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MEMOIRS

OF

FREDERICK A. P. BARNARD

FREDERICK A. P. BARNARD.
PRESIDENT OF COLUMBIA COLLEGE.
1888.

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OF

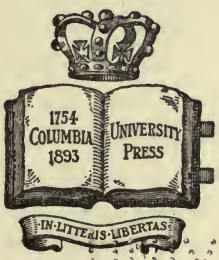
FREDERICK A. P. BARNARD

D.D., LL.D., L.H.D., D.C.L.

TENTH PRESIDENT OF COLUMBIA COLLEGE IN THE CITY OF NEW YORK

BY

JOHN FULTON



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PREFATORY NOTE

The material for these Memoirs was collected by the late Mrs. Margaret McMurray Barnard, and has been arranged and edited in accordance with her wishes. Her sudden death, when no more than two chapters had been written, left the editor under a double disadvantage, since many interesting letters and other documents of which she had frequently spoken could not be found, and it was no longer possible for him to confer with her on questions of detail. He has therefore endeavored to make such use of the material at his disposal as he has reason to believe that she would have preferred, treating some parts of the subject with more minuteness than his own judgment might have commended, but omitting nothing that she would have wished to be expressed.

Mrs. Barnard's wish was that her husband's career as a great educator should be illustrated as largely as possible from his own writings. Hence, a large part of the volume will be found to consist of summaries of his recorded views and condensed extracts from his published and unpublished works.

The brief account of the history of Columbia College, from its incorporation as King's College in 1754 to the accession of Dr. Barnard to the Presidency in 1864, has been considered to be desirable, because it shows that, from the first foundation of that institution, there has always been a tendency to reach out from the comparatively limited sphere of a college of liberal arts to the more comprehensive functions of an university, and because it was Dr. Barnard's sympathy

with that movement which made his election as President so peculiarly fortunate. For the materials of this sketch, the editor is almost wholly indebted to Professor Van Amringe.

It was no part of Mrs. Barnard's desire or design that these Memoirs should include a history of Columbia College under Dr. Barnard's administration, but only that her husband's views and efforts during that most important period of his life should be adequately set forth. No detailed account of his administration has been attempted, while copious but condensed extracts have been made from his reports to the Board of Trustees and from other documents, in explanation of his maturer thoughts on the whole science of education, and more especially on college government, the elective system of studies, postgraduate courses, and other measures looking to the growth of an university organization. To these have been added extracts from many papers in which he advocated the higher education of women, with particular reference to the events which led to the establishment of Barnard College.

Notwithstanding faults of matter and method of which the editor is conscious, and other faults which will doubtless be observed by the reader, it may be hoped that these Memoirs will be found to be useful as a contribution to the educational history of this country during the nineteenth century. If they shall also secure to the memory of Dr. Barnard some part of the appreciation which is justly due to him as one of the most eminent leaders in the conservative progress of the higher education during that period, they will fulfil the last and dearest wish of the loyal and devoted woman by whose desire they have been compiled.

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MEMOIRS

OF

FREDERICK A. P. BARNARD

CHAPTER I

Birth and descent — Sheffield and the Valley of the Housatonic — A New England village at the beginning of the century — The meeting-house — A Puritan Sabbath — Long sermons — The village choir — Innovations — A new meeting-house — Publishing the bans — Barnard's mother — The village school — Religious instructions — A peculiar grammar school — A bad introduction to the classics — Desultory reading — Mechanical pursuits — School at Saratoga — Barnard learns the art of printing.

