution of audience or sympathy, but solely in accordance with the entreaties of his friends. He knew well how in a very singular and inimitable way to unite the valuable with the amusing, the relation of dry facts and scientific deductions with wit and humour, and to season them with keen well-pointed anecdotes. Every one enjoyed the lecture. Grave or gay, every one went away stimulated and the better for it.

As listeners came to him from all parts of the world and went home full of his praises, his name was carried into countries where previously German literati had been little thought of. With a letter of recommendation from Blumenbach, a man might have travelled in all the zones of the earth.

He had the art of never giving too much, of confining himself to the principal points, and of deeply impressing what was essential by well-varied repetitions. He assisted the comprehension by appealing to the senses in every way; by outlines which he drew with chalk on a board, by the exhibition of copies and preparations, by happy quotations of well-known sayings. He laid stress on the fact, that from him might be learnt the art of observing; but that it is necessary, according to circumstances, to listen, smell, and taste.

He made it plain, that he held no propositions such as could be written out prettily on law-paper; his subject was the entire man, his whole inner activity in representation, comparison, and connection.

The means he employed to obtain this result were indeed manifold, but it is very difficult to give a satisfactory account of them; they are too much bound up with his peculiar personal appearance. One must have heard him speak himself, with the expressive play of countenance, the remarkable tone of voice,

which now fell upon the ear in sharp abrupt sentences, now carried your senses along with him in overwhelming cadences, and with the imposing effect with which he knew how, to some extent, to throw life into the natural objects before him and bring them into unexpected relations.

I could give many examples¹ of his numerous clever and

¹ For the sake of example I will give an inkling of them. He wished people would accustom themselves to get a clear and definite notion of subjects, and to reproduce the whole from a part, for, said he, "I cannot bring everything into the lecture, as the elephant or rhinoceros."

He tried also to prevent people from deriving false ideas from their impressions and observations: viz. "If you wish to form an idea of the lowest depth to which men have descended in the interior of the earth, pile up your library at home, your Corpus Juris, your ecclesiastical history, and medical books, until you have put 12,000 leaves, that is, 24,000 pages one upon the other. And how far do you think we have got into the heart of the earth? just so far as the first and second leaf in thickness. And yet people are not ashamed to speak of the kernel of the earth. When the poet speaks of the bowels of the earth, we ought to translate 'the epidermis of the earth.'"

He knew his audience so well, that if he wanted to get anything, he felt no necessity for making long manœuvres, still less for finding fault. He appealed to the sense of what was right and proper, not with pathetic demonstrations, but cursorily, as by an electric shock. If, for instance, he saw that his subjects were handled rudely as they went round, he called out with an intelligible gesture; "They are best laid on your coat-lapet or on cotton; but I know one word is better than an hundred-weight of cotton."

Sometimes he was fond of speaking in aphorisms, leaving the connecting links to be made out by his attentive hearers, though he always stirred up and set in motion the most apathetic by his overflowing humour. Once, for instance, when lecturing on natural history, he told the story how they shaved a bear, and gave him out as a new sort of man. "A beast in Göttingen, in whom Buffon would have discovered a good deal that was human:—it showed one particular trait of modesty, because it would not allow its stockings to be taken off. Behind the stove in the Golden Angel was the creature in question to be found, clad in a Hussar's coat with an over-cloak. The breast was visible—of a most inviting colour. The mouth was silent; large claws with long ruffles—a Hussar with ruffles.—That was something to think of.—Now I'm the man who gives the lectures here on natural history, the lecture-room is gone mad;—you show me this evening the beast as God created it, or rather as you have shaved it, or I shall stand for nothing, for it is no laughing matter to play with the Professor in his lecture-room. The man's hair stood up with fright, like spikes: later in the day Blumenbach was present at its evening toilette. The waistcoat had been nailed to it."

Sometimes he did not disdain to say a word of fun to the students: viz. "Many exegetists think that the whale cast out the prophet Jonah, because where a horse can find a place, a prophet might do so too. Blumenbach however stands rather by the opinion of Hermann von der Hardt in Helmstadt, who has written a very nasty commentary on that man of God; that he lodged in Nineveh at the Whale; that his cash ran out; the landlord would give him no more credit—he was turned out of the club; or—the Whale cast him out."

Or; "John Hunter used to inquire whether it was not possible for men to be thrown into the chrysalis state:—that would be good for the conscription, forced loans, or when the student is summoned; 'No, no, says the chambermaid, our master is become a chrysalis.'"

humorous illustrations, but I should be afraid, that deprived of the spirit of his pantomimic representation, and unsupported by his cheerful but still highly imposing delivery, they might easily appear in a false light.

It might sometimes have seemed that Blumenbach attached too much value to the singular and the curious, but when any one came to look into the matter more closely, he soon became convinced, that though what was extraordinary attracted him above all things, still, it was principally because it had remained unnoticed by others, or because it served him as a means, through which he could direct the attention to what was truly worth knowing. His business was with knowledge and explanation; yet he knew too well that the majority of men must have miracles to make them believe.

