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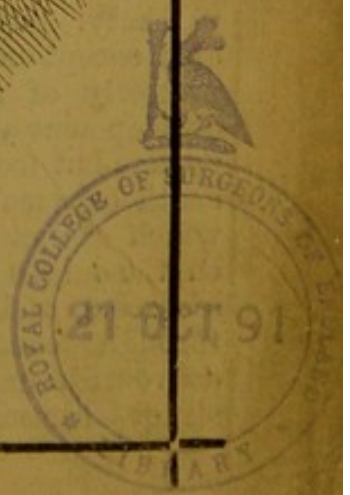
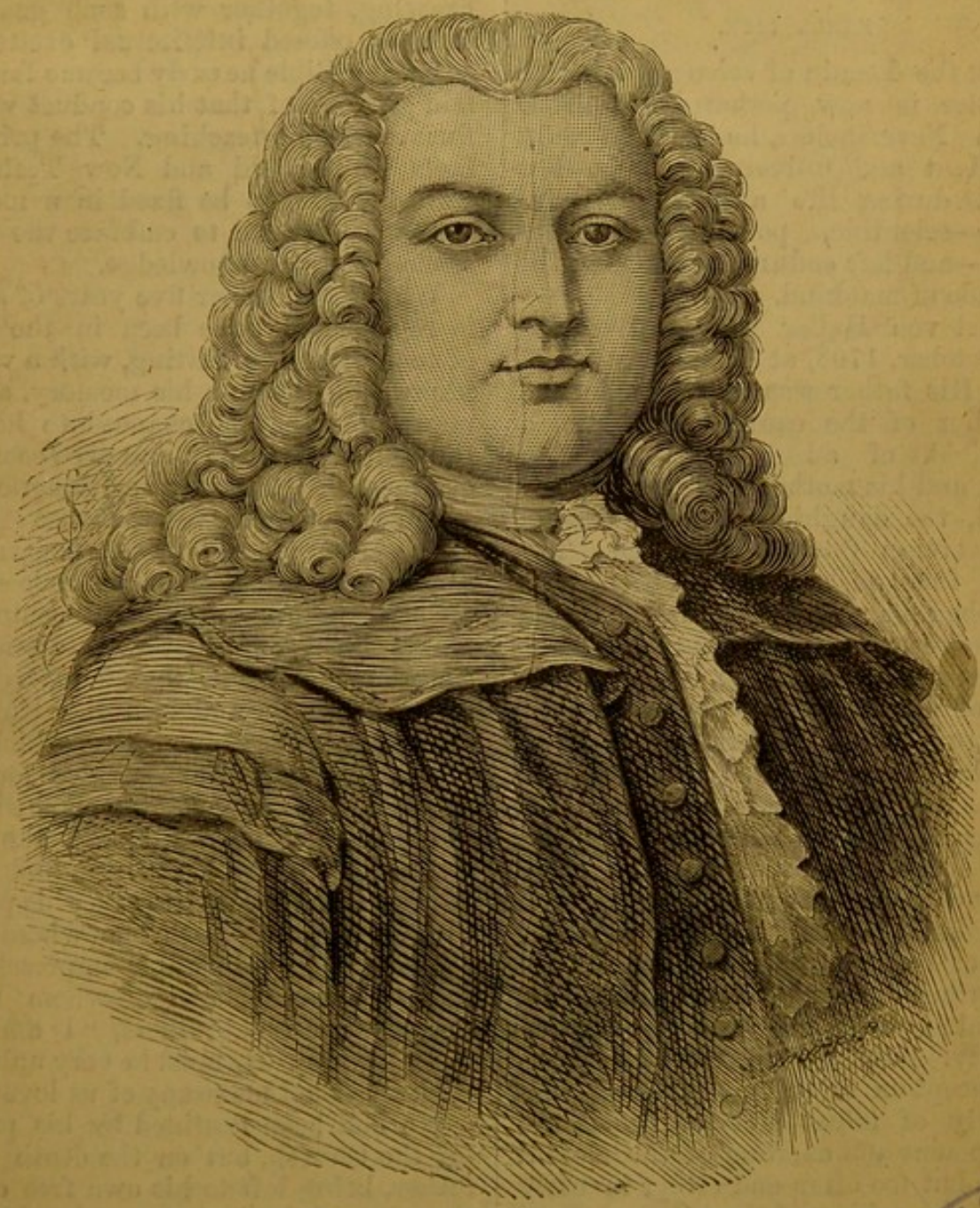
*The British and Foreign*

# BARON VON HALLER.

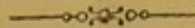
by J. R. Bennett.

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# BARON VON HALLER.



## I.

### EARLY LIFE.

OUTSIDE the domain of science the name of Haller is now perhaps but little known. Nevertheless, he was not only a brilliant and universal genius, but exerted during life a widespread influence—scientific, political, and religious—and left enduring claims on the gratitude of mankind.

Albert von Haller was born on the 18th October, 1708, at Berne in Switzerland. His father was an advocate and chancellor of the canton of Berne, a descendant of an ancient patrician family, and his mother was Annie Mary Enguel, the daughter of a member of the Sovereign Council of Berne. The Haller family had long been distinguished for piety; and Albert, when only four years of age, used to make short exhortations to the domestics, on texts of Scripture, at the customary family prayers. The father, though he died when the boy was only thirteen years old, clearly foresaw the distinction to which his son would attain.

The accounts on record of the early display of Haller's mental powers, while yet an infant, would be incredible did they not rest on the most unquestionable authority; and the more so as his physical constitution was weak and "rickety." He was therefore a remarkable exception to the general rule that precocity of talent and the premature development and exercise of the mental powers but too often end either in early death or wrecking of the intellect, facts which cannot be too strongly impressed on the minds of parents. Confined to his room, and unable to take exercise through continued debility, he endeavoured, unaided by masters, to instruct himself, and was constantly

occupied with writing, reading, and drawing, together with such games of skill as offered intellectual excitement. With the Bible he early became familiar, and gave proof that his conduct was influenced by its teaching. The principal facts of the Old and New Testament were the first to be fixed in a memory that was destined to embrace the whole circle of human knowledge.

