

gan in the ardor of youth his scientific investigations, and the echo comes back from the Andes on the one hand, and from the Ural on the other; for what land or what tongue is there that does not pronounce the name of HUMBOLDT? It was his aim from the beginning of his scientific life, so to comprehend in his capacious survey all sciences in their inter-relations, as to be able to reduce these to the grand order of a system. How well he succeeded in this, the work whose name is on every lip, the name of Humboldt's *Cosmos*, well defines. It is not as a traveler merely,—it is not merely as a man of science, that the whole scientific world and the whole civilized world unite to do him homage. It is as one who labored in the great interests of science for *mankind*; for he ever kept within him a fresh and young and noble heart; and he himself bears testimony that the welfare of humanity was the crowning interest in his own mind in all his labors. This was the consummation he sought to reach, to benefit mankind; to uplift the race by the developments and arrangements of science in their own beautiful system, as subordinate to man's instruction and advantage.

But he has passed, in a serene old age, from that sphere which he so long lived to illumine with the lustre of his presence, with his genial hospitality, and with the products of his amazing research and industry. In that beautiful picture to which I have referred, in the Heart of the Andes, you see embosomed within the mountains, in the midst of tropical warmth and verdure, a peaceful lake, the ascent to which is by the Cross, and where those who have toiled up that weary way repose in security and serenity. So we hope that this great explorer, who illumined for us the Andes with the various lights of science, has ended his long and toilsome pilgrimage in some serene home within the everlasting mountains; for of what avail is all knowledge, all science, all truth, except it lead us onward and upward to that serene abode? By the vast comprehensiveness of his survey, by the accuracy of

his knowledge, by studying laws and principles with fidelity to truth, Humboldt evolved from the chaos of individual sciences that *Cosmos* of beauty, order and harmony which is the name of science for the physical creation; and so all our sciences and knowledges should be a sapphire stairway to lead us upward to that diviner *Cosmos*, where all truth, order, beauty, love, and joy, dwell forever under the perfected law and will of Him who made both nature and man, and find their harmony about His central throne.

The following letters addressed to the Domestic Corresponding Secretary were then read:\*

OBSERVATORY, WASHINGTON, }  
Thursday, May 26, 1859. }

MY DEAR SIR,—It would be to me a precious source of satisfaction to accept your invitation to be present next Thursday evening in the halls of the American Geographical and Statistical Society, and there unite with its fellows in their tribute to the great, the good, the most admirable of associates, the illustrious ALEXANDER VON HUMBOLDT, but circumstances that I cannot control compel me to forego the melancholy pleasure.

Baron HUMBOLDT was among scientists what our own WASHINGTON was among statesmen, upright and just, with attributes grand and lofty in their intellectual proportions; he lived a life that was beautiful in private, and publicly altogether lovely.

By that queer thing, thought, alone, he acquired sweet influences in the world, which but few men have ever lived to enjoy.

Having won these influences by patient toil as a student of nature, he used the power they gave him among men, not for self, but for the advancement of knowledge, and so rendered services in the cause of science which no man has ever surpassed.

By a word from him new fields of scientific

\* Letters were subsequently received from Sir Wm. E. Logan, Provincial Geologist, Montreal, and from Mr. Bayard Taylor.

research were opened ; and upon his suggestion the most learned societies and enlightened governments made haste to occupy them with laborers. As great, important and valuable as are the contributions which he made directly to the general stock of human knowledge, it may well be questioned whether those which, simply by his influence, he induced, assisted or enabled others to procure or to make, are not manifold greater.

With unerring judgment he knew how to encourage, and when to commend. Often in the loneliness of his calling, has the "well done" of this great man cheered and encouraged the student with his speciality, the philosopher with his researches.

No one has a better right to speak upon this subject than your guest, who is excusing himself, for almost if not quite the last letter that Baron HUMBOLDT wrote was to help on a good work with a good word.

That letter is now before me—a precious heir-loom. He was just up from a sick bed when it was written ; it is scarcely legible, so aged, feeble and trembling was the hand that held the pen.

The occasion was of his own lofty impulse, but the object was the great scheme of research, in which this country has led off, touching the physics of the sea. The observers and chief laborers in this system are volunteers. Every undertaking which requires, upon a wide field, the united and untiring efforts of many men, seems, no matter how progressive, to have its vicissitudes, its periods of sunshine, its moments of gloom ; for clouds come in the brightest sky, and they will cast shadows.

So in this of the sea. Fellow-laborers began to flag in zeal. They wanted just such encouragement as no other "traveler of the age" could give. His commendation of what had been done was incentive enough for renewed exertions. He perceived this from his lofty eminence, and bestowed praise.

It was thus that this great man used his great influence ; and it was thus that the last days of his illustrious life were crowned by an

act rendered with a grace that will embalm it with the sweetest odors in the memory of all true-hearted sailors.

Who more than I have cause to mourn the loss of such a friend, and to whom would the privilege of uniting in the homage you propose to the illustrious dead be more grateful than to

Your obedient servant,

M. F. MAURY ?

CAMBRIDGE, Saturday, May 28, 1859.

SIR,—I regret exceedingly that the preparations for my approaching visit to Europe must prevent me from accepting the invitation with which your Society has honored me, and from being present on an occasion which excites my warmest sympathy.

Please accept my acknowledgments for the invitation, and believe me,

Very respectfully yours,

L. AGASSIZ.

NEW HAVEN, Wednesday, May 25, 1859.

DEAR SIR,—Your esteemed favor of May 23, addressed to my father is at hand.

My father left New Haven a few days since for an absence in Massachusetts and New Hampshire probably of a month or more. I shall communicate your letter to him. I know how cordially he would unite with your distinguished associates in bearing his testimony of respect and affection to the memory of the greatest and wisest of the scholars and scientists of this age.

Yours with high regard,

B. SILLIMAN, JR.

NEW HAVEN, Saturday, May 28, 1859.

DEAR SIR,—I am gratified with the invitation which has been extended to me by the Geographical Society, to join in honors to the illustrious HUMBOLDT. But I am just now overburdened with duties in College and out, and doubt whether I shall be able to be present on the occasion.

Yours, respectfully,

JAMES D. DANA.

ALBANY, DUDLEY OBSERVATORY, }  
 Saturday, May 21, 1859. }

SIR,—Please express my warmest thanks to the Council of the American Geographical Society for their kind invitation to their meeting on June 2, commemorative of the late Alexander von Humboldt. As I not only have always had the highest veneration for this greatest of my countrymen, but as I also was honored by his special confidence during the time of my connection with the Royal Observatory at Berlin, and spent many hours with him in his study, which will never be forgotten, it would have given me the greatest satisfaction to be present at the meeting by which you intend to honor his memory, and I feel the deepest regret that my engagements will not allow me to do so, as I am obliged to leave here to-day and to return to Michigan for several weeks.

I remain, with the highest regard, yours,  
 F. BRUNNOW.

PHILADELPHIA, June 1st, 1859.

MY DEAR SIR,—I have the honor to acknowledge the receipt of your kind note, inviting me to be present at the meeting of the American Geographical and Statistical Society in commemoration of the late Alexander von Humboldt.

In common with all scientific students, I feel grief at the loss of one who has added so much to the progress of science, and deeply regret that we are deprived of the counsels of him, who by perceiving the intimate relations of different branches of learning, has more than any other established the basis for magnificent generalizations, which will facilitate the advance of the student of nature for all time.

I regret, therefore, that it is impossible for me to meet with your Society in expressing the last tribute of respect to this illustrious man; and the more do I feel this regret, because, to his love for science, Humboldt added a feeling which endears him to every true American—a devoted friendship for our country and our countrymen. Very sincerely,

JOHN L. LECONTE.

BOSTON, May 26, 1859.

DEAR SIR,—I have received your favor of yesterday, inviting me on behalf of the American Geographical and Statistical Society, to attend the meeting of the 2d of June, in commemoration of the late illustrious Baron Humboldt. It is scarcely necessary to say that I share with the whole scientific and literary world the grateful veneration with which his character is regarded. I had the happiness of making his personal acquaintance some forty years ago, and have on various occasions borne my humble testimony to his transcendent merits as a philosophical traveler and student of nature, both in detail and as one vast system. This I attempted particularly to do in an account of all the works resulting from his travels on this continent, in the *North American Review* for January, 1823. It would afford me a melancholy satisfaction to unite with the Society in doing honor to his great memory, but engagements and duties at home will prevent my going to New York next week.