In literature he sometimes mentioned long-forgotten and obsolete works, and noticed with particular emphasis such as were not to be found in the royal library; but all that was only to excite the love of learning, and keep it at full stretch. Perhaps no teacher understood so well as he how to instil by the way a lasting interest in literature, and to accompany the acquaintance with the best and most select with opportune remarks.

The extraordinary reputation which remained to the famous teacher in full strength for more than half a century may partly be attributed to the influence of authority, which was then of more weight than it is now; partly perhaps to the more comprehensive view that though the University was in other ways crowded with teachers, he had no rival in his particular province; partly that he in all his outward circumstances and through his continuous good health was in a position to concentrate on his immediate objects all the materials which stood in his power; still we cannot help always admiring the greatness of his personality, and the wonderful insight and consistency with which he knew how to keep all this together. For a long period of time he continued to be the chief centre of instruction at Göttingen.

Not only did fathers send their sons, but grandfathers their

grandchildren, in order that these might hear Blumenbach as they had done themselves, and so participate in that particular kind of learning, which had remained so singularly indelible in their recollection. Many first heard of Göttingen through its connection with Blumenbach, and lighted by his star, journeyed to the place of his operations.

In the summer of 1776 he arranged for the public vivisections and physiological experiments on living animals in the great theatre. Also in 1777 he gave there public readings on the natural history of mankind. In the same year he gave lectures on the dissection of the domestic animals of the country. Though he began very early to treat upon comparative osteology, it was not till after 1785 that he gave lessons on comparative anatomy in general. For a long time he delivered lectures on pathology, after Gaub, on the history of authorities on medicine and physiology, and at last in the winter term of 1836-37 on natural history, which he read 118 times.

The three English princes, who had arrived here on the 6th July 1785, attended the course on natural history in the winter of 1786¹. Nor did the present king of Bavaria, then crown-prince, disdain to take his seat on the allotted benches, and in August, 1803, Blumenbach was his companion in the Harz as far as Magdeburg. This same royal patron of the sciences never forgot his student's time, or his teacher individually, as he proved not only by sending him valuable presents, especially the skull of an ancient Greek and his order of merit, but particularly by this, that he despatched in 1829 the present Crown-prince to be the alumnus of the Georgia Augusta and of Blumenbach. When our king, on the occasion of the hundred-year jubilee feast of the University, honoured us with his illustrious presence, he did not omit to visit his old preceptor in the house which he had so often entered as a student.

Blumenbach was a born professor; in this occupation he sought and found his satisfaction and his pride. What he

¹ With which agrees the passage of Heyne (*Opusc.* Vol. iv. p. 243), "the royal princes of Great Britain attended the lectures of some of the Professors, and were seen on the benches of the audience."

prompted and accomplished in that capacity is seen from the history of the literati of later years; innumerable are those who prize him as their teacher, benefactor, and friend. Who can enumerate the dedications in great and small books which were offered to him from far and near, partly out of gratitude, partly as expressions of praise and recognition? Out of all the great number of dissertations which have appeared here, the best have been accomplished with and through him. Read the words of affection and love in the elder Sömmerring's inaugural dissertation on Blumenbach¹, which has since become so famous, and you will want nothing more.

When his pupil Rudolphi, in conjunction with Stieglitz and Lodemann, who had equally been instructed by him in science, canvassed the German physicians, in order to celebrate the doctor's jubilee of their great teacher in a worthy manner, all to whom he had been a leader either by speech or writing rose like one man, and perpetuated the recollection of the event with a medal², and by the foundation of a travelling scholarship³.

The naturalists of his day endeavoured to recognize the services of the Nestor of their science by naming after him plants, animals, and stones. It was for him a particular pleasure, that on the morning of the day of his doctor's jubilee (Sept. 18, 1825), his colleague Schrader showed him a drawing of the new kind of plant, *Blumenbachia insignis*⁴.

¹ *De basi Encephali*. Gött. 1778, 4to. And Baldinger's title to it: *Epitome neurologiæ physiologico-pathologicae*, and in the *Curriculum vitæ Sömmerring*, p. 15: "Exc. Blumenbach was not only my most desirable instructor in general zoology, mineralogy, physiology, pathology, the particular history of man, and in relating the traditions of medicine, but also a distinguished patron, who deigned to treat me as a friend. Such was his kindness that he not only often took me as his companion in his zoological and mineralogical excursions, but also in his vivisections and experiments, which he carried on at his own expense in order to illustrate publicly the physiological part of natural history, he permitted me most kindly to give him my personal and manual assistance."

² The dedication runs: *Viro illustri Germaniæ decori diem semisecularem Physiophili Germanici læte gratulantur*. On the medal are drawn an European, Ethiopian, and Mongolian skull with the legend: *Naturæ interpreti, ossa loqui jubenti Physiophili Germanici*. d. 19 Sept. 1825. [Wood-cuts from this medal have been given on the title-page. Ed.]

³ The value of the travelling scholarship was 600 gold thalers. *Comp. Gött. gel. Anz.* 1829, st. 73, s. 721.