Whilst still under five years of age he is reported to have been in the habit of committing to writing, with a view of impressing them on his memory, all the new words that he chanced to hear in the course of the day, and even composed outlines of grammar, arithmetic, and various sciences for his own use. When nine years of age he had prepared for himself Greek and Hebrew Lexicons and a Chaldee grammar, and had compiled a biographical and historical dictionary, containing above 2000 articles, from the works of Bayle and Moreri. He early developed a talent for satire, which it is not surprising to learn created for him, in after life, some enemies. When only ten years old he could read the New Testament in Greek at sight, and wrote a satire in Latin verse against his private tutor, a severe pedantic man whose harsh conduct left an indelible impression on the pupil's mind, and of whom Haller remarked to his brothers, "I am very sorry for him. He must be very unhappy, for he does not make any of us love him."

He had been destined by his parents for the Church, but on the death of his father, being left to his own free choice, though with limited means, he chose the medical profession, and was sent to school for a short time to complete his preliminary education. Whilst here he translated into Greek an essay which had been given him to write in Latin, in order to prove his fitness for moving into

a higher class, so that his master said, "he was obliged to keep Haller in the shade in order to suppress the jealousy and ill-feeling of the other scholars." It was in this school that the poetic faculty first showed itself which in after life brought him no little renown.

In 1722 he went for a while to Bienne to reside with a surgeon, a friend of his father, but imbued with the principles of Descartes. It was here that his repugnance first showed itself for all human schemes leading to the denial of God as Creator and providential Ruler. He boldly put to the master questions which his philosophy did not enable him to answer, but which proved the profundity of the questioner's judgment.

He was then fourteen years of age, and his health at this time became so feeble that he was again almost entirely confined to the house, his only solace being the writing of verse in the various languages with which he was familiar. The result was a deluge of poetry on a multitude of topics. One night, aroused by an adjoining house being on fire, he hastily collected his poetic productions and, leaving all else, fled to a neighbouring hill. Seven years after these same cherished productions were by himself committed to the flames. Dissatisfied with his position at Bienne and the inadequacy of such means as he desired for his advance in natural science, he was allowed to remove to Tübingen in 1723. This University, not then very flourishing, afforded him opportunity for the study of botany as well as anatomy, and it was here that he made his first discovery in relation to the salivary organs, and gained the respect and admiration of his fellow-students, instead of the contempt with which he had hitherto been treated as a strange wild fellow, and nothing more. Haller, however, soon became disgusted with the coarse intemperate life of his fellow-students, which he found intolerable, and determined in 1725 to migrate to Leyden, where the celebrated Boerhaave occupied the chair of medicine.

Here he met with everything agreeable to a mind intent on the acquisition of science, and every facility for pursuing his studies. But the University was at this time infected with scepticism and even atheism, by which many of the young Swiss students were poisoned, and from which it has been said Haller did not entirely escape, although he subsequently derived from this perilous society arguments in defence of Christianity. Stimulated by a love of work worthy of his great master, he made notes of Boerhaave's lectures, which he subsequently published, together with his own commentaries, in Latin, four vols. 4to. Having obtained his degree of M.D. in 1727, he visited England, Paris, and Germany, making acquaintance with the most distinguished men in each country—in England, among others, of Cheselden, the famous anatomist and surgeon, and of Sir Hans Sloane, then President of the Royal Society, of which distinguished body Haller in 1739 was elected a Fellow.

Attracted by the celebrity of Bernouilli, he repaired to Basle in the year 1728, and joined the select company of students who alone were competent to profit by the mathematical genius of the man who made available the discoveries of Newton and Leibnitz for the profoundest problems of astronomical and other sciences. Henceforth Haller ceased not to interest himself in mathematics, which he applied with distinguished success to the theory of respiration and the physics of the human frame. At Basle, as at Leyden, his chief relaxation was in the study of botany, and in his rambles over the beautiful Swiss mountains he gathered materials not only for subsequent publications on the atmosphere, temperature, winds and glaciers of his native land, but also for those of his works which obtained a world-wide reputation, viz. his *Enumeratio Methodica Stirpium Helvetiæ*, &c., and his poem on the *Alps*, each of which ran through many editions both in French and German. His great

botanical work comprises accurate descriptions of 2486 plants, several hundreds of which were described for the first time. He did not, however, accept the classification of his great contemporary Linnæus, which occasioned some unpleasantness between the two great botanists.

At the age of twenty-four, in 1729, he returned to Berne, and taught anatomy as well as practised his profession; and, though looked on with distrust by his fellow-citizens as too learned in so many departments, he received from Upsal his first public honour, being elected member of the Academy of Science. He was, however, appointed Librarian of Berne City, the books, manuscripts, and medals of which he speedily put in order, and was delighted by having discovered numerous manuscripts and documents relating to his ancestors, who bore the title of "Reformers." The name of Haller appears first in the person of Jean, born at Wyl in Thurgau about 1420, who fought against the Burgundians at the battle of Morat. Berthold, the most celebrated of the three Hallers, to whom Berne owes in great part the propagation of evangelical doctrine, was born in Swabia in 1492. He was a fellow-student with Melancthon and his lifelong friend. Jean, the second, broke away as a priest from the Roman Church by marrying, and was followed by numerous other priests, and, after rendering the highest service to the Protestant cause, he fell in battle by the side of his bosom friend the great Reformer, Ulrich Zwingli. He left behind him numerous records of his studies and labours, and among the rest a New Testament copied in large characters by his own hand, with interspaces for observations with which the sacred Word had inspired him. It was from this Jean that the subject of our sketch descended, and who left a son, Jean the third, who rendered long and signal service to the Protestant cause in Switzerland, and is often spoken of in history as the "*Réformateur du Pays-d'en haut*."

## II.

AT GÖTTINGEN UNIVERSITY.