Frederick Augustus Porter Barnard was born at Sheffield, Massachusetts, May 5, 1809, of an honorable ancestry both on the paternal and on the maternal side. His father, Colonel Robert Foster Barnard, was a lawyer of distinction, and several times represented his district in the senate of his State. He was a lineal descendant in the sixth generation from Francis Barnard of Coventry, Warwickshire, England, who settled at Dorchester, Massachusetts, in 1636, but subsequently removed to Hartford, Connecticut, and still later to Hadley, Massachusetts. The wife of Colonel Barnard was Augusta Porter, daughter of Dr. Joshua Porter, a physician of Salisbury, Connecticut, and a descendant in the sixth generation from John Porter of Warwickshire, England, who migrated

to the colony of Massachusetts Bay in 1626. According to tradition, the founder of the Porter family was Sir William de la Grande, a follower of William the Conqueror; and the surname of Porter is said to have been derived from a son of Sir William who held the office of *Grand Porteur* at the court of King Henry I. John Porter, the founder of the American branch of the family, was a lineal descendant in the sixteenth generation from Sir William de la Grande.

The birthplace of Frederick Barnard was in the beautiful valley of the Housatonic, surrounded by Greylock on the north, by the western spur of the Green Mountains on the east, by the Dover Hills on the south, and by the bold Taughannock range on the west. Hardly anywhere could a greater variety or a more pleasing contrast of bold and peaceful scenery be found than in and around that lovely valley, sheltered, as it was, by picturesque if not majestic hills, watered by many streams and deep cold lakes, — all teeming with trout, which have long since disappeared, — and dotted with the quiet homes and villages of a hardy and enterprising people. Other noted towns in the near neighborhood of Sheffield were Williamstown, Pittsfield, Lenox, Stockbridge, Great Barrington, Salisbury, and Sharon; and it is no insignificant indication of the character of the inhabitants of the district that each of those towns sent from one to five students either to Yale or to Williams College every year. The village of Sheffield, as it was in those days, "before the aggressions of railways had broken up the peaceful quiet of country life, and converted rural districts into mere suburbs of the great towns," has been happily described by Dr. Barnard himself in an autobiographical sketch contributed to *The Forum* in 1886. The description of a typical Massachusetts village at the beginning of the

present century, as it appeared in the memory of an octogenarian in 1886, is historically as well as biographically valuable, and may properly be inserted here with some very slight abbreviation.

The inhabitants of Pitcairn's Island [says Dr. Barnard] were hardly more completely isolated from the great world than our little community. Only one slight link attached us to outside humanity — the mail-wagon, called for euphony's sake "the stage," connecting Albany on the west with Hartford on the east, which passed daily through the village. In my later boyhood, when this ramshackle old vehicle was replaced by a dashing, yellow-painted, four-horse post-coach, a galvanic thrill seemed to run through the whole sluggish community, and it was felt with pride that we were rising in the world. Afterward the startling event of the day was the flashing transit of that showy visitor, heralded long before its arrival by the tuneful notes of the coachman's bugle to which it was my daily delight to listen.

My native village was centrally situated in a township of six miles square which, in the ecclesiastical polity of early New England, had been constituted a single parish, subject to a pastor of the dominant Congregational persuasion. Our good town's people would have repelled with scorn the application to themselves of a term so savoring of prelacy as "parish." In their relations to the Christian world they described themselves as a religious "society"; but hateful as prelacy was to them, their reverential awe of their spiritual guide seemed to indicate that they could be brought to tolerate the thing more easily than the name.

In virtue of our centrality we possessed the "meeting-house" — the word "Church" shared with "parish" in the popular disesteem. As I remember it, the meeting-house stood, a dreary, forlorn, and melancholy-looking barn-like wooden structure, exactly in the middle of the road. It had been erected by a generation which regarded "steeple-houses" as vanities, and decorative architecture as positively sinful. There was nothing about it, therefore, to endanger any soul by ministering to "the lust of the eye." The interior was no