⁴ *Comp. Comment. Soc. R. Sc. Gött.* Vol. VI. 1828, p. 91-138.—A *Blumen-*

Although the confidence of the world in the learning of the aged veteran rested on firm foundations, still notwithstanding that he never left off continually improving it, for he was always putting fresh life into what he knew, and endeavouring to add new matter to his acquisitions. In his pocket-book we find the following remark made in later days. "Although I have been many years now delivering lectures, still up to this time I have never once been into the lecture-room without having prepared myself afresh, and specially for every particular hour, because I know from experience how much injury many teachers have done to themselves, by considering as unnecessary these perpetual preparations for lectures, which they have read already twenty times and more."

Blumenbach never, above all, allowed himself to repose upon his happy natural advantages, but was always endeavouring without ceasing to procure for them the greatest possible development. Only I may remark here, that his manner of speaking and writing never grew old, but on the contrary remained interesting and in many respects masterly, and was such as to fix the attention of hearer and reader in a remarkable way.

It is worth while to bring into notice the following extract from his note-book, which is intimately connected with the solidity and repose of his delivery. "Amongst the rules on which my father most strongly insisted in our education, was one especially, that when we had once commenced a sentence with a certain form of construction we must go on with it, and try to carry it out completely, and we were never allowed to begin over again, and join another construction on to the first. This was afterwards of great assistance to me towards an easy delivery."

Blumenbach not only developed himself into a most superior teacher by natural talent, reflection and experience, but he also possessed both by practice and by natural advantages the gift, in ordinary conversation, of bringing out the main points in his

bachia multifida is drawn and described in Curtis' *Botanical Magazine*, Vol. 64, 1837. Pl. 3599.

answers and stories, partly by short terse sentences, partly by unexpected hints. He was always lucky enough to hit the nail on the head, to bring the subject into a fresh position, and to attack it in new and interesting ways. He would sometimes describe reason as "the desire of perfecting oneself, or the determination to accommodate oneself to circumstances," and his manner both of address and of doing business was a standing commentary on this definition.

Generally he preferred listening to speaking; frequently he would only let fall isolated sentences, leaving people to guess at the connection; he avoided direct contradiction, and was pleased when his meaning was understood, without his having been obliged to express himself in so many words. In this way he spared the personal feelings of others, gladly recognized assistance from without, and was tender to human weaknesses, especially the vanity of authorship¹.

Grammar had sometimes to give way in his cursory discourse for his immediate objects. In other respects his talk, just like above all his style and delivery, was the result of conscious deliberation. In his note-book I find written down the following remark: "In the delivery of my lectures, as in my writings, I have always endeavoured to follow Quintilian's pattern! This is it. 'I² tried to throw in some brilliancy, not for the sake of displaying my genius, but that in this way I might more readily attract youth to the acquaintance of those things which are considered necessary for study. For it seemed probable that if the lecture had anything pleasant in it they

¹ He was of opinion that this in respect of opinions upon it, might fairly stand upon the same footing as personal beauty. Hence he used to remark on the latter: "If a toad could speak and were asked which was the loveliest creature upon God's earth, it would say simpering, that modesty forbade it to give a real opinion on that point."

In his pronunciation he followed ordinary usage, quoting Horace, '*quem penes arbitrium est, et jus, et norma loquendi*.' He used Adelung as a decisive authority, and that dictionary always lay by the side of his table. Purists were a nuisance to him. To call granite *kornstein*, he said, made him shudder.

He always tried to correct the improper use of definite words, especially with a view to the language of natural history: viz. 'My canary bird sings beautifully.' 'To hear a canary bird *sing* I would go ten miles; but perhaps it *pipes*.' 'Yes, pipes, sings.' 'Ah, ah, now we understand each other.'

² *Instit. orator.* l. III. c. 1. Ludg. Bat. 1720, p. 211.

would be more glad to learn; whereas a dry and barren mode of teaching would probably turn their minds away, and grate rudely against ears tender by nature.”

After what has been said already about Blumenbach's relations to the outer world, it seems almost superfluous to go on mentioning in detail how numerous and honourable his connections with that world became.

It might be sufficient to mention, that 78 learned societies elected him as a member. There was scarcely any scientific body of reputation in the wide extent of cultivated nations which did not send him its diploma by way of testifying their respect.

One of the necessary consequences of this was a very extensive correspondence, and though much of the correspondence between him and distinguished persons has already been printed¹, there must still remain, on the other hand, a great deal, which will one day be made public. Blumenbach himself laid the greatest stress upon his correspondence with Haller, Camper and Bonnet, and considered these as amongst the fortunate incidents of his life².