In 1736 George II., as Elector of Hanover, founded a University at Göttingen and invited Haller to fill one of the chairs in medicine. He was loath to leave his native country despite of numerous trials and obstacles to his advancement that he had met with from his fellow-citizens. He had, however, taken to wife a beautiful and charming woman named Marianne Wys, to whom he was devotedly attached, and by whom he had three children, and felt that for their sakes he should accept the preferment offered him. Their entrance to Göttingen was, alas, signalled by a sad accident, their carriage being upset, and Madame Haller so seriously injured that she died a fortnight after. Alone, a stranger in a city devoid of all the natural charms of his native country, it is easy to imagine the effect on Haller's sensitive nature. He for a time lost all his energy; science, far from affording him relief, lost its charms and became irksome. He again had recourse to poetry, and wrote an elegy on his lost partner, which is considered one of the choicest pieces of his verse. But his grief did not lead him to poetry alone; he turned his attention to God and eternity with an intensity he had not hitherto done. He commenced a journal which he continued till his death. In the first solemn passages of this journal he says:—

"May God in His mercy bless my various enterprises. The death of my beloved wife has occasioned me great sorrow, and has singularly awakened my conscience. . . . I am alarmed at the terrible consequences of a life void of sanctification, and I desire to seek to become better. Hitherto I have felt within me something that desired perfection for my soul, but it has been without real love of God, without emotion, without hatred of sin, without sorrow.

"I cannot pray as I ought, nor avail

myself of the merits of Christ. . . . I have reason to doubt whether there is any good in me. O God, I cannot produce it; but Thou canst. Soften my hard heart; teach me to know Jesus, that I may not believe in Him only with my mouth, but that I may be able to accept the sacrifice of His blood."

The Government was alarmed to find that their valued professor's depression was such as to lead him to think of retiring, and with great delicacy and generosity obtained assistance for him in the person of a young friend from Basle, M. Huber, to whom Haller poured out his heart, and who gave him courage to retain the post that he held for seventeen years.

He was twice married after the death of his first wife, but the name and recollection of Marianne recur at every stage of his subsequent life and on his death-bed.

The greater part of Haller's original scientific and professional work was accomplished at Göttingen, more especially that which constituted an epoch in medicine, and by which mankind are benefiting to the present day. A *résumé* of this has been given in the various *Éloges* delivered by men of science in all lands, by Cuvier and others in dictionaries and histories of medicine, but the limits of this sketch do not admit of full details. We must, however, mention those subjects with which Haller's name will ever be associated, and which alone would have sufficed to secure him his laurel crown.

Notwithstanding the important and lasting value of the knowledge acquired through Harvey's brilliant discovery of the circulation of the blood, vital phenomena and the various processes of the living body continued to be explained on mechanical and chemical or metaphysical theories alone, until Haller gave to the world the results of his investigations and experimental researches. He first saw that to render physiology as certain as other physical sciences, it must be based on correct anatomy, both human

and comparative, and devoted himself to prolonged and careful dissections and experiments both on dead and living subjects. It would be difficult to say how large a part of the facts of vital and medical science now familiarly known we owe to his extraordinary labours. By these he has acquired the title of "Father of Physiology," a title by which, in the progress of discovery and amid all the future changes of medical opinion, he must ever continue to be distinguished.

He clearly saw and maintained that the nature of the mind is different from that of the body, and says that "this is more particularly shown from the consideration of those abstract ideas and affections of the mind which have nothing in common with the organs of sense." But the then prevailing doctrines of Stahl, that the agency of the rational soul (*anima*) is necessary to the production and regulation of the vital as well as the animal functions of the human body, he refuted so ably and completely as to leave little or nothing to be added by his successors. Believing that there were powers peculiar to the living body which must govern those actions which are found only in it, he sought for these by way of observation and experiment, and determined that they were mainly two—irritability and sensibility. He proved that muscular fibre, when removed from the body, still contracts for a while under the influence of stimuli, whilst nerves, when detached and stimulated, show no sign of motion. Hence irritability cannot be derived from the nerves, but must depend on some special power in the muscle, which he termed *vis insita*, a vital power distinct from elasticity or any known mere physical power. He further showed the distinction between voluntary and involuntary muscles, the former being called into action by the will transmitting to them the requisite stimulus through the nerves, the latter acting, as in the case of the heart, through appropriate stimuli independent



of the will. On this, his great doctrine of irritability and sensibility, he based all the phenomena of life, and around which he ranged all the facts of physiology known in his day in his *Elementa Physiologiæ*. The promulgation of these specially Hallerian doctrines, together with his important experimental researches on the formation of the chick *in ovo* and on the growth of bone, though forming but a small part of his labours, furnished a series of results unequalled in number, accuracy, and importance by those of any other physiologist, and gained for the Göttingen professor universal renown.

In his commentaries on Boerhaave's teaching he enters on the discussion of the connection between mind and matter, and observes: "Those have behaved modestly, who, confessing themselves ignorant as to the manner in which the body and mind are united, have contented themselves with proceeding no farther than the known laws which the Creator Himself has prescribed without inventing and supplying us with conjectures."

He did not, however, escape the penalty of detraction, misrepresentation, and irritating disputes, whilst nobly upholding his Christian character in opposition to the scepticism of the day. On leaving the University, he had, through his influence with the Government, established the Göttingen Academy of Sciences, and founded a church for his fellow-citizens of the reformed faith. He had stimulated the enthusiasm of a large class of admiring students, and revolutionised in many countries that science which seeks to penetrate the intimate structure of the living body, the laws by which it is governed, lives and grows, reproduces its species, decays, and dies.

### III.

#### RETURN TO BERNE.

During his residence at Göttingen, Haller was appointed physician to George II., and received through

Francis I. of Austria the hereditary title of Baron, and having declined, among various other distinguished posts offered him, the chair held by Albinus, the great anatomist in Holland, that of botany, vacated by Dellenius at Oxford, and the pressing invitation of Frederick the Great to establish himself at Berlin on such conditions as he might choose, he paid a visit to Berne in 1753, which resulted in his refixing his abode there after an absence of seventeen years. In this determination he was mainly influenced by his intense patriotism and love of the natural beauties of his native land, though certain domestic reasons weighed also with him.