EDWARD EVERETT.

TRENTON, May 31st, 1859.

DEAR SIR,—Your note of the 20th inst., inviting me to participate in a public meeting to be held on the evening of the 2d of June, commemorative of the services rendered to science by the late Alexander von Humboldt, has been duly received. I feel obliged by this kind invitation, and shall ever regret that circumstances which I cannot control render it impossible for me to be with you on an occasion of so much interest. We all feel that a great man has fallen. The genius which for so many years penetrated the mysteries of the material world; the mind which with wonderful power of comprehension grasped every branch of science, and made itself familiar with its laws and principles, has passed away from earth.

For more than half a century the labors of the illustrious deceased have benefited our race, and for a long portion of that time he has stood confessedly at the head of science in the old world. The learned of all countries looked up

to him as a superior, and rendered homage to his exalted attainments. Although spared to a remarkable age, it is comforting to know that he retained his powers and faculties until the last. He has gone to his rest, full of days and full of honor; and his name will be known and venerated in all time to come. Germany, who glories in the renown of her departed sons, will take care that the memory of Humboldt is duly honored. France has already decreed him a monument, and America will not fall behind in suitable demonstrations of respect and gratitude for his services.

It would seem indeed peculiarly fitting that this country should hold him in grateful remembrance; for although Baron von Humboldt was a Prussian by birth, and was devotedly attached to his king and his fatherland, he was a man of liberal sentiments, and took a lively interest in the progress and welfare of our Republic. Our literature; our advancement in science and the arts; our public institutions, and our growing power among the nations, were themes on which he often dwelt. He loved to speak of Henry, Bache, Maury and Kane, with other distinguished scientific men of our land, whose works, he remarked, had done so much to elevate our national character.

In addition to this, it is well known that all Americans were received by him with peculiar attention. Indeed, his kindness to them had become proverbial.

In view of these circumstances, it is gratifying to observe that our public Representative at the Prussian Court, and all our citizens who were in the capital, united in paying the last tribute of respect to his memory. They faithfully represented the feelings of the country, and are entitled to its thanks.

I am, dear sir, very respectfully,  
Your obedient servant,  
P. D. VROOM.

ALBANY, Monday, May 30, 1859.

DEAR SIR,—I have received your very kind invitation to attend a meeting of the American

Geographical and Statistical Society, to be held in New York on the 2d of June, in commemoration of the late Alexander von Humboldt.

I have delayed answering this invitation a day or two, in the hope that I might find the condition of my health such as to enable me to accept it, and to take such part in the proceedings of the meeting as might be assigned me. I deeply regret to say that a fresh aggravation of a chronic affection to which I am subject, will put it out of my power to be present on that interesting occasion.

It would have afforded me particular gratification to have been allowed to offer at your meeting my humble tribute to the memory of the illustrious Humboldt. Honored with his acquaintance, and I flatter myself, also with his friendly regard, manifested by many generous tokens during a frequent intercourse running through a period of more than three years, I came to entertain a most sincere affection for him, mingled with that inevitable reverence for his wonderful genius, which never failed to grow with every interview. I really do not know whether in the end, I revered or loved him most. I am sure I never entered his presence without some feeling of awe, nor left it without a new sense of personal attachment.

Humboldt had, beyond all comparison, the fullest mind I have ever encountered. How broad and deep it was the world knows. It was truly majestic in all its proportions, and in its mighty comprehension. And all its manifestations were marked with that perfect simplicity which is the characteristic of true greatness.

His disposition was peculiarly genial. Devoted as his life was to science, and to profound study, he did not withdraw himself from society. On the contrary, in the midst of systematic and unceasing toil, no man was more constantly found mingling in social circles. The chosen and loved companion of royalty, he was loyal to the slightest wish of his sovereign, sometimes—as I have known from his own lips, yet not in the way of complaint—to the very serious interruption of his plans of study, and

of scientific literary labor. At a good deal past eighty, I have often seen him going through the formalities of entertainments at the Palace without being seated for many hours together, and always cheerful and happy in thus contributing by his presence to the gratification of the King, and to the interest and dignity of these ceremonious occasions.

Humboldt loved to call himself an American. His sympathies were with his kind—with man and with freedom. And he saw in the United States, and in our institutions, an example and a promise of advance and improvement in the political condition of mankind, which he was never tired of contemplating. His kindness to Americans was proverbial. The card of many an unknown and obscure traveler, with the inscription: "I am an American citizen," presented at his door, has been a ready passport to his presence, when even a personal friend or an illustrious visitor, not offering this talismanic prestige, would be denied.

I beg to thank you heartily, and the Council you represent, for the invitation with which I am favored, and renewing the expression of my great regret at my inability to attend the proposed meeting.

I am, with great respect and regard,  
Very truly yours,

D. D. BARNARD.

After the reading of the letters, the Vice President remarked—

Much as we regret the absence of the gentlemen who have favored us with these most interesting and valuable contributions to this ovation of Science to her departed patriarch, we congratulate ourselves upon the presence of gentlemen high in official station, and eminent in scientific and literary circles, some of whom have come from abroad on purpose to testify their interest in this occasion. In particular, we are happy to welcome to this platform, an intimate and long-trying friend of Humboldt, the Baron Von Gerolt, Prussian Minister at Washington, who has come from the seat of government expressly to participate in this tribute to

his illustrious friend. [Here Baron Gerolt was received by the audience with a most cordial greeting, which he gracefully acknowledged.] I am glad that he can witness such a homage from Americans to the name of one who, though ever loyal to his native land, was bound to this land, also, by associations and sympathies which made almost a second nature.

We have with us, also, one who has brought hither the stores of his native Germany to adorn the philosophic halls of one of our principal universities; a gentleman whom New York is proud to adopt as a citizen, and who has already marked his name for history by his profound and lucid treatises upon Political Ethics, and the application of moral science to Civil Liberty and Self-Government. As a personal friend of Humboldt, most competent to appreciate and analyze his character, Professor Lieber has been invited to read a paper embodying his reminiscences of that distinguished man.

Dr. FRANCIS LIEBER, of Columbia College, read the following paper:

DR. LIEBER'S ADDRESS.

"The whole earth is the monument of illustrious men."—There are passages in the works of antiquity which, to our ears and minds, have the sound and depth of inspiration. They impress themselves on our souls, and, having faded in the lapse of years, they are restored to visible letters, by corresponding occasions on the paths of our lives. Such seem to me these words of Pericles, and such the occasion which has brought us together in this place. What Pericles said in his funeral speech of the men who had fallen, not for the defense, but for the glory of Athens, seems to apply in a double sense to Alexander von Humboldt. Wherever death occurs, or is remembered, there is solemnity, nor can we wholly free ourselves even from mourning, when a revered man has left us, however full his measure of a favored life may have been. He lived so long and so large a life that generations over the whole globe have grown up familiar with his name, and we were so accustomed to it that our very intel-

lects feel a degree of discomfort at presenting to our minds the world henceforth as existing without him. There is a void without Humboldt. Yet it is one of the noblest delights for those who reflect and love to be grateful, to trace the chief components of the monument of illustrious men to their authors—to find whence came the discoveries, inventions, conceptions, institutions and endeavors of entire epochs in the field of culture, freedom and truth. Who has not enjoyed the pleasure of finding the spots on the chart of human progress where you put down your finger and say, here is Aristotle, and here again; here is Hildebrandt, here is the conquest of Constantinople traced even in the discovery of our continent, even in Descartes and Bacon; here are the causes and the effects of the University; and to trace the lines of civilization radiating in different directions, from point to point? And this delight we may enjoy when meditating on the period of which Humboldt was one of the most distinct exponents—we enjoy it even now, although he has left us but yesterday; for God allowed to him days so long that he passed into history before he passed away from among us. Humboldt died as old as Sophocles.