He was made Secretary to the Physical and Mathematical branches of our Society in 1812, and in 1814 General Secretary. In this capacity, it was his duty to keep up the connection between it and allied institutions, as well as with the individuals who belonged to it, both at home and abroad; to prepare the memorials of deceased members, and to compose the introductions to the printed volumes of our Society. We are all witnesses of the zeal and devotion with which he fulfilled these

¹ Viz. with Zach, to whom particularly he gave information about distant travellers. *Allgem. Geogr. Ephem.* B. II. s. 66, 158. B. III. s. 101. With Carl Erenbert von Moll in his *Mittheil. aus mein. briefwechsel*, 1829, Abthl. I. s. 56—63, on general subjects of natural history. With Johann Heinrich Merk in his *Briefen*, published by K. Wagner, Darmstadt, 1835, Nos. 197, 218, 250, principally on primeval bones.

² *Medic. Bibl.* B. III. s. 734. These entries are to be found in his journal: “1775, Nov. 1, My first acquaintance with De Luc; 1777, Nov. 21, with G. Forster, 1778, in summer, with Camper. In the same year my correspondence with Baron Asch began, 1781 with R. Forster in Halle; in Bern, 1782, my acquaintance and subsequent correspondence with Bonnet; in 1786 my correspondence with Banks.”

honourable duties. He had laid down himself the 84th year¹ as the natural termination of human life, and so it might be regarded as one of his many peculiarities, that it was not till his 88th year that he expressed a wish, in a higher quarter, to be relieved of that office.

There are still some of his official relations to be noticed, which brought him into manifold connection with others, and into business transactions with colleagues and magistrates, namely, his position towards the Faculty, the Library, and the public Natural History Collections. In all these different circles it may be said, that he conducted himself to universal satisfaction, and gave proofs in every detail of his knowledge, his experience, his forbearance and good feeling.

As member of the Faculty of Honours², he distinguished himself throughout by conscientiousness in delivering the judgments demanded of him, by giving out his individual statements of the prizes, by mild and moderate examinations. He did neither too little nor too much. During his decanate in 1818 he created 76 doctors, the greatest number since the foundation of the University. He fulfilled that office with all its obligations up to 1835. On the 20th Feb. 1826, his Professor's jubilee was celebrated. Blumenbach himself considered it a remarkable occurrence, that he in his 60th year³ should be already not only the senior of the medical faculty, but also that of the whole Senate. He showed that the case had now really occurred which Michaelis⁴ had declared was scarcely possible.

As member of the Library Committee he was always ready to give his advice and influence for the improvement of an institution he held so dear. He arranged⁵, as its Director, the

¹ *Medic. Bibl.* B. III. s. 181. "The goal which many old people arrive at, but few pass by."

² In 1783 he was assessor; in 1791 he shared the post with Gmelin, and in 1803, after his death, held it alone.

³ When Richter, July 23, 1812, had died, 71 years old.

⁴ In his *Raisonnement über die protest. Universit.* Th. II. s. 343: "The senior of a whole University can hardly be a man of sixty years, but generally somewhat younger or older than 80."

⁵ *Gött. gel. Anz.* 1778, st. 122, s. 986.

University Museum, and continued to overlook it to extreme old age, when he could no more attend to it personally. To his name also it was owing that many presents were sent to it from far and near¹.

Blumenbach never undertook the office of Proctor of the University, although he knew as well as anybody else how to deal properly with the students, and to remain in the best understanding possible with older persons and with his superiors. Very early in the day he had asked it as a favour of the Curator, that he might never be chosen for that office. His familiarity with the older conditions of discipline, and the then unavoidable disturbances which agitated the University, and his fear² of being withdrawn from pure scientific activity by this official business determined him to come to this conclusion.

But this refusal did not prevent him from doing all the services in his power, both to the University and the town, by deputations of all kinds. On the 10th June, 1802, he went with Martens to Hanover, and on the 5th Nov. 1805, to Cassel, in the same company, to visit Mortier. On the part of the higher authorities such a value was set upon these two organs of the University, that it was made its duty never to put them aside on any important occasion³.

¹ Comp. *Some Notices of the University Museum in Annalen der Braunsch. Lüneb. Churlande*. Jahrg. I. 1787, st. 3, s. 84—99. Jahrg. II. 1788, st. 2, s. 25—35. In his sketches of subjects of natural history, he always mentions where the examples quoted were to be found in our Museum.

² In his journal I find written with a lead pencil: "From the year when Ruhnken was made Rector Magnificus, says his biographer Wyttjenbach (Ludg. B. 1799, 8vo. p. 141), he became lost to literary pursuits."

³ In a P.M. of the University and School department at Hanover to the University d. 12 Jan. 1805: "In respect of the business which under the present circumstances are to be seen to by the Privy Councillor von Martens, which do not ordinarily belong to the duties of Proctor, it will continue to be the case, and so long as the condition of things renders it necessary, that all and every communication with the French generals, whatever name they may have, shall be conducted by Privy Councillor Martens, or, if he is unable, by Privy Councillor Blumenbach, since both are known to the French generals through the University deputations they have already been employed upon. In consequence, the rules hitherto attended to must be resumed, according to which, in all cases where it is necessary to send a deputation of honour, the Proctor of the day does not go himself, but must send a deputation, and that must consist, when there is no necessity for its being more numerous, of Privy Councillors von Martens and Blumenbach, and if a more numerous one be sent, then these two must always be members of it."