The Bernese now speedily showed their appreciation of their renowned fellow-citizen by appointing him to various important posts. He was made Governor of the "Hôtel du Sénat;" Prefect of the Bailliwick of Aigle; and subsequently Director of the Salt Mines of Bex. There he occupied the "Château de Roche," and returned to his botanical expeditions in the Canton de Vaud. Vicq-d'Azyr, in his *Éloge* of Haller, says: "It was a singular sight to see the administration of the Swiss salt works committed to a philosopher, who devoted himself to simplifying the methods by which salt is obtained, increasing its amount and its purity, and making it less costly to the community; affording a bright example to all others charged with like duties in all other European countries. He wrote a number of memoirs for the State, important edicts of the Sanitary Council, on the means of arresting cattle disease, and on the restoration of the drowned." He was made member of the Privy Council of State, and carried through various important political measures. He was active in the establishment of the Academy of Lausanne; in the founding of the first orphanage in Switzerland, and a school for sons of the patricians. His piety gained him a seat in the Consistory, which is a tribunal of man-

ners, and his probity a place in the financial council. His souvenir remains engraved on the front of the hospital outside the city, where this noble inscription bears testimony to his faith and charity, "Christo in pauperibus." The clergy of the Canton de Vaud had long been in great distress through the inadequacy of their stipends. Haller was appointed commissioner, and obtained from the Government an increase of salary.

As a politician, he was an aristocrat, and advocated concentration of the power of the Government; to be exercised, however, with the most rigid impartiality and active kindness. His views on political economy he published in the form of three romances, the first of which is entitled "*Usonq.*" In this he shows how a virtuous but despotic monarch may make his people happy and prosperous by encouraging justice and morality.

It may be described as a treatise on moral government, presented under a dramatic form. It was published in 1771, and dedicated to Duke Frederick de Holstein, hereditary Prince of Norway. In the preface he says, "One of the glories of the present epoch is the improved education given to young princes destined to reign, and is no longer restricted to teaching the military art to those who are to govern men. They are no longer called to understand how to make war, but are taught to consider it an evil, and that the efforts of every wise Prince should be to maintain peace."

He was affable in manner, and of great liberality, one to whom his subordinates were greatly attached. When one came to him soliciting an office, who, replying to questions put to him as to his acquirements, said that they were few, but that he hoped to make up for his deficiencies by good sense—"Take care what you say, young man," said Haller, "it is a great thing what you mention; let me tell you that out of a hundred learned men there is scarcely one that has good sense, and that good

sense, of all qualities, is the most precious!"

Writing once to an Italian nobleman who had refused him aid on behalf of a poor stranger, he says, "You bear the title of Count, and you are surprised that a poor friend should have recourse to your charity; remember how glorious is the origin of this title, which in Anglo-Saxon means lord, *i.e.*, a man who gives bread to others."

It was during his residence at Roche that he published his great work on the *Plants of Switzerland*, preceded by a sketch of the physical geography of the country; and thus accomplished one of his great desires, "to sow for posterity and pursue the path that shall bring us there."

Geology was then in its infancy, but did not escape the attention of Haller. He was one of the earliest to maintain that the six days of creation implied periods of thousands of years.

In the pleasant rural abode at Roche, in the valley that runs east from the Lake of Geneva, Haller and his wife saw their children happily grow up, and develop characters that reflected honour on their parents, whilst his own occupations, literary, social, and political, were pursued with unremitting zeal and success. But in the second year of his sojourn he was disturbed by a contest with Voltaire, who appealed to him to obtain the aid of the Government of Berne to prosecute a bookseller named Grasset, for publishing an anti-Voltairian work. Haller refused to interfere; but the correspondence recalled a former one that had been forced on Haller, in consequence of the infamous conduct of La Metrie, who had published a system of materialism, entitled *Man a Machine*, which he had impudently dedicated to Haller as his friend and associate, pretending that it was based on Haller's doctrine of vital actions.

Although it was not till later in life that the *Letters* against infidels were published, we refer to them here. On the appearance of Voltaire's famous work on the Bible, Haller could not re-

strain his indignation, and his heart gave utterance to a cry of grief and alarm. The worthy old man, borne down by labour and suffering, regained the animation of his best days to combat the cynical antagonist of the Word of God. Unfortunately for France he wrote in German, and did not approve of a French translation during Voltaire's life, saying that, however little he respected him, he did not wish to vex him. Haller, however, lived but two years after his last attack against the freethinkers, and the *Letters* were then widely circulated in a French translation. The title in German was *Letters on some Objections of a Living Freethinker against Revelation*. We cite the opinion of so excellent a judge as Professor P. A. Stapfer on this work:—"It may be said that there is not a single one of the 'Patriarch of Ferney's' objections which Haller has not examined and met; not one of the jokes or hostile allusions scattered with profusion, and repeated *ad nauseam* in the pamphlets and writings of all kinds that have issued from the pen of this clever and indefatigable old man, has Haller left unanswered. In this contest the superiority of Haller is unquestionable; he crushes his adversary with the club of a giant. No historical blunder, no error of ignorance, whether in philosophy, philology, or science, escapes the apologist; it is a display of heavy artillery in a combat with light troops."

In the preface to a second edition of the *Letters*, Haller speaks with singular modesty of this "heavy artillery," and says: "If I have derived great consolation from the rapid sale of these *Letters*, I am far from attributing it to my talents. But little initiated in the sciences that furnish evidences of religion, having had no other guides in my theological studies than the sacred Scriptures, and some historians, I see no other cause to which I can attribute the success of this work, but that there remains some attachment to religion, which, in spite of the progress of a

second paganism, still preserves to our Lord faithful servants, to whom the truth, though devoid of ornament, is not the less venerable. . . . Having examined *The Bible explained at Last*, a work in which the author surpasses himself, I cannot resist a feeling of indignation, when I see the ardour, not to use a stronger expression, with which M. de Voltaire strives to destroy my hopes. . . . This man still lives, his career extending beyond the ordinary age of mortals; he writes and labours without ceasing against his Creator, who has loaded him with honours, riches, and talents; he daily seduces both men of the world who do not give themselves the trouble to read the refutation of his errors, and women whose whole knowledge consists in submitting blindly to the notions of some savant, and young men whom infidelity frees from disagreeable restraint—the sole barrier to their corrupt desires. O Thou Judge of the Earth! it is from Thy goodness alone that we can expect a change so salutary, that Thy light may illumine and penetrate his heart, and put an end to the revolt of a being on whom Thou hast heaped so many favours. May Thy faithful ones enjoy the blessedness of seeing the most audacious of Thy enemies fall at Thy feet, and find themselves reunited with him in the happy abode which Thy grace, ever powerful and victorious, has prepared for them."