Many of my young friends have asked me, as their teacher, and, indeed, many other friends have repeated the question, as I conversed with them on that news which on the day of its arrival attracted more interest than the accompanying advice that the contest in the plains of Italy would soon begin—was he not the greatest man of the century?

I do not believe it is fit for man to seat himself on the bench in the chancery of humanity, and there to pronounce this one or that one the greatest man. If all men were counted together, each one of whom has been called in his turn, the greatest of all, there would be a crowd of greatest men. Mortals ourselves, we should call no one the greatest. History is abstemious even in attributing simple greatness. But if it is an attribute of greatness to impress an indelible stamp on the collective mind of a race, and to give a new im-

pulse to its intellect; if greatness, in part, consists in devising that which is good, large and noble, and in perseveringly executing it by means which in the hands of others would have been insufficient, and against obstacles which would have been insurmountable to others; if it is great to graft new branches on the trees of science and culture, leading the sap to form henceforth choicer fruit; if the daring solitude of lofty thought and loyal adhesion to its own royalty is a constituent of greatness; if lucid common sense—the health and rectitude of our intelligence which avoids, in all directions, the Too-Much, is a requisite of greatness; if rare and varied gifts, such as mark distinction when singly granted, showered by Providence on one man; and if modest amenity, gracing these gifts and encouraging kindness to every one of every nation, that proved earnestness in his pursuit, whether he had chosen nature or society, the hieroglyphics or the liberty of America, the sea and the winds, or the languages, astronomy or industry, geography or history; if, in addition, an organizing mind, a power of evoking activity in the sluggish; if sagacity and unbroken industry through a life lengthened far beyond that which the psalmist ascribes to a long human existence; if a good fame encircling the globe on its own pinions long before it is carried on by later history; and if the conquests made in the realm of knowledge, so brilliant that they were not dimmed by the victories gained by the captain of the same period, who numbered the same years—if this makes up or proves greatness, then indeed we may say without presumption that one of the great men has been our own, one who was so favored an exemplar of humanity that he would cease to be an example for us, had he not manifested through his whole life of ninety years that unceasing labor, unvarying love of truth and advancement, and that kindness to his fellow-beings which are *duties*, and in which every one of us ought to strive to imitate him.

Courage, modesty, calmness and will—the multiplier of every energy—noble aims, te-

nacity, disregard of wealth, and an adaptive pliability distinguished him through life. He sacrificed his fortune to his enterprise in South America, declining high appointments in the State, which were proffered to him even then, and to the publication of his costly works. The last letter which he wrote to a friend before sailing to our southern continent, contains these words: "Man must will the Good and the Great; the rest comes as decreed." When early in this century the Russian Government invited him to travel in Asia, as he had traveled in America, he accepted the liberal offer, although the war with Napoleon prevented its execution; and in his letter to the Russian Minister of Finances he says: "I shall go from Tobolsk to Comorin, even if I knew that out of nine persons only one should arrive." In another portion of the letter we find these words: "I shall make myself Russian, as I made myself Spaniard in America." When he delivered that memorable and long course of lectures in Berlin, which foreshadowed his *Cosmos*, and which was steadily attended by men and women, students, professors and men of old age, by clergymen and the King and Court, his brother William wrote to a friend: "Alexander is really a *puissance*, and has gained a new species of glory by his lectures. They are unsurpassable. He is more than ever the old one, and it is as it always was a characteristic of his, to have a reluctance, an apprehension, which he cannot get rid of, concerning this kind of public appearance."

What an amount of thinking, observing, writing, traveling and discovering he has performed, from that juvenile essay of his on the textile fabrics of the ancients, to the last line of his *Cosmos*, which reminds us of Copernicus reading the last proof-sheet on his deathbed shortly before his departure, or of Mozart, who in his darkened room directed with dying looks, the singing of a portion of that requiem which he had in part composed, conscious that his ears would never hear its pealing sounds of resurrection. Let us, one and all, young and old, symbolize by the name of Humboldt, the fact

that, however untrue assuredly the saying is that genius is labor, it is true that the necessary co-efficient of genius and of any talent is incessant diligence. We are ordained not only to eat the bread of our mouth in the sweat of our brow, but to earn in the same way the nourishing bread of the mind. This is no world of trifling; it is a world of work, and Humboldt, like the Greeks, whose intellectuality he loved to honor—whose Socrates loved to say: Arduous are all noble things—was a hard working man, far harder working than most of those who arrogate the name to themselves. He ceased to work, and to work hard, only when he laid himself down on that couch from which he rose no more.

It is not considered inappropriate, on occasions like this, to give distinctness to the picture by stating personal reminiscences. Indeed I am informed that they would be gladly received. Allow me, then, to relate a very simple, yet characteristic fact. I visited Humboldt at Potsdam in the year 1844, when he had reached therefore the age of seventy-five; for you know that he was born in that remarkable year of 1769, in which Cuvier was born, and Wellington, and Chateaubriand, and Napoleon—just ten years after Schiller; just twenty after Goethe. Humboldt told me at that time that he was engaged in a work which he intended to call *Cosmos*; that he was obliged chiefly to write at night, for in the morning he studied and arranged materials, or received visitors, and in the evening he was expected to be with the King from 9 o'clock to about 11. After his return from the King he was engaged in writing until one or two, and even three o'clock.\*

\* While this paper was printing, a volume was sent to me, which had that day arrived from Europe—Alexander von Humboldt, by H. Klencke, 3d edition, Leipzig, 1859. It so happened that the book, opened at random, presented a passage which I cannot refrain myself from giving to the American reader, however unusual it may be to append a long note to papers of this sort. What the reader will find here is, probably, unique in the records of biography:

"About thirty years ago (this was written in 1859) he regularly rose in summer at four o'clock, and received visits as early as at eight. Only eight years

All his friends said of him that he was a master in utilizing time and opportunity, whether traveling or at home; whether in society or contemplating things. Yet no one could be less inquisitive than Humboldt, or less liable to be lead away by trifles.

Humboldt, when in Berlin or Potsdam, was retained, if I may use a professional term, to join the evening circle of the King during the indicated hours. It was all, I believe, he was expected actually to perform in return for the titles, honors and revenue which he was enjoying, except that the monarch sometimes selected him as a companion on his journeys. Humboldt described to me the character of these royal evening reunions. Everything of interest, as the day brought it to notice, was there discussed. The drawing of a beautiful live-oak near Charleston, which a fair friend had made for me, was taken by Humboldt to that circle, where it attracted so much attention that he begged me to leave it; and he told me that the volume describing our aqueduct, which my friend, the author, now the President of our College, had given me at the time of its publication, and which I had then sent to Humboldt, had furnished the topic of discussion for an entire week. We collected, he said, all possible works on ancient and modern aqueducts, and compared, discussed and applied for many successive evenings. Is there, then, a royal

ago he said that, according to long experience, he could get along with four hours sleep perfectly well. But his eighty-ninth year imposes at present restrictions upon him. Humboldt now rises at half past eight o'clock; while breakfasting he reads the letters which may have arrived, and is in the habit of replying to most of them immediately; he then dresses himself with the assistance of his servant, in order to receive visits or to make some himself. At two o'clock he is in the habit of returning home, and to drive at three o'clock to the royal palace, where he generally dines. Sometimes he presents himself at the table of some friend, chiefly that of the banker Mendelsohn (a descendant of the philosopher, Moses Mendelsohn). At seven o'clock in the evening he returns home, where he reads or writes until nine o'clock. He now goes again to court or to some company, whence he is not in the habit of returning much before midnight; and only now, in the stillness of night, begins his more especial literary activity; he is engaged in his great works until three o'clock, when in summer the bright day greets him before he lies down for his short rest."

road to knowledge after all, when a Humboldt can be retained?