On the 28th Aug. 1806, Blumenbach and Martens set out for Paris: on the 28th Sept. they had an audience of the Emperor. On the 30th Oct. 1812, Blumenbach went, as deputy of the University, with Sartorius to Heiligenstadt, to the headquarters of Bernadotte, the subsequent King of Sweden.

In consequence of these important services, combined with his other academical exertions, the town-magistrates resolved to give him a most unusual proof of their recognition of them: namely, on the 1st March, 1824, the magistracy of the town decreed him a twenty years' exemption from the municipal taxes imposed upon his house.

With respect to the outer appearance and personal effect of the departed, they are undoubtedly still fresh in our memory. Still perhaps some outlines may be of use to preserve them fresh, especially since in his last years he lived very much retired in his apartments, and so many had very little opportunity of coming in contact with him.

No one who had once seen or conversed with Blumenbach could easily forget him; and he knew how to make himself valuable to every one who lived with him. Even in extreme old age, when the weight of years had bent even his resisting back, there he stood and sat, as if cast in bronze, in every look a man. Any one who heard the stout voice with which he answered, "Come in," to a knock at his door; or saw the wonderful play of muscles in his expressive face, and remarked in any interview his undisturbed equanimity and collectedness, and the freshness and cheerfulness of his spirit, soon knew with whom he had to do.

No one left his presence without receiving either an instructive narrative, a cheerful story of old times, or some weighty hint. He understood a joke, and knew how to return one. If any one let slip in conversation an expression, or a suggestion, which was wanting in due consideration or respect, or if any one appeared as if he wanted to impose upon the old man, he must have been wonderfully put down, when he snatched at his cap, and bared his snow-white head, with the

words, "Old Blumenbach is obliged to you." I cannot leave untold how Astley Cooper, in 1839, said in a letter of recommendation, that King George IV. had declared that he had never seen so imposing a man as Blumenbach.

His health suffered on an average little disturbance. Blumenbach refused to be ill; he had no time for it. In his youth he was delicate, and was liable to violent bleedings at the nose, and even to spitting blood; but by taking the greatest care, and by regularity in his mode of life, he arrived in the course of years to a very sound state of health. He declared that the occupying himself with natural history had done him this good among others, that he could sleep like a marmot, and had acquired the digestion of an ostrich. Every now and then he suffered from dry coughs, inflammation of the eyes, or lumbago, which he called the thorn in the flesh. If he found it impossible to subdue or conceal the complaint, he went to a physician, and followed his prescriptions most punctually. Glad indeed was he when he found himself relieved of the inconvenience, and thankfully did he exclaim with Jesus Sirach, "A short madness is the best."

Extreme old age can scarcely avoid bringing with it some unpleasant consequences, but altogether the still intellectual old man enjoyed sound bodily health. After he had got over the cold days in the middle of the past January pretty well, he was seized at the commencement of the mild but stormy weather with his cough, which however left him again. Only the old annoyance, of not being able conveniently to void his phlegm, drew from him the remark, that in the pathology which he possessed, this chapter had not been satisfactorily accomplished.

On Saturday the 18th Jan. I was summoned between eight and nine o'clock in the morning from the lecture to visit him. He had chosen to get out of bed, but had been unable to walk or to stand. On the first seizure they had placed him in his arm-chair, close to the stove, and covered him with pillows. When I came I saw what I had never before remarked in him, and what immediately filled me with uneasiness; his body trembled

all over, and was cold to the touch; his expression was altered; his pulse was irregular in the highest degree; nothing could enable him to throw off his dejection.

Still by good luck this threatening storm passed away. The remedies which were applied might congratulate themselves on a happy result. When I saw him again two hours afterwards, he gave me his hand, he had recovered his usual expression, and the natural motions seemed to have suffered no essential interference.

However tranquillizing this might appear, still there was the apprehension that so lamentable and powerful an accident, which had proceeded from the central organ of the nervous system, in an organism which had hitherto gone on working with such regularity, might only too easily occur again, and at last bring to a standstill the machine which was kept going by habit alone. When I saw him again at 5 o'clock in the evening, he stretched out his arms towards me, and spoke aloud; still I thought that he felt as if he must not consider the circumstances as so trivial. About 8 o'clock I found him in a sound sleep, which continued throughout the night.

Sunday and Monday passed off well enough, and he spent them, with the exception of his siesta, in his arm-chair. When I entered his room, he gave me so loud a "good day," that, according to his own expression, the angels in heaven might have heard him. When I asked him how he was, I received for answer, "Quite in the old way." He had books brought to him again, read them, had himself read to at intervals, and was particularly cheerful. But I could only share this happy tone of mind by constraint, for his pulse became more and more irregular, and fainter, and when he spoke I missed the old tone of voice.