In the first of the *Letters* addressed to a friend, Haller speaks of his relations with Voltaire, and of the bold enterprise that he meditates against this apostle of infidelity, with a simplicity and frankness that is remarkable. "I know this celebrated man personally," he says. "He has honoured me with his visits, I have read his works with pleasure, often with enthusiasm, but sometimes also with that aversion which one cannot but feel when one sees their author employ his great talents in robbing us of motives the most powerful for becoming as good and just as it is possible for man to be. I know his vindictive spirit, the malignity of his pen—formidable to all who

refuse to pay him the homage of their admiration—his skill in flattering the great, his predilection for hypotheses devoid of proof, though upheld with the firmest assurance. Often have I deplored the abuse of talents so rare, which he might make useful to the world, but which he has employed against truth and virtue, and against God Himself. The price of my labour will be an irreconcilable hatred; he will pursue me with biting irony and the most bitter satire. But I submit, should I be happy enough to deliver a single Christian from painful doubt; if I can prevent a single bad deed, I shall bless heaven for granting me this consolation for his hatred!”

Haller then goes on to show that a contest with Voltaire is not so difficult as at first sight might appear—pointing out his ignorance of the sacred writings, knowing only the Vulgate text, imperfect acquaintance with the history of ancient peoples, seeing only in his reading what he wished to see—questions not mentioned in the work he is criticising. In order to repeat objections a thousand times refuted, he is content to clothe them in new ornaments as though they thus acquired new force, he is hesitating and inconstant on all that regards the divinity, and thus exposes himself to frequent contradiction. The *Letters* had a very large circulation, and are replete with treasures of knowledge and sentiment relating to the most abstract questions, beginning with original sin.

Haller possessed two indispensable qualifications for producing his incredible amount and diversity of work—activity and memory. The former was incessant, and the latter almost fabulous. On one occasion, after fracturing his arm, he began writing with his left hand before the arrival of the surgeon to attend to the broken bone. On another occasion in advanced age he sustained a serious fall, and fearing that his memory might in consequence be impaired, with a view of assuring himself that this precious faculty was retained, he set himself to write down

the names of all the rivers that flow into the ocean, and was only satisfied when he found that he had forgotten none.

Science he loved for its own sake. To his pupil and dear friend Zimmerman (who wrote on Solitude) he speaks thus in one of his letters: “I do not agree with your views on the sciences. I believe them to be as innocent as the mechanical arts. One consideration alone is sufficient to render them irreproachable—it is, not to have in view fame or fortune or simply to occupy an hour with useful reading; for God has not made the marvels of nature to be known by beasts; it is for men that the beautiful spectacle is designed. St. Paul was sufficiently learned to have been reproached with falling into excess without thereby having rendered himself unacceptable to God, or without having warned men of their danger. Calm and retreat are not made for man; he carries his world with him, even in his cell where his ill humours are only increased. I do not think that the apostles or early Christians went to that excess which arouses within us that devouring mental passion which must be furnished with food if we would not lose our reason.”

His physiological studies and experiments were continued long after leaving his professorial chair, and acquired for him such renown that renewed efforts were made by various universities to recall him from his retreat. The King of Prussia sought to induce him to accept the post of Chancellor of the University of Halle, and the Empress Catherine urged him to become President of the Academy of St. Petersburg. But the only offer that tempted him was that of George III., who in 1764 pressed him to return immediately to Göttingen, and even wrote several times to the Senate of Berne asking them to support his request. The Senate, however, took an opposite course. They knew how much Haller's straitened pecuniary circumstances must influence him, and they created a special office and conferred it

on him, by which he was placed in perpetual requisition by the State, and with a formal clause that the office should cease at his death. Writing to Tissot on this occasion, Haller says, "Their excellencies, to the number of one hundred and fifty-seven, have unanimously resolved to retain me on a representation made to them by the 'Conseil Secret.' They have also accorded me a pension of one thousand lire. It is not the trifling and disproportionate sum that deserves notice, but the novelty of the proceeding. Behold me, then, fixed in my native country. This trifling sum will help me to pass the remainder of my days more comfortably, and I should be still happier if public duties did not occupy so much of my time."

#### IV.

##### HALLER'S PRIVATE LIFE.

The famous "De Saussure," in his *Alpine Travels*, says:

"I visited him several times at Roche, where I was always received with the utmost kindness, and on the last occasion with unusual warmth, as he said he was longing for a visit from some one with whom he could converse on the subject of his studies. I stayed eight days in his house, and had the happiness of being constantly with him, as he suspended all his occupations. I was at that time twenty-four years of age, and had not then seen, nor have I since, any man of his stamp. It is impossible to express the admiration, the respect—I had almost said the feeling of adoration—with which this great man inspired me. What truth, what variety, what opulence, what profundity, what clearness in his ideas! His conversation was animated not with that factious fire which dazzles and at the same time fatigues, but with that soft penetrating glow which warms and seems to raise you to a level with him who is speaking to you. If he felt his superiority—and how could he be ignorant of it?—he never offended your *amour propre*; he listened to objections

with the utmost patience, resolved doubts and never assumed a peremptory or dogmatic tone, *unless it were on a question that might prove prejudicial to morals or religion.*

"These eight days have left indelible traces on my spirit, his conversation inspired me with a love for study and for all that is good and virtuous. I spent my nights in meditating on and making notes of what he had said in the day."