May I extend your supposed permission of giving personal anecdotes, provided they are of a sufficiently biographical character, such as Plutarch, perhaps, would not have disdained to record? I desire to show what interest he took in everything connected with progress. I have reason to believe that it was chiefly owing to him that the King of Prussia offered to me, not long after my visit, a chair to be created in the University of Berlin, exclusively dedicated to the Science and Art of Punishment, or to Poenology, as I had then already called this branch.\* I had conversed with the monarch on the superiority of solitary confinement at labor over all the other prison systems, when he concluded the interview with these words: "I wish you would convince Mr. von Humboldt of your views. He does not entirely agree with them. I shall let him know that you will see him."

Humboldt and prison discipline sounded strange to my ears. I went, and found that he loved truth better than his own opinion or bias, and my suggestion that so comprehensive a university as that of Berlin, our common native city, ought to be honored with having the first chair of Poenology, for which it was high time to carve out a distinct branch, treating of the convict in all his phases after the act of conviction, was seized upon at once by his liberal mind. He soon carried the minister of justice along with him, and the tempting offer to which I have alluded was the consequence.

During this visit of mine to Berlin, Humboldt also urged me, after a long conversation which we had had on the trial by jury, to give my observations in a succinct paper for the King, and to indicate what glory it would be for him to give it to Prussia. When I hesitated—for such a step seemed to me very doubtful in its character, for a simple traveler, he quickly remarked: "Never mind, send it to me; I take

\* In German I had given it the better name of *Strafkunde*.



it to-morrow myself to Charlottenburg. The King will carefully peruse it."

It was the naturalist Humboldt who did and said this, and said it with encouraging warmth, contrasting with that superciliousness or circumscription of thought with which, from my university days, I have occasionally heard distinguished naturalists declare that they never pay attention to "politics," never take notice of the broad stream of public affairs which courses past their observatory on the shore. Humboldt, so far as I know, has never fallen into the error of claiming an aristocratic privilege for the natural sciences, an error not uncommon in our times, nor did he view the connection between nature and man in that light which has led contemporaries of his to what may be called material predestination.

And so it was the naturalist Humboldt, of whom a friend, whose name is perhaps more interwoven with the history of our canal than that of any other citizen, except Clinton, informs me that he had the pleasure of sitting by the side of Humboldt at a royal dinner at Charlottenburg. They were almost exclusively engaged in conversing on our great canal, and that greater one which ought to unite in everlasting wedlock the sturdy Atlantic and the teeming Pacific, having now yearned for one another for centuries. Humboldt spoke with a knowledge of details and a sagacious discernment, which was surprising to my friend, well versed in all the details of these topics.

Although it has been stated by high authority that the works of Humboldt show to every one who can "read between the lines" an endeavor to present Nature in her totality unconnected with man, I cannot otherwise than state here that, on the contrary, it has ever appeared to me that this great man, studying Nature in her details, and becoming what Bacon calls her interpreting priest, he elevates himself to those heights whence he can take a comprehensive view of her in connection with Man and the movements of society, with language, economy, and exchange, institutions and

architecture, which is to man almost like the nidifying instinct to the bird. Humboldt's tendency in this respect seems to me in its sphere not wholly dissimilar to the view which his friend Ritter takes of geography in connection with history. And do we of this Society not know with what interest and critical skill he pursued historical questions? Humboldt did not only view Nature in her totality as she is; he did not only search her own history which has made her progressively that which she is, (for the conception of successive geologic eras is his); but the history of man's knowledge of Nature, the development of discoveries and the growth of geography, had an equal charm for his fine intellect. In these researches he showed the true spirit of the historian, for whom no detail is too small, and whose comprehensive mind allows no detail to lead him to historical trifling. Present him to yourselves at one time as standing on the high Andes, and his mind soaring in high circles like a sailing eagle; at another time tracing, with ant-like industry, the beautiful name of our continent to the German schoolmaster that first proposed it.

Humboldt, it would seem, could hardly be expected to stand in a different relation to the natural sciences. He was, with all his erudition and the grandeur of his knowledge, eminently a social man. I have found a passage in a paper, written by a diplomatist and highly cultivated writer, Varnhagen von Ense,\* which I feel sure will be listened to with interest. Von Ense describes his sojourn in Paris in the year 1810, and says:

"In the *salons* of Metternich (at that time Austrian Ambassador near the Court of St. Cloud) I saw Humboldt only as a brilliant and admired meteor, so much so that I hardly found time to present myself to him and whisper into his ear a few of those names which gave me a right to a personal acquaintance with him. Rarely has a man enjoyed in such a degree the esteem of all, the admiration of the most oppo-

\* Published in Raumer's Historical Annual, for 1845.

site parties, and the zeal of all in power to serve him. Napoleon does not love him; he knows Humboldt as a shrewd thinker, whose way of thinking and whose opinion cannot be bent; but the Emperor and his Court, and the high authorities in the State have never denied the impression which they received by the presence of this bold traveler, by the power of his knowledge and the light which seems to stream from it in every direction. The learned of all nations are proud of their high associate; all the Germans of their countryman, and all Liberals of their fellow." . . . "It has rarely been vouchsafed," continues Von Ense, "to a man in such a degree as to Humboldt to stand forth in individual independence and always equal to himself, and at one and the same time in scientific activity and in the widest social and international intercourse, in the solitude of minute inquiry, and in the almost confusing brilliancy of the society of the day; but I know of no one who, with all this, has endeavored throughout his whole life to promote the progress and welfare of our race so steadily, uniformly, and with such ample success."

So far Von Ense. This picture is doubtless true, but we ought not to recall it to our memory without remembering at the same time one of his most prominent characteristics—his simplicity and amenity so inherent in him that they were never dimmed, so far as I know, by the luster of his talents or the energy of his thought.

The most perfect image of social refinement, which I have to this day in my mind, is an early evening party at the villa of William von Humboldt, near the Lake of Tegel. Nature has not done much for that spot, but refined simplicity, courtesy and taste, easy interchange of thought and experience, gemmed with sparkling converse, men of name and women of attractive elegance and high acquirements, young and old, travelers, courtiers, artists, soldiers and students, music, works of art, green lawns, and bright flowers, shrubby and winding paths along smooth water or waving fields,

and the Spes of Thorwaldson, are the components of that scene in the midst of which the two illustrious Humboldts moved and delighted others as much as they seemed to be gratified, giving and receiving as all the others did, never condescending, never indicating a consciousness that they encouraged the timid, but showing how gladly they received additional knowledge from every one.

The fact that Humboldt was born a nobleman was unquestionably of great advantage to him, but it was of advantage to a Humboldt only, as it is undoubtedly an advantage to a man that stands up for the people's rights, to be the descendant of ancient nobility. That noble birth, that connection with the court which aided Humboldt and his brother, has prevented thousands of persons, similarly born, from becoming earnest pursuers of high objects and deep inquiry. Alexander Humboldt threw himself at an early age into the ranks of the toiling workmen in the vineyard of knowledge and remained there, with all his titles and stars, to his end, thus doing on a more limited scale, what that good founder of a republic did, who, though born a prince of the empire, became a citizen and patriot of such a type that, in the firmament of History, his name forms a double star, with the name of Washington.

Humboldt retained his freshness of mind and soul to his latest years. This was one of his greatest charms. No one, I believe, has ever heard the old man's complaint of changing times, from his lips. He never sighed for the "good old times," although he had lived through changes in institutions and opinions, of systems and language, of men, manners, and even of dress, as no other prominent man. He received the living traditions of the great circumnavigator, Cook, through Forster, Cook's companion, and lived to gather facts for his Cosmos from the latest reports of the geological surveys of our States; he lived when Voltaire died, and must have grown up with many French ideas floating around him, for Humboldt was a nobleman whose family lived within the atmosphere of the Berlin court: and he lived

to witness the great revolutions in literature as well in Germany as in France and England; he lived when Rousseau died (the same year when Voltaire deceased), and must have remembered, from personal observation, that homage which even monarchs paid (at a distance, it is true) to the Contrat Sociale, and he outlived by some weeks de Tocqueville. He lived through the period of the American Revolution; was a contemporary of Washington and Adams, and a friend of Jefferson. He lived through the French Revolution and the age of the classic orators of Britain. He lived through the Napoleonic era and the resuscitation of Prussia and of all Germany. He studied under Werner, with whom mineralogy begins, and knew Hony. He knew Laplace, survived Arago and Gauss, and worked with Enke. He lived with Kant, and knew Schelling and Hegel. He knew Goethe and read Heine. He read Gibbon's Decline as a work of a living author, and perused Niebuhr, and later still praised Prescott. He grew up in the Prussian monarchy according to the type of Frederic the Great, and with the fresh reminiscences of the seven years' war, and left it changed in army, school, government—in everything. He saw the beginning of the Institute of France, and lived to be considered by its associates as one of its most brilliant ornaments at its most brilliant period. He lived through the periods which distinctly mark the science of chemistry, from Lavoisier to Rose and Liebig. Humboldt was seventeen years old when the great king, perhaps the most illustrious despot of history, died so tired by the genius of his own absolutism, that we cannot forget the words of the dying king: "I am weary of ruling over slaves;" and he lived through the whole period of growing popular sentiments and habits, of constitutional demands, and revolutionary, fearful conflicts. He wore the lace and ruffle of the last century, and the more practical dress of our times. Yet no one, I repeat, ever heard from him any useless regret for what had passed and was gone. I have heard him speak with warmth of noble things and men that he had known,

but not with gloomy despair of the present or the future.