On Tuesday one might still have been deceived as to his condition on the first glance, because when I asked to feel his pulse, he thrust out his arm with energy, in his usual way: and he showed by all his other motions that the power of the will over the body was yet entire. This was the first time that he spent the whole day in bed. Still in the evening I conversed

with him upon subjects of natural history, and recounted to him some bygone passages of his life, at which the expression of his face, his cheerful humour, and many a subtle remark showed the clearness of his mind.

Wednesday morning, the 22nd, about 8 o'clock, contrary to his previous custom, he did not extend his hand to me; still he quickly recognized me, and was as friendly as usual. On my repeated inquiry whether he felt anywhere any pain, any oppression, or any anxiety, he answered straight and decided with "No, nowhere at all." The only thing which annoyed him was, that he could not expel the phlegm from the windpipe. He began to doze, and spoke at intervals a few words to himself; but when a question was put to him he always gave an answer. As I was going away he said, "Adieu, dear friend." These were the last words which I heard him speak plainly and connectedly. The tone of his voice remained good till midday. Dozing and feebleness increased; but his consciousness remained undisturbed till evening, and when I asked him several times if I should give him something stimulating, he opened his eyes readily, and fixed them hard. At half-past 8 I could feel no pulse, and the inspirations were numbered. I laid my hand upon him and said, "Adieu;" but the dear well-known voice, which had so often heartily responded to the greeting, was silent for ever. Five minutes afterwards he was in another world.

There still remain some isolated strokes to be given, which may help to the better comprehension of this generous and unusual character, who retained his innate harmony even in the very hour of departure.

Blumenbach never shed tears¹. After a heavy domestic misfortune I found him collected, reading some travels of natu-

¹ "Look for the lachrymal gland after my death," he said sometimes, "you will find none," or "I must have nerves like cords, or none at all." The dissection never took place. It would have been most interesting in many respects for the more accurate knowledge of the particular parts of the brain, and their connection with each other, the comparison of the skull, the windpipe and the lungs, with the well-known symptoms which were seen during the life of the old man, who was remarkable even in a physical point of view. Still, with respect even to the

ral history, and calling my attention to the pictures in them. He suffered through his whole organization, yet he made no complaint, and shed no tear, but tried to occupy himself as far as he possibly could.

He never used spectacles, and in his 88th year read with ease the smallest letters and type. His handwriting changed remarkably according to the different epochs of his existence. In his youth and active manhood he wrote beautifully. Then he was afflicted with a difficulty of using his writing finger, and after he had tried hard to conquer it without success, he accustomed himself to write with the left hand, guiding the pen with the right. For this purpose he used a swan's quill, and the thickest lead-pencil. In his 87th year however he again attempted to write with the right hand, and the strokes by their firmness and clearness recalled the best performances of his earlier years. If you ever got him to talk on the chapter of writing, he took care never to forget to recommend the art of writing handily in your pocket, which had been of great service to him on diplomatic missions, through the agency of a short thick lead-pencil and strong parchment paper.

Blumenbach was a man of the watch, which always lay beside him. No one could be more punctual than he was. If any one expected anything from him to no purpose, he might be quite certain that it had not been forgotten, but that he had let it go, because he considered that the proper thing to do.

Immediately after he had got up in the morning he was frizzled and powdered, according to the old-fashioned style, and then put on his boots and kept them on till he went to bed. It took a great deal of trouble to get him at last to use slippers and a footstool. Even his physician scarcely ever saw him in his night-shirt. As he spent the whole day entirely in full dress, so also he scarcely in other ways indulged himself in the slightest relaxation. He had a sofa for visitors in his study,

peculiarities mentioned, it must be considered that the forms hinted at were easy to be seen, and as normal as might be; but long-continued design, iron will, and custom, which had almost become law, had made their influence distinctly tell upon them.

but he never made any use of it himself. Only on one single occasion, when he was ill and obliged to lay up, did I find him upon it. He pronounced against arm-chairs for a long time, and said there ought to be pricks in the back of them; and it was only by degrees that this position was made agreeable to him.

It was one of his principles never to sleep in the day-time; only in his very last years did he allow himself a siesta. It was his opinion that a man ought always to be wakeful, active, and cheerful, and on that account he was slow to understand how he sometimes in his 88th year went off into a doze in the day-time, in the absence of any outward excitements.

He kept himself free from every confining habit; after allowing himself to smoke for some time, he gave it up again, and did the same by snuff-taking too, which had occupied the place of the other. After his 86th year I saw his snuff-box no more.

Moderation at table was his habit; he always took exactly the same quantity. He used to tell of himself that he had never been drunk¹.

With respect to this unusual self-reliance which Blumenbach arrived at so early, and which he retained to the end, it will be interesting to hear his own account, to what influence he principally ascribed this important result. It stands written in his journal. "My parents, among other wise and serviceable principles of education, as I consider, never allowed us children to know that they had any possessions. All we knew was this, that everything which they had was entirely their own unencumbered property. That fortunate ignorance was for me a mainspring to more earnest exertion to help myself on alone, and it is that principally which has made of me an useful man. How many unhappy examples there are, on the other hand, of young people, who have neglected to cultivate their natural capacities solely for the reason, that their parents have too

¹ He used to say with Johnson, "Abstinence is an easy virtue, temperance a very difficult one."

early let them become acquainted with the lucrative inheritance which was awaiting them."