less gloomy than the outward aspect. I heard it often spoken of by our godly pastor in the pulpit as "the very gate of heaven," and though I shuddered at the impious thought, I could not help wondering what sort of a place heaven must be, if the meeting-house was its gate. It was furnished with old-fashioned pews, eight or ten feet square, enclosed by partitions so high as completely to conceal the occupants from their neighbors; the design being perhaps to prevent untimely criticisms of bonnets and dresses, or to guard the pious meditations of young people from being distracted by the contemplation of the charms of the opposite sex. The figure of the parson in his lofty pulpit could be discerned only by those of his hearers who sat on the further side of the pews from the sacred desk. The pulpit was a ponderous and clumsy contrivance, so lofty as to put the preacher on a level with his hearers in the spacious galleries which ran around three sides of the auditorium. It was approached by lofty stairways, one on each side, leading to massive doors which, when closed, gave it, to my young eyes, so much the appearance of a place of involuntary confinement that my earliest and long-continued impression was that the minister was shut up there against his will, and that his fervent discourses, which I did not in the least understand, were passionate appeals to the congregation to let him out. I could never quite make out how it happened that these appeals, often so apparently pathetic, seemed to be so unavailing.

Immediately above the pulpit was an approximately hemispherical canopy, the nearest approach to ornament which the edifice had to boast, but which was too hideous in appearance to have been introduced with an æsthetic design. In popular parlance it was called the "sounding-board," to which purpose its flat under-surface may perhaps have adapted it.

In the pews the sexes sat promiscuously; but as the occupants of each pew were usually members of the same family, that arrangement was regarded there as innocuous. In the galleries, however, which were occupied by persons for whom there was no room in the family pews below, and by the unfortunate class of extra-familiated persons who are always numerous in every community, there was a "man's side" and a "woman's side," the dividing line between them being di-

rectly opposite to the pulpit. This was an effectual safeguard against the dangers of personal proximity; but it afforded to the undevout the incidental advantage of being able to contemplate each other's features from a favorable point of view.

During my early boyhood it was one of the most earnest of my ambitions to be permitted "to sit up gallery"; but this was an aspiration which my father did not regard with favor, and which was rarely gratified. I felt this privation the more severely because the boys of my own age with whom I most constantly associated were not generally subject to a similar restraint; and it grieved my soul to see them in the weekly enjoyment of a privilege which was denied to me; but there were times when the presence of "company" or some other cause dislodged me from the family pew, and then the freedom of the gallery was open to me as to others. It is possible that I enjoyed these opportunities the more because of their rare occurrence. There were two reasons which made a seat in the gallery — I will not say pleasant, for no part of the church was pleasant — but less wearisome to me than on the floor. The first was that it afforded me the companionship of other sufferers who shared my feelings, and with whom I could engage in a cautiously conducted intercommunication which enabled us to while away the tedious minutes. In our interchange of thought, however, there was need of great circumspection; for there was a formidable functionary, elected on every "town-meeting day" and called a tithing-man, whose duty it was to look after the good order of public worship; and the vigilant eye of that dreaded functionary was sure to detect, and his stern rebuke was not less sure to check with prompt severity, the slightest overt act of young or old resembling irreverence. The tithing-man was always a "professor" of the most austere sort; and I remember that I used to wonder whether he did not think it wicked to laugh on week-days as well as on Sundays, and whether he did not regard anything pleasant as necessarily sinful.

Another circumstance which made a seat in the gallery desirable to me was that it afforded a view of the desk on which the parson laid his manuscript. Our clergyman's sermons were written out in full, each of them forming a sort of libretto,

and as he turned the leaves in the progress of his discourse, we could judge approximately how much of it there was yet to come. I remember the wistful anxiety with which we gallery urchins used to watch his gradual approach to the last page; and how, when the last leaf was turned, we almost held our breath for the final Amen. I remember, too, our deep disappointment when we saw him turn his libretto over and begin again on the first leaf — originally left blank — with "a few words by way of application to close the subject." The "few words" often expanded into many, until it seemed as if the earnest divine were going to add a second sermon to the first, and then our hearts sank into fathomless despair.