There are men here around me of honored names in those sciences which Humboldt cultivated more especially as his own. I hope they will indicate to us how he infused a new spirit into them—how he immeasurably extended them—how he added discoveries and original conceptions; but I, though allowed to worship these sciences in the *pteroma* only, and not as a consecrated priest, crave permission to say a few words even on this topic.

Some fifteen years ago Humboldt presided over the annual meeting of Naturalists, then held at Berlin. In his opening speech he chiefly discoursed on the merits of Linnæus. He knew of Linnæus as Herodotus knew of Salamis and Thermopylæ; for the life of the great Swede overlapped by some ten years that of Humboldt, and all he there said of Linne seems to me to apply to himself with far greater force and on an enlarged scale. In that speech, too, I remember, he quoted his friend Schiller. Humboldt was, in a marked manner, of a poetic temperament. He not only analyzed and thought Nature—he *felt* Nature; and what he had comprehended by thought and feeling, he rendered in glowing presentations. I do not believe that without the poetic element he would have been able to receive those living impressions of nature, and to combine what was singly received in those vivid descriptions, and in language so true and transparent that they surprise the visitor of the scenes as, generation after generation, they are examined. He had that constructive imagination—I do not speak now of inventive fancy—without which no man can be great in any branch, whether it belong to nature or to history, to statesmanship or to the region of Watt's ingenuity.

But yesterday an officer of our navy, whose profession has made him well acquainted with South America by sea and land, and with the Andes—one of the Monuments of our Illustrious Man—told me that he knew of no descriptions, or rather characteristics, so true to living

reality as Humboldt's Views of Nature, which he had perused and enjoyed on the spot.

The power of collocation and shrewdness of connection, the knowledge of detail, and the absence of a desire to perceive things according to a system, the thirst for the knowledge of the life of Nature, and the constant wish to make all of us share in the treasures of his knowledge—his lucid style, which may establish his *Cosmos* as a German classic—these seem to me to characterize Humboldt in his studies of Nature, besides all that which he has done as a professional naturalist.

Humboldt's name and life may be termed with strict propriety of language, international. He lived for many successive years in France, and the French considered him one of theirs. He read and spoke English and Italian; he spoke and wrote Spanish with ease and correctness; his many French works are written, according to the judgment of the French themselves, with purity and elegance. He moved like a Frenchman in those few Parisian circles, which under the empire still retained the charming *esprit* and courteous benevolence of the circles of the eighteenth century. Indeed Mr. Guizot, when speaking, in his *Memoirs*, of the company which was in the habit of meeting at Madame de Rumford's, the widow of Lavoisier, enumerates Lagrange, Laplace, Berthollet, Cuvier, Humboldt and Arago. Many of the friends to whom Humboldt was most attached were Frenchmen; yet this was not at the expense of patriotism, even though his long sojourn in Paris was, partly, during the period of Prussia's humiliation by the armies of Napoleon. In that discourse at Berlin, which has been alluded to, he dwells with pride on the penetrating effect which the German mind has exercised on all the physical sciences no less than in the other branches.

Humboldt was a dweller in kingly palaces—a courtier if you choose, and a son of a courtier, without a taint of servile flattery or submission. He was rather the honored guest of royalty. He loved liberty, and considered it a necessary element of our civilization. He was a

sincere friend of substantial, institutional freedom. He thought that, with the widening of civil freedom, the knowledge and views of nature expand, and could expand only with it. But a few years ago, Humboldt, although a daily attendant upon the King, who had much at heart the support of his Prime Minister when the Liberals exerted themselves against the latter, went unostentatiously, but openly, to the poll, and voted for the Liberal candidate. The man of science, the old man, the titled friend of the King, the courtier, voted against the administration. His mind often traveled to this country, and that he loved America is sufficiently shown, were it not otherwise well known, by the singular love which the Americans bore to him. To me that little piece of news was inexpressibly touching, which simply informed us that our Minister in Berlin with the Americans now present at that city—a cluster of mourners from afar—formed part of his funeral procession—the only foreign nation thus represented.

In all the letters of Humboldt and all his sayings, we trace high plans and noble ends, the good man and comprehensive thinker, anxious to obtain the living truth of the whole—of the entirety of nature. In his simplicity and genial warmth he did what many a bold man would have hesitated to do. I was present as a young and distant listener, when at Rome, immediately after the Congress of Verona, the King of Prussia, Humboldt and Niebuhr conversed on the affairs of the day, and when the last mentioned spoke in no flattering terms of the political views and antecedents of Arago, who, it is well known, was a very advanced republican of the Gallican school, an uncompromising French democrat. Frederic William III simply eschewed republicanism, yet when Niebuhr had finished, Humboldt said, with a sweetness which I vividly remember: "Still, this monster is the dearest friend I have in France."

Humboldt had all his brother's views of the necessity of the highest university education, as well as the widest possible popular educa-

tion, and he gave impulse to many a scientific, historical or ethnological expedition, fitted out even by foreign governments, for he was considered the counselor of all.

But I cannot dwell here any longer on his versatility and manifold aptitude. It is proved by the literature of almost every branch. If we read Barth on Central Africa, we find Humboldt; if we read Say's Political Economy, we find his name; if we study the history of the nineteenth century, we find his name in the diplomacy of Prussia and France; if we read general literature, we find his name in connection with Schiller and Madame de Staël; if we look at modern maps, we find his isothermal and magnetic lines; if we consult Grim's Dictionary of the German language, we find Humboldt as authority.

That period has arrived to which Cæsar alluded in the memorable exclamation, Oh, Solon, Solon, Solon! and we are now allowed to say that Humboldt was one of the most gifted, most fortunate and most favored mortals—favored even with comeliness, with a brow so exquisitely chiseled that, irrespective of its being the symbol of lofty thought, is pleasant to look upon in his busts, as a mere beautiful thing—favored even in his name, so easily uttered by all the nations which were destined to pronounce it.

When we pray not only for the kindly fruits of the earth, but also, as we ought to do, for the kindly fruits of the mind, let us always gratefully remember that He who gives all blessed things has given to our age and to all posterity such a man as Humboldt.

Dr. LIEBER resumed his seat amid great applause.

The Vice President next presented Judge CHARLES P. DALY as one who needs no introduction to a New York audience, nor any commendation before a Society to whose prosperity he devotes so much of his time, his means, and his counsels. Judge Daly offered the following

RESOLUTIONS:

*Resolved*, That in the death of Alexander von

Humboldt, this Society has lost the most illustrious name on the roll of its honorary members, and the world one of its great benefactors.

*Resolved*, That we do not assemble to indulge a sentiment of regret at the termination of a life which the great Author of the Universe extended beyond the ordinary limit, but to express our sense of what that life has accomplished, and of the noble example that it presented to the age which it adorned and to all future time.

*Resolved*, That as this continent was the field of Humboldt's earliest achievements, and the quarter of the globe to which, for forty consecutive years, his labors were devoted, it is particularly due that a public expression should be given here of the appreciation and high estimate we put upon what he has done for our hemisphere.