Blumenbach was economical, but he understood also how to give. He knew how to appreciate the value of money, without at the same time setting any higher consideration upon it. There was once a passage in his note-book which some time later was written down: "However singular it may appear to many, still it is literally true, that up to the date at which I am now writing, I have never once solicited any emolument, salary, or addition, or anything else of the kind concerning myself, but have received everything throughout from the Hanoverian government, from my first appointment up to the last addition allotted to me in the summer of 1813, entirely from free gifts, that is, without any exertion of my own; and so also under the kingdom of Westphalia."

As Blumenbach himself was beyond all things discreet, both in public and in private affairs, so also he expected the same from those he associated with. He had no objection to a piece of news, especially when it was of a piquant nature, but beyond that, he troubled himself little about the concerns of other people. He used to say, "*De occultis non judicat ecclesia.*"

- If any one complained to him of his position, and solicited his intercession, he would encourage him with the saying, "*Lipsia vult expectari.*" If it appeared to him that the petitioner stepped beyond the proper bounds, he would exclaim, "I shall remember you," and with these words the negotiation would be closed.

Blumenbach was always himself, never distracted, never preoccupied. Had he been woke up in the middle of the night and questioned upon the most important subjects, he would certainly have given the same distinct answer as at midday. He acted according to definite inner determination. He acted or declined to do so according to certain rules of the understanding, which became at last a sort of machinery of his character.

He was never wanting in attention to others, and he had

the faculty of attaching to himself in a subtle way men of all classes, but especially superior men. It was his plan to bring up and, as it were, accidentally to allude to whatever must necessarily have an agreeable effect, and to stir beforehand all the strings in harmony; and in this way he won for himself many well-wishers, and knew how to keep them when they were won. Politeness he considered as a duty, and he knew very well how to use it, both to attract people and to keep them at a distance.

Not only did he closely adhere to what was demanded by custom, and all the observances of society and official relations, but his attention to these things put many younger men to the blush.

Blumenbach was always anxious to learn, and was never idle for a moment. He used to say, he only knew ennui by reputation. As he was reckoned the great curiosity of Göttingen, and scarcely any traveller omitted to visit him, he was kept continually on the stretch through the quantity of fresh information. To this also contributed his unceasing reading—in the evenings he preferred to be read to—and his unexampled memory, which he was always trying to strengthen by taking memoranda. He often used to laugh at the perverted manners of certain men who wanted to be taken for clever, and complained about their bad memory, when that was the very thing they could exercise a certain power over. One hears people say, "I have a most wretched memory," but never "What a miserable judgment I have."

It will serve to show how attentive he still was in extreme old age, that one Wednesday morning when the *Literary Notices* had been published, and in one of the Reviews, without naming him, I had hinted at something which concerned him, he greeted me with the words, "To-day old Blumenbach has been out-jockeyed."

He was not in the habit of speaking his opinion or his ideas straight out, but he left them to be seen through a hint, or only by a jest; any one who knew his way of speaking wanted no further explanation.

He was not one of those who received everything immediately as true and certain¹; but he guarded himself and also warned others against carrying their scepticism too far. He said it would be a subject for a very acute head to decide, whether too much credulity or hyper-scepticism had done the most harm to science, and he inclined to the latter opinion. He considered it as above all necessary, on every assertion to keep in view the individual from whom it proceeded².

He always found fault when any one lost himself in common figures of speech, instead of seeing the way clearly to the foundation of appearances from the immediately connected facts. Thus he used to express himself: "The lament, that mankind is always growing weaker, is a miserable Jeremiad. Lay upon one of our horses the horse-trappings of the middle ages—it will be crushed under them as a pancake. Yet these drink no tea or coffee, and do not suffer from the evil, which has been given us by America. Habit does it all."

In his thought as in his action all was considerate, connected and moderate.

In what has been done already, an attempt has been made

¹ In his preface to the *Samml. Merkwürd. reisegesch.* Erst. Th., Memmingen, 1789, he gives some words of warning against too confident a belief in the accounts of travellers.

² This lay at the bottom of a playfully told story. "In Moravia on a sun-bright day there was a thunder-clap, and stones like pigeons' eggs fell from the sky. The testimony of those who heard it is remarkable, as a specimen of what often occurs in courts of law. 'Did you hear the noise? what did you think it was like?' 'Like platoon-firing.' 'What are you?' 'Musketeer.' 'Did you hear it?' 'Yes.' 'And what did you think of it?' 'It was like an old carriage rolling along the street.' 'What are you?' 'Postilion.' 'And you?' 'Yes.' 'What did you think it was like?' 'Janissary music.' 'Have you ever heard Janissary music?' 'Never in my life, but I think it must sound something like that.'"

He used to take opportunities of showing how people sometimes propagate an error from a self-pleasing delusion, viz.:—"The Hungarians boast that on their Tokay grapes you will often find grains of pure gold. All is not gold, which glitters. Looked at more closely it is no real gold, but glittering yellow caterpillars' eggs."