The choir, usually spoken of as "the singers," occupied the front seats in the gallery, the "men singers" on one side, and the "women singers" on the other, extending in long rows from the leader, who stood directly opposite the pulpit, around the corners of the gallery on both sides. They stood up when they sang; the congregation remained seated. In my earlier recollection, they were sustained by no instrumental accompaniment, a church organ being regarded as little better than an invention of the devil; but after a time this prejudice was so far softened, that a violoncello, or, as it was called, a "bass viol," was somewhat ungraciously admitted to give increased solemnity to the deeper tones. In order to "set the pitch" the leader was supplied with a sort of wooden whistle called a pitch-pipe, having the external appearance of a small psalm-book, and provided with a sliding stop by which to vary the tone. After the hymn had been read entirely through by the minister, this important functionary rose, audibly announced the melody, gave a sound on his pitch-pipe, thus, "Bangor — toot!" raised his right arm to bring the singers to their feet, and then, with a powerful down-beat, struck the leading note which the rest followed. The leader usually sang the air, though that was properly the part of the "trebles," — the word soprano was unknown — but, as if proud to show his versatility, he often passed in succession to the other parts.

One further recollection of the old meeting-house I must not omit. The time arrived at length, even in my early years, when the depressing ugliness of the homely old structure

became too much for a generation which, while still firmly clinging to the faith of the fathers, had ceased to regard the utter mortification of natural taste as absolutely indispensable to godliness. In the minds of the devout there was a gradual but evident softening on the subject of steeples; and at length it began to be suggested that a taper spire, pointing to heaven, might not be an inappropriate emblem of the pious purposes to which the sacred edifice was devoted. The need of a bell, too, to announce the hour of praise to distant dwellers, had long been felt; and a bell implied a belfry, which was half way to a steeple. These ideas gradually worked in the minds of the people until it was resolved in open town meeting that the meeting-house should have a steeple. At the same time it was suggested by some progressive reformers that the situation of the structure in the middle of the street, though quite consistent with the spirit of reverence which regarded it as typifying the thought which should be always central and supreme in the minds of men, was an unnecessary obstruction to the circulation of vehicles; and it was consequently resolved that the meeting-house should not only be embellished with a spire, but should also be removed to a position where it should dominate the highway laterally. The spirit of improvement did not stop there. In fact, when a stagnant people is once awakened to the idea of change as a possibility, changes for the sake of change will not be slow to follow. It was resolved to reconstruct the whole interior of the building. All the venerable square pews were removed, the gallery and the lumbering old pulpit were torn away, and nothing was left but an empty shell. Pews in the modern style — slips, they were called in Sheffield — in which all the hearers faced the minister, though preferable, perhaps, on utilitarian principles, but greatly inferior in apparent dignity, replaced the family boxes of the fathers; the ponderous, sombre-colored columns which sustained the gallery gave way to slender, white-painted pillars; and a new and airy-looking reading-desk, approached by circular steps with a light hand-rail, succeeded the venerable pulpit. In these new arrangements there was a manifest effort to soften the gloom of Sunday, but the impressiveness of the place was lost, and, on the whole, the transformation did not please me.

The grand operation of moving the meeting-house to its new site impressed me very powerfully. To transfer so vast a structure to a distance of only a few hundred yards seemed to me a truly Titanic work; and I watched it from day to day with eyes almost of incredulity. The difficulty of the work was probably magnified in my mind by the fact that it surpassed the power of our local mechanics; we were obliged to send as far as Hudson, twenty-eight miles distant on the North River, to obtain a competent engineer; and when that august man of science arrived, I well remember the mingled feelings of awe and admiration with which we boys of the village looked upon him.

The addition of a steeple to the meeting-house involved the construction also of a kind of pronaos, or vestibule, since the old framework could scarcely be trusted to bear so great a weight. This vestibule, in the half hour before service, became a sort of loitering place, where even the most devout were accustomed to linger for the exchange of pious greetings. It served, therefore, as a convenient place for the posting of public notices of such matters as were not out of harmony with the sacredness of the edifice. Here, accordingly, it was customary to make the publication required by the laws of the State of Massachusetts of an intention of marriage entertained by persons in the township. This publication, contrary to the usage in Great Britain, where it is made from the pulpit, was required to be made by the town clerk. For many years my father held that responsible office, and discharged the particular duty here mentioned by affixing a bulletin in a conspicuous position on the wall of the church vestibule. In order that the people might have ample opportunity to peruse such interesting notices, it was desirable that they should be posted about the time of the first bell — say about an hour before service; and my father used often to entrust the notices to me with instructions to affix them in the proper place. I well remember the feeling of importance with which I used to discharge this duty, and the pride of office I felt when I saw the crowds which curiosity drew around me as I entered bearing the official posters. There were occasions on which I did more than post the notices; I prepared them