*Resolved*, That it is impossible, within the limits of a resolution, to express our sense of the extent and value of the labors of this extraordinary man. That researches, the details of which reach to a colossal magnitude, embracing scientific subjects of every variety, pursued with the most patient assiduity, subjected to the closest possible scrutiny, and unfolded with the most luminous comprehensiveness, constitute alone a vast achievement; but when to this is added the contributions made to, and the plans devised to assist and direct the labors of others, the observations set on foot and maintained in different parts of the globe; the enormous correspondence kept in connection with the interests of science, reaching in his latter years to 3,000 letters annually, and the various publications and papers not embraced in the works above enumerated, finally culminating in the preparation and completion of his *Cosmos*, he presents a spectacle of industry and acquisition unexampled in the history of mankind.

*Resolved*, That while before his time the natural sciences in their course of development stood isolated, it was reserved for his genius first to master them all in detail, and then, rising to

the highest pinnacle of observation, to survey them as a whole, tracing amid their infinite diversity the connection that linked one with another, and exhibiting through this mutual relation and reciprocal action, the harmony and unity that prevail throughout the universe.

*Resolved*, That his intellectual pre-eminence is heightened by the beauty of his private life, his disinterestedness and gentleness, his ready sympathy with and encouragement of all who sought his aid or counsel, his strong faith in the future of humanity, his manly love of liberty as an element in human progress, and the exalted point of view from which he regarded and labored for man as a being capable of and destined to still higher developments, presenting a harmony of moral and intellectual qualities befitting the true interpreter of nature and of God as manifested in his works.

*Resolved*, That a copy of these resolutions, to be signed by the officers of this meeting, be transmitted to the family of the illustrious deceased.

*Resolved*, That a Committee of three be appointed by the Chairman to select a suitable person to deliver before the Society, in the course of the following winter, an address upon the life and services of our late associate.

After the reading of the resolutions, the Vice-President remarked :

I have somewhere read in Humboldt, that those who observe countries merely by their coasts can form no adequate idea of their geological structure, and therefore it was that he undertook those vast interior explorations which have laid open to the scientific world the physical geography of two great continents. Moreover, Humboldt brought sidereal observations to illustrate telluric phenomena, and combined in one harmonious system heaven, earth, air and sea. It is most fitting, therefore, that his system, which received its development, as it finds its highest illustration in this continent, should be represented by that distinguished son of American science, who has not only directed the survey of our coast but also com-

prehends the grandeur of our continent, and who has made astronomy and the higher mathematics subservient to the best practical interests of the nation. I have the honor to introduce to you Professor BACHE, of the United States' Coast Survey, who will respond to the resolutions just read :

ADDRESS OF PROF. BACHE.

I am sure that these resolutions, admirably worded as they are, will meet a ready response from all, will be carried by acclamation, and need no enforcement feeble as mine must be, or even strong as that of the orator of the evening. I came here to-night out of love to Humboldt, and respect to you. Such an occasion needs no preparation. But to appear before an intelligent audience like this, and endeavor, unused to public speaking, to make unpremeditated remarks, does require some apology, and nothing less than the command of the President of your Society to excuse it. I shall speak as words come, and out of the veneration, excessive though it may be, but one which I know you all share with me—veneration for this great, this good, emphatically the great and good man of the nineteenth century.

The sciences have been called upon to mourn, within the last few years, the loss of two of the most eminent leaders, eminent in knowledge, pre-eminent in influence—Arago and Humboldt;—both born in the last century, but both having acquired their undying reputations in this, and shedding therefore the lustre of their distinction upon it. Arago was born later (in 1786), and died earlier than Humboldt, (born in 1769,) whose life thus overlapped Arago's in both beginning and end. Through lives of great vicissitudes these two remarkable men were friends, glorying to the last in their close relations of sincere affection. The early training of neither would seem to have been intended to prepare him for the life which he was to lead—the mountaineer pupil of the polytechnic, the pioneer of war, the corsair slave interpreter, for the perpetual Secretaryship of the Academy of Sciences of Paris

the quiet student for the renowned explorer of the Cordilleras, the first man to reach the peak of Chimborazo, the traverser of the Siberian steppes. These two men were alike in many great characteristics, and as unlike in others as men of lofty aims and pursuits could be. Their reputations were acquired, as all sound scientific reputations are, from the judgment of the world of science, which was alone competent to determine the real merit of their works. Their popularity was acquired from their powers to address the reading and reflecting in intelligible language. To some men of science it is given only to pursue one branch or a few branches of knowledge, and to become truly great as discoverers in these branches. Such men must be content to advance their science without acquiring notoriety, and truly their reward is great. To others is given the power to master many branches thoroughly, and to a few not only to advance science but to diffuse it, and to these is the reward of true fame, a large reputation based upon the judgment of those who know, and a notoriety which has this judgment for its foundation. Arago and Humboldt had this fame, and while they both were capable of the minutest research, and each (especially the former) distinguished himself in several branches of science by original investigations and discoveries, both enjoyed the most wide-spread reputation and exalted influence.

Both of these men held opinions in regard to the rights of their fellow men which induced them to sympathize warmly with Americans, and when these Americans were devoted to science, their goodness towards them knew no stint. If they erred it was in too lenient a judgment of us, and in using too easily their much prized influence, and even in bestowing their friendship.

This was emphatically the case with Humboldt, who was amiable to a fault in his encouragement of Americans holding scientific positions.

It would be a grateful theme to me to follow out the parallel and contrast of these two won-

derful men, but the object of this meeting seems not to make it appropriate to do so.

When the Coast Survey, under my direction, was attacked by one of the most powerful of American politicians, then occupying the high place of Senator of the United States, these two men were foremost in repelling the attack, and in giving the weight of their names in support of the work, and of its administration. I have always felt the most ardent gratitude to them and to their American and European brethren who then came promptly to the rescue. The invitation of the Council of the Geographical Society to appear here this evening met thus a response from my heart, which made me regret exceedingly that my want of habit of public speaking would make me so unworthy a representative of American science in a meeting like the present to do honor, in words, to the memory of Humboldt. I was, however, but to raise a feeble echo voice, the address of the evening was to be delivered by one eminently worthy and able to speak on such an occasion.

It is to do honor to the memory of Humboldt that we have met. Of the man whose reputation was acquired mainly by researches on the continent of America, which thus may be said to have supplied the occasion for the man, if not the man for the occasion.

Humboldt's great work was the result of six years of travel in North and South America, of his abilities as an explorer, as a geographer and astronomer, as a hydrographer, as a meteorologist, as a geologist, as a general observer of nature, of art, of things and men. The results of these labors, chiefly worked up in ten years by the aid of the best science of the day, laid a foundation for the sound and wide-spread reputation of Humboldt. This work belongs to our century, and is one of its great illustrations. Before its claims, the earlier researches of Humboldt in geology and botany though considered as highly meritorious in their day, and the later ones in physiology, and experimental philosophy dwindle into comparative, (though truly only comparative,) insigni-

fluence, and the popular works though so great in the eyes of reflecting and reading men, seem to the votaries of science as comparatively small contributions to the extension of the great domain of science. It is no doubt true that the adoption of many of Humboldt's ideas, thrown off broadcast in this wonderful work, have made good reputations for others by merely working them over and extending them.

When the combined system of magnetic observations, from which such useful and important results have since flowed, was inaugurated in 1838, the name of Humboldt was placed at the head of the enterprise by common consent of the men of science who were urging it forward. A letter from him pointing out the objects and advantages of the "Magnetic Crusade" was considered an essential to the successful organization of an enterprise in which Europe, Asia, and America were to take a part. The success of his previous efforts in organizing a system of magnetic and meteorological observations in Russia, and the encouragement given by him to the combined observations of Gauss and his associates, prepared the way for this more extended plan of work, which has been crowned with such success, as in turn to lead to the renewed effort which is to be made during the present year. The character of Humboldt's mind was eminently co-operative. He saw clearly the fruits which might be obtained by combination of labors in the sciences of observation, and was always ready to suggest feasible plans, and to encourage well directed and even well meant undertakings.