His criticism was intelligible, and yet was more subtle and instructive than the most elaborate exposition. Thus, "The Sloth can never be brought to move both feet at the same time. When it goes it moves first one foot, stops and sighs Ah! It could not have been in the universal menagerie of Mount Ararat, because it lives in Brazil only; if it had had to come from Ararat to Brazil, it would not have been there yet."

to throw off a silhouette of Blumenbach's exertions and personal appearance; in conclusion, I may be allowed to give some account of his nearest external connections.

His father, Henrich Blumenbach, was first of all private tutor in Leipzig, and in 1737 became tutor to the chancellor of Oppel in Gotha, and in the same year was made professor in the school there. He had a very choice library, and many engravings and maps. For Leipzig, the place of his birth, he had such a preference, that when his son went, against his wishes, to Göttingen, he alluded in a school prospectus to the new University as the *quasi modo genita*; but however at last he changed, and later in the day ceased to refuse it the well-merited honour of being the *optimo modo genita*.

His mother, Charlotte Elenore Hedwig, was the daughter of Buddeus, the Vice-Chancellor of Gotha, grand-daughter of the Jena theologian; she died in 1793, sixty-eight years old. The departed left behind him, in his journal, this remark upon her. "A woman full of great and at the same time domestic virtues, and perfectly faultless." He had a brother who died in the prime of life, in an employment at Gotha, and his sister was the wife of Professor Voigt, who afterwards came to Jena.

In 1759 Blumenbach went to the school of Michaelis. In 1768 he delivered an address on two occasions: on the Duke's birth-day, and the marriage of the then Crown-prince.

Amongst the interesting men in Gotha, to whom he often went, and who were glad to see him, was the Vice-President Klüppel, who took a great share in the Gotha *Literary Journal*, which began to appear in 1774.

On the 12th October, 1769, Blumenbach, then seventeen years old, went from school to Jena, where Baldinger was then Proctor, principally to attend the lectures of the then famous Kaltschmidt; but on the very day when his lectures commenced, he dropped down dead, from a stroke of apoplexy, at the wedding dance of one of his friends. In his place at Easter, 1770, Neubauer came to Jena, to whom Blumenbach took prodigiously, and to whom he was very grateful.

After he had studied there for three years, he felt the necessity of getting instruction from other teachers, and soon made his choice, in consequence of the renown Göttingen then enjoyed. On the 15th October, 1772, he arrived here; on the 18th September, 1775, a Sunday, he took his degree¹; and on the 31st October he began to read his first lecture.

For his learned career he considered it the greatest of good luck that he came to Göttingen. He shared, as he often remarked, with regard to a learned life the saying of Schlözer²: "To live out of Göttingen is not to live at all."

Nor did he conceal from himself that the fact of his career coinciding with the necessities of that day, and his personal position to influential men, had had an important influence on the recognition of his labours³.

By his marriage (on the 19th Oct. 1778) he became the brother-in-law of Heyne, and as his father-in-law George Brandes, and afterwards his brother-in-law Ernst Brandes, managed the affairs of the University, we can see partly at least how Blumenbach came to have so much influence in it.

¹ His sponsor was his old Jena tutor Baldinger, who in the meantime had been summoned here, and who on that occasion had written his thesis *De malignitate in morbis ex mente Hippocratis*, 1775, on which depended Blumenbach's career in life. According to him Blumenbach had attended the following lectures. In Jena: logic with Hennings; pure mathematics and physics with Succow; botany, physiology, pathology, and the history of medicine with Baldinger; anatomy, surgery, and midwifery with Neubauer; practical medicine and pathology with Nicolai; natural history and archaeology with Walch; German antiquities with Müller; English language with Tanner. In Göttingen: on the power of medicine, on the nature and cure of diseases with Vogel; pharmaceutical chemistry and the preparation of medicines, the art of prescribing and clinical lectures with Baldinger; botany and materia medica with Murray; anatomy and midwifery with Wrisberg; pathology and ocular diseases with Richter; mineralogy with Kästner; history of the mammalia with Erxleben; natural history with Buttner; on the odes of Horace with Heyne; the English language with Dietz; the Swedish with Schlözer.

On the occasion of that anniversary, Heyne said (*Opusc.* Vol. II. p. 215): "Blumenbach, from whose genius and learning we expect something very great."

² In his life written by Blumenbach himself. Götting. 1802, s. 197.

³ He had early made a mark against the two following passages: "It makes a great difference on what times a man's peculiar virtues fall" (Plin. *Nat. Hist.* vii. 29). "Nor can any one have so splendid a genius that he can come to light without material, opportunity, or even a patron and some one to recommend him" (Plin. *Ep.* vi. 23).

What he was to this institution of learning in general, and our society in particular, that the world knows well, and history will not forget. In our tablets of memory his name will always endure, and his recollection will always renew in us the picture of a great and beautiful activity.

He who like him has satisfied the best of his time, he has lived for all time.