myself when the absence of my father from home happened to occur just as some ardent couple were impatient to fulfil the legal formalities necessary to permit the union of their hearts and fortunes for life. In such cases I assumed the function of town clerk *ad interim*, wrote the bulletins, signed my father's name as his proxy, and thus spared the waiting lovers the weariness of delay. The usual mode of publishing the banns of marriage was that which has been just described, but it was optional with the town clerk to make it *viva voce*, if he chose; and as a single publication of that kind sufficed, there were sensitive people who preferred so expeditious a mode of getting through with a disagreeable formality rather than to be publicly advertised for the space of three weeks. In complying with the wishes of such persons my father used to seize the moment when the services were concluded and the congregation were rising from their seats; then, rapping for attention, he would make a stentorian outcry of the important notification with which he was officially charged. It happened once, when I was acting as his substitute, that I was requested to publish by word of mouth, and not by posted bulletin. It seemed to me a terrible thing to speak out loud before such a multitude; but the dignity of office and the sense of duty sustained me, and I passed through the ordeal without discredit. Only, as my stature was small, I found it necessary, in order to secure attention, to mount the seat of the pew where I stood and to use all the strength of my lungs. When the ceremony was over, I had the satisfaction of knowing that the parties most immediately interested had been well published.

In later life Dr. Barnard was of the opinion that the most powerful educative influences in a child's life are those by which he is surrounded when emerging from infancy, and consequently at a period of which conscious memory preserves no record. Whatever education, in any true sense of the word, he himself had received, he referred to the careful training of his mother, chiefly in that early period; and although he remembered nothing of its proc-

esses, he believed it to have affected his moral rather than his mental development. "I believe [he said] that if there is anything good in me, it must be owing to that loving maternal solicitude which gently swayed me towards the right at a time when the bending of the twig sufficed to give its permanent inclination to the full-grown tree." Yet his recollection of events occurring in his childhood was unusually distinct. Thus, he definitely remembered being taken out at night to witness an astronomical event which occurred during his second year, and he also remembered the style of the "dresses of printed muslin cut in kilted fashion" which he wore at that age. With one of those dresses he associated what must have been a very early lesson in the English language.

The dress [he says] was one I particularly admired; and once, on having been arrayed in it just after it had come back fresh from the laundry, I exclaimed, "O mamma, what a pretty new dress!" "You should say clean dress, my child, not new," replied my mother. The correction surprised me; and I pondered long on the distinction between clean and new.

In the intellectual sense of the word, Dr. Barnard hardly believed that he had ever been educated.

If by education is meant the result of influences exerted by other minds acting on and giving shape to my own, I should find it difficult to point out when, where, and to what extent such influences have produced such an effect on me. Not that I had not teachers enough; I had probably more than my share; but their personal relations to me, as I recall them, seem to have consisted chiefly in "setting" me lessons, in listening to my "recitation," — which was a verbal repetition of the text, — correcting my blunders by giving me the right word when I used the wrong one, and telling me I "had better mind" when I was restless or disorderly.

Under such teachers his mind was neither nourished nor stimulated. He was taught a few things and forced to learn other things in an uninteresting mechanical way; his real education was derived from the spontaneous exercise and healthy growth of his unusual natural powers.

He had the good fortune, as Dr. Hale puts it, to be "born in the middle of a family," his only brother, John G. Barnard, afterwards a distinguished general officer in the Engineer Corps of the United States army, being somewhat his junior, and his only sister Sarah, who afterwards married the Hon. Augustus Porter, United States Senator from Michigan, being his senior by about two years. In company with the latter he was sent to the village school soon after he was able to walk, and his description of that institution of learning is well worth preserving.