To his powers of observation and of expression, more than to his real scientific qualities, he owes the very wide-spread and general sympathy which have constantly followed his undertakings. The Kosmos, from which he derives so large a portion of his popularity, and which has given him so wide-spread a reputation in the world of literature and intelligence, would never have made him as a man of science—it was the fluting, and the acanthus adorning the column, not the column supporting the edifice of his scientific reputation.

To his personal qualities also Humboldt owed much. His heart shone out in the intercourse not only with his intimate friends, but with strangers. So that no one came in personal contact with him without feeling drawn closely to him. His powers of conversation were remarkable, his command of language, of facts, his stores of observation, his recollection of scenes and persons, his memory for details and for generalities. There was a certain characteristic of adventure in his thoughts, in his remarks, and in his actions, attractive to almost every man. You realized that you were in presence of the man, who in youth had explored the New World, and in maturity the Old. Whose experience contained and combined all other experiences. Who was familiar with kings, philosophers, and the people, understanding and understood by each and all, and who enjoyed without condescension companionship with you! He had seen so many freaks of the intelligence that he had learned to estimate most highly the qualities of the heart, and thus found easy access to yours.

Death seemed to have stayed his foot from striking at the door of this great and good man of this century. But it was only stayed; he has knocked. You are collected here to honor the memory of the nonagenarian. Already the citizens of many of our States, gathered at Berlin under the lead of the Representative of the Union, have followed to the grave the bier of this illustrious representative of the science of the nineteenth century, only anticipating in this, the honor to be done him by the scientific bodies of our country, and the mourning of the intelligence of America.

The Vice-President—I remarked in the opening address—and Prof. Lieber has repeated the sentiment—that the name of Humboldt was international. It is not like the names of heroes, civilians, or of merely territorial patriots and benefactors, which, however illustrious, are confined to their own sphere and time, but both in the spirit and sentiments of the man and in the scope of his labor and



teachings, the name and work of Humboldt are the common heritage of mankind. It is meet especially that the three tongues which best represent our modern civilization should unite to do him homage. The great tongue of Germany, his mother tongue, has spoken. The English tongue has also uttered the tribute of those sciences in which he was most eminent. It remains that we should hear from that other tongue, which was to Humboldt in speech, in writing, and for the service of science scarcely second to his native language. And who so worthy to speak in the name of France as he who, prompted in his youth by the genius and example of Humboldt, has wrought out the beautiful moral harmony of creation in "the Earth and Man." I am happy to introduce to you Prof. Guyot, whose accents are familiar in this room, where he has so recently illustrated the science of physical geography.

ADDRESS OF PROF. GUYOT.

MR. CHAIRMAN: If I rise before this brilliant, to me unexpected, audience, it is to obey your summons, and to redeem a pledge which I now see was very imprudently given. At this late hour, however, after so much has been said, and so well said, on the great philosopher, to honor the memory of whom we have to-day convened, I feel that I have no right to trespass upon the patience of the audience by any extended remarks. I beg leave, therefore, to call the attention only to one prominent feature of Humboldt's character and soul, which appears to me so fundamental that it is, in my view, in a great measure the secret of his success.

While I unite with all in admiring his giant intellect, his wide grasp and power of generalization, his prodigious memory, and the universality of his knowledge, all of which were the indispensable instrumentalities for the performance of the task that he so courageously undertook and so gloriously achieved, I am still more struck by that ardent, devoted, disinterested love of nature, which seems like a breath of life to pervade all his acts—by that deep feeling of reverence for truth so manifest in him, which leaves no room for selfish motives

in the pursuit of knowledge, and finds its highest reward in the possession of truth itself. Is it not, indeed, from these noble feelings, nowhere more common than in the deep and honest German soul—from these feelings, which are the life as well as the sinew of every true man of science—that flow, as from a sacred fountain, that honesty of purpose, that sincerity in the research, which prompt the student of nature both to the most scrupulous care in ascertaining the facts in their most minute details, and to those wide generalizations which alone enable him to read aright the deep and broad sense of the book of the universe, and to make this book reveal to him the magnificence and the infinite variety of the Creative Mind? Is it not the same craving and love for truth, which forbids him to stop learning as long as he feels that he has something to learn, and thus bids him constantly progress; which makes him at once thorough in his investigations, original in devising new methods and opening untrodden paths for the discovery of new laws; modest in his opinions, cautious in his statements, ever happy to receive light from others, and to acknowledge his indebtedness to them, as well as freely to impart what he has acquired; always ready to give up even a long cherished error, when recognized as such, and to help every one sincerely engaged in the sacred cause of scientific discovery?

All these virtues of the true man of science, Humboldt possessed in a high degree, while in him they were happily associated with commensurate talents. They imparted to his personality a worth far surpassing that which mere eminence of talent can bestow. In Humboldt, the heart as well as the mind—every one who came near him could not help feeling it—the whole man, was engaged in the cause of science; and that enthusiastic devotion to so high an aim secured for him, besides the admiration due to his vast labors, that reverence for his character which was so deservedly and so universally granted to him by his cotemporaries.

It is no exaggeration to say that his life was a long series of evidences given to the world

of the reality of these noble qualities of mind and heart, of his loyalty to truth, and of his entire, unselfish devotion to the progress of human knowledge.

As a young man, in the period of preparation for active life, we find him full of enthusiasm for the study of nature in all its branches, seeking diligently for knowledge from all quarters, and becoming the pupil and friend of the most distinguished naturalists of the age. He prepares himself in his native country, by original researches in geology, botany, physiology, electricity, for the gigantic investigations in foreign lands that he dreams of, and that he was to achieve in the future, and does not hesitate to give up an official, well-remunerated situation, in order to be more free to pursue his favorite studies.

When released by the death of his beloved mother of the bonds of filial duty which had kept him at home, he sells his estates, which were by no means considerable, and ready to devote all that he possesses to scientific investigations, he starts, in 1798, for Paris, the great centre of science, to secure the best instruments which could be obtained, and join some of the scientific expeditions then preparing for distant countries under the mighty impulse of the First Consul. Obstacles seem to accumulate, but his perseverance is unshaken. He leaves France and visits Spain on his way to Africa.

But encouraged by kind offers of help, the Columbus of science leaves in June, 1799, the shores of Europe, under the protection of the Spanish Government, for the colonies in tropical America, and begins that remarkable series of travels which led to the scientific discovery of the New World. Five years are spent among the burning wastes of the Orinoco, the rich solitudes of the Amazon, the deep and sultry valleys of New Granada, the elevated plateaus and lofty volcanoes of the Andes and of Mexico; five years of toil, of danger, of privation, but also of the highest enjoyment, during which he succeeded, by his untiring industry, and with the help of his faithful friend, Bonpland,

in accumulating such an amount of information and of scientific materials, that to work them out was the task of his life. Nothing escaped his watchful, inquiring, and well-practiced eye day and night he is at work, and his observations are made with such scrupulous care, and so much skill, that for accuracy they still stand unsurpassed by the subsequent observations, made with instruments more perfect than those that science could then command.

After his return to Europe, in 1804, the question before him was not only how to prepare these rich materials for publication, but how to do it best; how to give them their full value, and to derive from them, for the benefit of science, all that they could furnish. Paris offered him a reunion of distinguished savants in all departments of natural science, for discussing his observations, and an abundance of specimens in its rich collections of natural history for comparing with his own, such as he could not find elsewhere. Germany, his own country, waits for him; his tenderly-beloved and noble-minded brother and his family wait for him; his heart is with them, but his duty to science speaks; he denies himself the pleasure of such a reunion, and takes his abode in Paris. There he remains for over twenty-two years, reviewing and studying anew, patiently, and with the most scrupulous care, every branch of science, and superintending the publication, in the most splendid style, of that long series of classical works which cost him the rest of his fortune, but won for him general admiration. Anxious, above all, not to build up a hasty reputation for himself, but to advance knowledge and to secure the greatest possible perfection, he shares his rich treasures with the most eminent men in each department of science, and requesting their collaboration, takes modestly the second place, even where his own studies might have allowed him to take the first. To Cuvier and Latreille he intrusts Zoology; his friend Bonpland with himself, and afterward his German friend, Prof. Kunth, examine and describe the 4,500 species of plants that the travelers brought from the New World. Oit-

mamm revises the computation of the astronomical and barometrical observations. No petty rivalry ever marred, even for a moment, his relations with so many co-laborers—all remained his best friends to the end.