Bonstetten, a celebrated contemporary Swiss author, says:—"Nothing could be more beautiful than his look, which was both piercing and sensitive. Genius glowed in his lustrous eyes. He was of all men that I have known the most spiritual and the most amiable. His immense knowledge had all the grace of impromptu. He lived habitually in his spacious library, where he was always to be found writing. One day I found him writing, and was talking with him on free will, when the English newspapers were brought in; he at once began reading the papers, without leaving either his pen or his conversation. I was so astonished at his presence of mind, that when he had finished his newspaper, I took it up and asked permission to question him on the contents of certain articles. He had taken them all in."

Another instance is recorded of Haller's marvellous power of attention. During one of the sittings of the Council of Two Hundred he was interpellated for permitting himself to read during the debate, and told that he could not know what the council had been discussing. He shut his book, rose and recited the course which the discussion had taken and the resolutions to which the council had arrived. Everafter he was allowed to pursue his own course. It is curious to learn that though he never showed any ambition to be known as the greatest savant of his time, he was grieved and annoyed at repeated failures to secure a seat in the lesser (cabinet) council of Berne, which, however, appears to have resulted

more from the complex and chance character of the mode of election, than from any jealousy or fear on the part of those whom he counted as his friends.

We cannot refrain from reproducing a further portrait of our subject drawn by another celebrity of his time, Vicq-d'Azyr. "He was tall and of commanding stature. His physiognomy, which a downcast look and habitual tension of the muscles rendered serious, was full of expression, and varied with the degree of energy, excited by the subject occupying his thoughts. His considerable increase of *embonpoint*, feebleness of sight, and the character of his penmanship, so minute that it became almost illegible, must necessarily have made his work difficult. He was, however, so imperiously governed by his love of study, that he could not abstain from reading or writing immediately after his meals and far into the night. His impatience under the enforced idleness entailed by his maladies was such that he was always more anxious to abridge their duration than to obviate their recurrence. This desire for prompt relief led him to excess in the use of opium, of the dangerous effects of which he was fully aware."

"It is surprising that, pursuing such a manner of life, he should have attained the age of seventy; for his whole life in the strictest sense was a continual sacrifice of pleasure and health to the love of science. The reading of new books was the sole recreation that he allowed himself. He slept in his library, and sometimes passed several months without leaving it. He took his meals there, and when his family assembled to join him he was surrounded by all that he held most dear in the world. His excessive love of study influenced not only his character, but also all by which he was surrounded. His house became the sanctuary of science, to the worship of which everything was consecrated. The pupils, of whom great numbers worked under his eyes, his children, Madame Haller herself, who learnt to draw and paint in order to make herself useful, his friends

and fellow-citizens all felt it a duty to assist in his labours."

Among many others whose testimony is equally deserving of confidence, may be mentioned Fenelon and Klopstock, and in our own country Sheppard (in *The Autumn Dream*), and Fletcher of Madeley, who says: "This truly great man has given another proof of the truth of Lord Bacon's assertion, that, although smatterers in philosophy are often impious, true philosophers are always religious."

All were astonished at the accuracy and extent of his knowledge in every department of science and literature—his prodigious memory, so that there was not in his great library a single dictionary, nor one needed, of all the various modern languages that he spoke with facility; his readiness to communicate his knowledge, and equal readiness to confess his ignorance, as when he was asked by a noted Swedish physician what was the origin of the endemic national disease "goitre," he replied, "I know not."

Although a most affectionate parent, he took but little interest in the education of his children, who were left, when not in his presence, to develop their natural dispositions. Like many other physicians, he was unwilling to make use of his medical knowledge on behalf of members of his own family, and when one of his daughters brought to him a little grandchild, of whom he was very fond, he simply kissed the child and told its mother to take him to a physician. He was not, however, unwilling to study any disease with which they were affected, with a view to increase his knowledge, though the awe that he inspired often proved an obstacle. Thus, when one of the children was brought to him tormented by hiccup, it ceased in his presence, and he observed, "It is singular that I can never study the hiccup in one of my own children." But he was far from neglecting their eternal interests. If he allowed them to wander as they pleased in terrestrial ways, he strove to guide them into the strait and narrow

path, and whilst enjoying their affections here below, constrained them to join him above.

Of his paternal affection, he has left an enduring monument in his letters to his daughter, Madame Zeerleder, first published in German in 1772, five years before his death, under the title, *On the Truths of Divine Revelation*. He wished to leave not only for females of his own family, but for women in general, and for the least instructed of mankind throughout the world, the most precious fruits of his Christian experience—the results of his conflicts and constant researches on the one thing needful. This last gift to a beloved daughter breathes the highest wisdom and the most sincere piety, presenting the truths that Haller wished to establish with admirable clearness, exquisite sensibility, and with all the authority that strict logic and true science can render.

In the first letter he says: "It is to me, my dear girl, a great satisfaction to see that at your age, when life is most fascinating, you have learnt to think seriously. This life, however sweet and full of charm it may be, must one day end. The term may seem far off, and I shall not live long enough to witness it. But the day that is to be the last of your life is insensibly approaching, and when this awful moment arrives, what is it that will sustain you? The caresses of your children, the converse of dear friends that your kind heart has gained, will be but feeble resources. Think you that medical art will be able to ward off the fatal hour? The earth will seem to bend beneath your tottering feet, you will enter into eternity—immense, unmeasurable eternity—where are to be found other joys and other griefs than those you have known in this life. Evils far more dreadful, blessings infinitely superior to those which this earth affords, await you in this new state. When your eyes no longer behold the light, your ears no longer hear the voices of those that are dearest to you, when you feel

the arrows of death penetrate your trembling heart, who will support amid these dread elements of fear if God withdraws His succour? It has been often and well said that to arm ourselves by inattention against evil to come, and against that day which will decide our lot for ever, is extravagant folly. Miserable expedient that cannot delay for a moment nor ameliorate in the least the destiny that awaits us."