On my introduction into this school, not being in the least aware what I was sent there for, I was a good deal puzzled by the scene presented to me. From end to end of the room on each side there extended a long desk of soft, white, unpainted pine, that on the left being embellished with curious and highly ingenious carvings, and that on the opposite side being decorated with numerous pen-drawings which a more mature critic might have assigned to the Egyptian school. In front of these desks were benches or forms of simple construction, consisting of planks of some thickness supported by stout wooden pins driven into obliquely bored auger-holes to serve as legs. Smaller forms of less height occupied more advanced positions in the room. These were for the little pupils, among whom I was unceremoniously set down — those next the desk were for the "big boys" and "big girls," — the sexes occupying different sides of the room. Many of the little ones, with small books in their hands, were rocking themselves to and fro, and rapidly moving their lips. I was told that they were "studying their lessons," and I wondered what that could be.

The master, for it was a "man's school," occupied a commanding position upon a slightly raised platform. His eye

swept frequently over his little realm, and I observed with amusement that the boy or girl on whom it momentarily rested became instantly absorbed in some profoundly interesting occupation with book or slate, and seemed to breathe a deep sigh of relief when the formidable eye passed on. Some of the boys at the desk, when thus left free to follow their own devices, exchanged whispered communications, apparently relating to strings, pins, and certain spherical objects which were furtively passed from hand to hand. Others applied themselves to improving the contour of their desks with knives which seemed to have been furnished, not only with blades, but also with gimlets, saws, and other implements adapted to the use of sculptors in wood, and it soon became evident that these were the artists to whom the decorations of the desks were attributable. The girls, on their part, improved their opportunities of perfecting the pictorial decorations of the desks on their side. This sort of by-play, however, interested and puzzled me less than the scholastic exercises of the institution. "The first class in reading," "the second class in reading," "the first class in spelling," "the second class in spelling," and so on, were successively called up, and a horrible botch they made of it, one after the other. I could not understand what they stood up to read for, nor why they did not read after they stood up. I could read before I went to school. How it happened I did not know. I supposed it was natural to do so. Probably I had acquired that accomplishment from the same source from which I derived almost everything else in me that is good — if there is any such thing — from my mother's careful teaching. There came a time when I had to stand up myself with a class of children of my own age. I read and spelled as the others did; it was a very wearying and meaningless business, and I found school life very trying. As days and weeks went on, I learned to hate it intensely. There was but one pleasant incident in the oppressive three-hours session. It was when the glad announcement was heard from the master's lips, "The boys may go out." Then, for ten or fifteen minutes, there followed a sense of exulting freedom, to which nothing in later life could be compared.

A few weeks after my attendance at the district school began,

my inadequate appreciation of its educational advantages was the occasion of a profound mortification to my loving mother; and, through her, of a singular feeling of perplexity and shame to myself. A lady visitor, thinking perhaps to gratify a parent's pride by noticing her offspring, called me to her and asked me some of those trivial questions which strangers usually address to children. Among other things she asked me, "Do you go to school?" I answered, "I do." Then she asked, "What do you go to school for?" I replied very truthfully and honestly that I did not know. "O my child," exclaimed my mother, "why do you make such a naughty answer?" "It is not naughty," I insisted, "I don't know." "Oh, now," she continued, "be good, and tell the lady that you go to learn to read." "But I don't learn to read at school," I said; "I can read better than any of the children now." My mother gave it up as a helpless case; but I could see that my stupidity deeply grieved her, and I was deeply grieved myself without knowing why.

Religious instruction, such as it was, formed an indispensable part of the curriculum of a New England village school.