Humboldt's desire to be true to nature, and to reproduce the vivid image of the countries that he had visited, and of the grand phenomena that he had witnessed and carefully studied, does not allow him to remain in the beaten paths. His description of the physical structure of the Andes, his profiles across the plateaus of Mexico, the tableau of the distribution of the various forms of vegetation as connected with the changes of climate produced by altitudes, are a real revelation of the vast importance of the plastic form of our continents, which was never forgotten since by science. The laws of the distribution of plants are for the first time reduced to a system, and placed on the true foundation of Climatology; and the isothermal lines invented by Humboldt to make clear these phenomena, become themselves the fertile source of new progress in Meteorology. Physical Geography assumes henceforth the scientific aspect that it now possesses, and that none more than Humboldt has contributed to it.

The circumstance that Humboldt wrote in France, and that most of his associates were French, rendered it imperative for him to make the sacrifice of his own native language. He did so. All his works are written in that clear and positive language of France, and which is pre-eminently the language of science, and which also is the most accessible to scientific men of all nations. Two of his works only make an exception; the "Views of Nature," that first outpouring of his youthful feelings, and of the vivid impression made on his enthusiastic and poetic soul by the grand nature of the tropics; and the "Cosmos," that last and supreme effort of the poet and the philosopher, in which the whole man, heart and mind, finds his highest manifestation; both of these are written in that rich German tongue, the language of the heart and the imagination, which

was the language of his youth and of his old age.

After having nearly accomplished his long task, and not before, Humboldt yielded at last to the repeated invitation of his king and of his country, and returned to Berlin. Here again we find him at work in behalf of science. A large number of his countrymen knew him by reputation more than by his writings, which were written in a foreign tongue. He consented to give, in the winter of 1827-28, an outline of his vast researches and his profound views on nature, in a course of sixty-one public lectures, which became the foundation for his "Cosmos." All classes, from the king and the nobleman, to the literary, the scientific, and the simple man of intelligence and education, were represented in the immense audiences which gathered around him, and which no hall was large enough to contain. Humboldt was at the height of his glory and popularity. And still, a few years afterward, when scarcely returned from his great journey in Siberia and Central Asia, one might have seen in the same halls of the University the modest, gray-headed philosopher, laden with honors, both from Russia and from his own royal master, listening with eagerness, among the crowd of students, to the lectures of the celebrated philologist, Boeck. What a lesson for the young men around him! He was one of them, he who addresses you this moment, and he can assure you that though he has since personally received numerous tokens of kindness on the part of that great model student, he does not value that unintended lesson as the least.

But not only was Humboldt a valiant soldier in the field of science, he was always ready to help his fellow-laborers, and to urge on every plan by which new light could be obtained. His extreme readiness to co-operate in all such schemes has been justly dwelt on a moment ago, by the distinguished scientist who last addressed you, and who has a special right to speak of it.

At all times and in all positions, Humboldt gave the most signal evidences of his unflinch-

ing loyalty to the cause of universal progress. He was one of the warmest promoters of the foundation of that great University of Berlin, the glory of his native state, and of Germany. He planned that comprehensive system of magnetic and meteorological observations, and secured the co-operation of England and Russia, thanks to which that line of scientific stations extended over both hemispheres. Never was such a vast influence more faithfully, more unselfishly used for the common good. Those who have lived in Prussia know how much of that fostering protection so largely granted to universities and public instruction in general, to scientific explorations in Europe and abroad, in the most liberal spirit, by that government, was due to the generous and the elevated views that he was spreading around him. And to speak only of individuals: who has ever approached him who has not a tale of kindness to tell of him? True, he has been charged with indiscrimination in the liberal patronage that he bestowed upon so many men, young and old. But as bountiful nature spreads broadcast a superabundance of germs, thus making provision for those which are lost, Humboldt, in his unlimited kindness and sympathy for every one in whom he recognized a sincere spirit, and a true love for nature and for knowledge, was ever ready to tender him a helping hand, even if his talents were not commensurate with his good-will, knowing well that some good would grow out of his earnest efforts for the cause of humanity. [Applause.]

Well may such a man be claimed, not by one, but by all nations. As all great and good men, he belongs to mankind. Germany, the land of his birth, is proud of the just honor to possess his mortal remains; France places his image in the temple consecrated to the memory of her distinguished sons; and we in America, we pre-eminently, by Providence, the cosmopolitan people, and the people of the future, let us rear him a monument among us such as he would approve; let us honor the science that he cherished; let us faithfully and harmoniously continue the work of the exploration of this

New World that he has so well begun, by the careful methods that he taught us, and with the disinterested, truth-loving spirit, of which he gave so remarkable an example; and let this be the homage and the fit tribute of the Western Hemisphere to Alexander von Humboldt. [Applause.]

At the close of Prof. GUYOT's speech, the Vice-President said—

Ladies and gentlemen—You will willingly remain to hear further of that honored patriarch who so often sat till the small hours of the night writing for our instruction. I shall make free to call, without notice, upon a gentleman whom you would not suffer me to pass over in silence. History already claims the name of Humboldt. But Americans will also claim that their own historian be the first to inscribe that name, *here* and *now*. I call upon the HON. GEORGE BANCROFT.

ADDRESS OF HON. GEORGE BANCROFT.

The call upon me is most unexpected. I considered silence my duty this evening, not from a want of intense admiration for Humboldt—not from a want of affectionate reverence for his virtues and his memory—but because we have just listened to a delineation of his career from those of our men of science who have made a great name for themselves throughout the world, and are best capable to pass a fitting eulogy upon his achievements. I should think you, like myself, would have preferred to have heard his praises pronounced exclusively by them. But as the Chairman has called upon me, to continue silent would seem like an unwillingness to acknowledge my great sense of his surpassing merits. It was my fortune to have known Humboldt earlier than any one of those who have spoken to you to-night. As a young man of 20 years, I made my way from Berlin to Paris in the year 1821, taking letters from Wilhelm von Humboldt to his brother, Alexander. And, sir, you know, all of you know, what kindness he must have extended to me. To one point only shall I call your attention: his intense love of liberty. I

came at the time with all the zeal for liberty which may be pardoned in a young man, and which I hope I may be pardoned for retaining in later years. [Applause.] It was in the time of Louis XVIII. Humboldt read with clear distinctness the character of parties—the conflicts of opinion, and he declared himself with the utmost firmness against those retroactive measures and against that retroactive policy which was ultimately so disastrous to the Bourbon line of kings. And not in France only, for greatly as he admired English statesmen and English men of science, and England, he saw also clearly how England was suffering from excessive aristocracy. I remember to this day the strong and emphatic language in which he expressed himself of the political condition of that nation at a time when reform had not yet begun its work. More than a quarter of a century afterwards I met him again in Paris. I found in him the same friend of man; the same friend of my own native country; the same lover of liberty; with the same breadth of statesmanship. He knew our continent so well, knew the relations of the United States toward every part of it, and formed his judgments respecting the gradual advancement of

the United States, with the best wishes for our prosperity and honor, and with a perfect knowledge of the influence of physical formations of the earth, of climate, and race on the desirableness of an increase of our territory. He wished, and authorized me to say, that he wished that California and all the noble tract of land which now belongs to us on the Pacific might come to us, expressing only his apprehensions of such an expansion as might interfere with the proper development of free institutions. I have never heard any one discuss the questions of our relations to Mexico and to Cuba more calmly and more candidly, or with more gentleness toward us, and with more full and perfect acquaintance with all the circumstances that would attend any further progress on our part. He was always the friend of America. [Applause.] Sir, these few words are uttered in obedience to your request; at this late hour there is no opportunity for more. I do not hold myself competent to do justice to the merits of Humboldt as a man of science; and the little I have said expresses very inadequately my veneration for his virtues as a man. [Applause.]