"The enemies of revelation have sometimes made a confession that deserves our attention. They have acknowledged that a Christian, whose object of faith they regard as chimerical, ceases not to be happy, at a time when his body is well-nigh consumed and is hastening to corruption, at that moment when the soul seems deprived of all support. They confess that his hopes, however ill-founded they consider them, and only deserving the contempt of philosophers, never forsake but sustain and embolden him. His faith, say they, fills him with courage and enables him to look death in the face, because he believes that he sees an eternity of happiness beyond. But faith cannot produce such effects unless it be firmly established, nor is it faith unless it rests on a solid foundation. If it is only on custom and example, and not on reason and the conviction of our own minds that it is based, it is false and groundless and cannot give us confidence and peace. Death is terrible to human nature, the sufferings which precede it, the steady lapse of time that is inevitably drawing us nearer to our dissolution, must excite in us painful and sad feelings which we cannot resist, when faith is feeble and unreliable. If we would banish such fears and entertain more happy thoughts, we must possess a faith that carries as much certainty to the mind as do the impressions we receive from sensible objects . . . We must judge for ourselves, must see, as it were, with our own eyes the proofs of religion, and must feel their force. Both the understanding and the heart must give their assent, if these

proofs are to have any influence on our lives."

"Apply yourself therefore with all confidence to these researches. The rock of salvation is solidity itself, and cannot be shaken either by the doubts of the sceptic or the sarcasm of the sneerer. Your father, during a long life spent in continual labour and study, felt compelled to consecrate a portion of his time to inquiries of this nature, the result of which was that those truths which have been called in question always appeared to him more evident and deserving of respect the more attentively he examined the reasons and proofs on which they were founded."

After describing the characters and competency of the men who in his day were the best known in the sceptical ranks, he proceeds: "I have read the works of their most famous authors. Not one of them was capable of understanding the true and precise acceptation of the terms made use of in the Bible. Not one of them had entered deep enough into the study of nature to trace divinity in the various objects which surround us, notwithstanding that its displays are so numerous, so eminent and illustrious in every work of creation, whether we consider its design or the disposition of created beings. Therefore that which afforded Hobbes matter for infidelity confirmed the faith of Newton; that which was to Ofray a subject for sport, was to Boerhaave a boundless theme for wonder and adoration."

"Some persons have thought that if a layman, who in the course of a long life hath had occasion to testify his love for the truth and hath sacrificed to it great temporary advantages, was to write in defence of the faith, and to found his arguments on such facts only as were incontestable, his suffrage would carry with it much greater weight and authority. Some friends of mine, from the too good opinion they have been pleased to entertain of me, have suggested that it was in my power to accomplish the task agreeably to their

ideas; and that under my hands the work would be useful not only to you but to other young persons who have at the same time an inclination to studious inquiries. They were persuaded that the less erudition there should be in the work the better. . . . In short, it is for your sake alone that I now address you on this subject, not to obtain the approbation of the learned. The last words of a father far advanced in years, and who sees his end approaching, will doubtless make a greater impression on your heart than all the lessons of a skilful teacher."

## V.

## CORRESPONDENCE, JOURNAL, AND LAST DAYS.

Amid all his constant and varied labours Haller maintained a correspondence with many of the most learned and prominent men of his day, but especially with several of his most distinguished fellow-countrymen, and from these letters and his private journal much might be extracted that could not fail both to interest and instruct our readers, whilst revealing the inner life of this remarkable man. The letters to Haller from the scientific and literary celebrities of his day were published at Berne, in Latin, and occupy 6 vols. 8vo.

The journal was translated and published in French in 1836, under the title of *Thoughts extracted from the Journal of Albert de Haller*, and has been characterised as a continued prayer intermingled with the various events of his life—always seeking and asking for the same help, whether oppressed by a sense of his own unworthiness and failures and over addiction to the pursuits of this life, or when overflowing with the love of God. Surprise has been expressed at the frequent evidence of want of assurance and gloomy doubts as to his real change of heart. But it has been replied that account must be taken of the age in which he lived, the frequent agitation into which he was



thrown by the renewed attacks of Voltairian philosophy, and the consequent investigations that he felt called to make, both to confirm his own convictions and to reply to his adversaries.

We extract one or two passages at different periods of his life. In 1737, when twenty-seven years of age, is the following entry:—

“April 10.—God has given me a book to warn and instruct me. But does my heart recognise the Divine voice? Saviour of the world, Thou who hast shed Thy blood for all mankind, give me to know Thee, to love Thee, to feel my need, to find the path by which alone I can have peace in this life and obtain eternal happiness.

“January 24, 1741.—‘Blessed are the pure in heart.’ O my God, how far I am from this sixth beatitude! How spiteful I am, envious, touchy, mocking and evil speaking. I recognise all these sins and yet daily commit them. They flow from my heart, as water from a fountain, as soon as I speak or act.

“January 28.—Satisfied again, and why? Because my work pleases my spirit, because I have just finished a new work, because I am every day surrounded by vain men prodigal of their flatteries. Devoid of these circumstances I have the greatest reason for being sad. Am I not poor before God? Without love, without devotion, without zeal, without firmness in my decisions, solely occupied with *opere operate*. What am I before God? A poor worm of the earth.

“May 18.—In the midst of the calm that I enjoy I will lift up my heart to God, to give thanks for all the blessings that He deigns to accord me. He has so improved my position that I am living, though far from being over-rich, yet wanting nothing. He has given me to know my duties, and to feel the bonds that attach me to Him. House, position, family, are so many blessings that I enjoy without having merited them, and that I would not wish different from what they are. O Redeemer, teach me to use Thy benefits in accordance with Thy will.

“July 25.—I read the Bible and study the life of the Saviour suffering for us, and then begin to think of my plants and a thousand useless things. If a journal comes in I leave the Word of God and read till the holy seed is choked, so as to leave but the smallest grain in my heart. Is it then surprising that I make no advance, not the least progress in what is good?”

The Geneva Library contains a long correspondence between Haller and his friend Bonnet,<sup>1</sup> replete with varied interest on diverse topics—political, scientific and religious.

In 1754 Haller writes: “You are rendering the public a great service, sir, in teaching men the *art of observing*. As for myself, my sole remedy against error has been to verify an infinite number of times everything even what I have considered non-arguable. It is almost impossible for an unprejudiced mind to misapprehend the same thing twenty or thirty times. It is, I think, owing to not repeating the same observations before applying them to the support of a favoured system, that there has been so much bad observation, and is still, both in France and elsewhere.”

“There are two classes of savans, those who observe frequently without writing, and those who write without observing. The first class cannot be too largely increased, nor the second perhaps too much diminished. But there is a third still worse class, which observes badly.”

To the same friend on another occasion he writes: “We are all corrupt, my dear friend; man left to himself would invade all things to satisfy his soul’s thirst. The warrior would

<sup>1</sup> Bonnet was a distinguished naturalist and philosopher who was born at Geneva in 1720, and first attained eminence by his work on *Insectology*. His numerous researches led him to recognise the necessity of revelation, the evidence and truth of which he delighted to proclaim. His writings display deep and enlightened piety. Some have been translated into English, among others, the *Philosophic Researches into the Proofs of Christianity*.

subject the universe to his dominion, the sectary to his rules, and the philosopher to his opinions. Religion alone can teach us to look without vexation on the talents and prerogatives of our contemporaries." "When we determine to live as children, but children eternally submissive to the same father, established for ever in a residence unapproached by envy, we can in some measure overcome this innate jealousy based on our own will, whose pretensions are not restricted by nature."

In 1768, when Switzerland was politically much disturbed, he writes: "I would fain comfort my dear friend did I know how. Had it been a personal misfortune it would have been easy. There is a grandeur both in pardoning and suffering for faults. But the misfortune here is to our country. Can we be insensible to this, and pardon the injury done to it, as though it were a personal affair? In this case it seems a duty to be afflicted, a duty to detest the crimes of our country. And yet He who knew the counsels of God has made no exception. We are to pardon all faults, to sacrifice all griefs to the consoling thought that, though inflicted by the hand of man, they are the strokes of *supreme wisdom* that knows neither error nor cruelty. . . . This evil comes from God. Public calamities are the only means of interrupting the progress of luxury, arresting the advance of irreligion, the daughter of pride, that is the offspring of prosperity."

But our limits forbid further extracts from journal or correspondence.

It was near the moment when he was to render up his spirit that Joseph II., Emperor of Austria, paid him a visit, July 17, 1777. This visit made a great noise, because the Emperor refused the same honour to Voltaire, and passed by journey, to the intense mortification of the philosopher. When one felicitated the illustrious old man on the distinction paid him, he replied, "Blessed only are they whose names are inscribed in heaven." The distinction was increased

by the advice given by Maria Theresa, who had told her son to visit Haller and to avoid Voltaire. The Emperor on leaving Haller's apartment said to one of his sons, "Such a man as your father I have never known, genius allied to virtue! What riches, what dignity in his conversation, what manly eloquence. How grievous that we are so soon to lose such a man! I owe him two delightful hours."

On his return to Vienna he sent some choice wine and a supply of quinine, which, however, arrived too late—Haller having died a few days before. The Emperor was much pained to hear of his death, and when his library was to be sold, purchased it for 2000 louis d'or and presented it to the Milan Academy. Haller wrote an account of this visit to his friend Count Lambert but declined to have it published, and replied to the question whether it had not made him very happy—"I am on the confines of eternity, my good fortune and my happiness are beyond the tomb; all that I have on this side is but a momentary affair, a house of cards, gilded if you please, but to be thrown down by an inevitable wind." He retained his remarkable faculties to the last, and though he seems not to have entirely lost his habitual fear of death, the rod and staff of the Good Shepherd did not fail him in the valley of the shadow of death. His final words when drawing his last breath were a threefold invocation to his Saviour to receive his spirit.

He died on the 12th December, 1777, when Switzerland lost her most illustrious citizen. A few days before his death he wrote his last letter to his friend Count Lambert, in which he says:

"On the borders of eternity I see nothing that can assure me of my destiny, but the certainty of a Mediator who has paid my debt and given me ground to believe that God is reconciled to me and will pardon my faults, and the multitude of sins of which I have been guilty during the course of a long life; for I have entered on my 70th year."

The news of his death was received throughout Europe with the deepest regret, and called forth the warmest and most generous tributes to his worth and service to humanity. Eloquent *Éloges* were delivered in all the principal societies and academies by Condorcet, Cuvier, Senebier, and others.

Some idea of the extent of his labours may be formed from the fact that the titles of nearly 200 treatises published by him from 1727 to 1777 are given by Senebier, and that this list does not profess to be complete. His greatest work, the greatest in medical science of the 18th century, is his *Elementa Physiologiæ Corporis Humani*, 8 vols. 4to. It contains every fact and doctrine of physiology known at that time, and the elegance and classical beauty of his Latin has always been considered as a model for authors. His series of *Bibliothecæ* of anatomy, surgery, practical medicine, botany and natural history, form altogether 10 vols. 4to. His collected writings, comprising his *opera minora*, abundantly show that he was versed in oriental, classical and modern languages, and in every department of science, metaphysical, mathematical, physiological, moral and theological. Nor is there in all this marvellous record of work any evidence of vanity or display of learning, but, on

the contrary, a pervading air of modesty and loving search for truth.

Wealth he sought not, nor did he ever acquire. From the time that he left Göttingen, his means were very limited. His numerous writings do not appear to have done more than enable him to provide for the education of his family, keep up his vast library and supply his charitable purse. Of Cavendish it was said by Biot, that he was "le plus riche de tous les savans," and of Haller, that he was probably "plus savant que tous les riches."

But over and above all is to be noted his unvarying recognition of a supreme all-wise Creator and Governor of the universe, of the Divine origin and authority of the Sacred Scriptures, of the fallen nature of man and his need of a Saviour, of Jesus Christ as the Son of God, whom to know is eternal life; and amid all his physical fears and doubts and self-depreciation, an abiding sense of the pardoning love of God and trust in the atoning sacrifice of Christ for admission to the realms of eternal bliss. As a scientific philosopher of the highest order, he affords us a signal refutation of the unfounded notion, that there is, or can be, any opposition between natural science and Divine revelation.

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