The sensibilities of our pious villagers had never been shocked by the proposal to exclude the Bible from the schools. Every Saturday morning the whole school was called up to "say the Catechism," meaning the Shorter Catechism of the Westminster Assembly. On one occasion an answer given during this exercise created a sensation. The commandments were the subject of interrogation, and had been correctly given until it came to one of the larger boys to answer the question, Which is the ninth commandment? Whether in sheer ignorance, or whether he was instigated by the total depravity that the Catechism told us was inherent in us all, the boy replied in a confident tone, "Thou shalt not swear." The consequences of his indiscretion were somewhat serious; and, some hours later, when the lad's father inspected his son's back, it was a prevalent impression that he grievously violated this new commandment.

It cannot be said, however, that Frederick Barnard learned nothing at the district school. The three additions to his knowledge which he received there, and of which he retained a grateful recollection, were the difference between his right hand and his left, the mysteries of the game of "mumble the peg," — commonly called mumblety-peg,— and the charms of the fair sex to which he ever afterwards continued to be sensitive. His mention of that first experience of the tender passion is extremely characteristic :

> The object of my affection was very pretty, and I suppose that was why I loved her; but I thought I loved her because she was a pleasant playmate. The persistency with which I sought her society did not fail to attract the notice of my rude companions. Possibly they were envious, — I will not impute motives, — but I know that, on account of this weakness of mine, they held me up to merciless derision, and, as a crowning insult, called me "gal-boy." In the fact of being a "gal-boy" I could see nothing discreditable; but the contemptuous tone in which the word was uttered wounded me deeply.

Thus "lives of great men all remind us" that "the course of true love never did run smooth!"

At the mature age of four, Frederick was sent to what was called a grammar school, conducted by a graduate of Williams College, who, in later life, achieved a brilliant reputation and became one of the most famous preachers of his time, the Rev. Orville Dewey. The small student was not required to study set lessons, but he was deeply interested in Mr. Dewey's lessons on geography. For the sake of illustration the teacher used a wooden ball, about eight inches in diameter, on which he had traced the equator, the tropics, the polar circles, and the ecliptic. Unfortunately, however, he held the globe by a rod passing through the axis and projecting some inches beyond the

places which represented the poles of the earth, and when he spoke of the poles, Frederick naturally inferred that the earth must have similar projections on a larger scale. From this bit of personal experience Dr. Barnard was led to think "that illustration by design and model is not always so effectual a mode of conveying knowledge as it is generally supposed to be."

At the age of six Frederick was promoted to the study of the humanities under the direction of the village parson, who was fain to eke out a scanty income by receiving a limited number of pupils. Of the eight or ten lads who enjoyed the privilege of his instructions Frederick was the only small boy, and he was set forthwith to study Adams' Latin Grammar and the Colloquies of good old Martin Cordery. The methods of the parson's school were somewhat peculiar. His pupils were turned loose together in a large room to prepare their lessons for the appointed hour of recitation. As there was no one to look after them, the time of preparation was spent in play; and as the reverend tutor was far from strict in his requirements, the recitations were something of a farce. Sometimes it happened that the dominie forgot his pupils altogether! Naturally enough, the progress of the boys in polite learning was not rapid, and after a time Colonel Barnard put Frederick under the instructions of a young law student who was then reading in his office. For two trying years there was a struggle between the boy and his instructor, the boy hating the very sight of the Latin grammar and determined not to study it; the young man equally determined that he should. The stronger will prevailed, and the end was that Frederick did learn the whole grammar, rules and exceptions, Etymology, Syntax, and Prosody, word for word, by heart, but without understanding a syllable of it all. Luckily he had a read-

ing book — Farrand's Course of Latin Study — which has long been forgotten, but the contents of which interested his mind more than the dry if elegantly worded Colloquies of Martin Cordery, and it is due to the pleasure with which he read that book that he was able to regard the study of the Latin language with anything but disgust.

Meanwhile, his mind was gaining nourishment elsewhere. He was a voracious reader. The juvenile literature of that time was scanty; but at least he read it all, from Mother Goose to The Pilgrim's Progress. When he was only six years old his father wisely put Shakespeare into his hands, and even then he was able to enjoy the Comedies, though the Tragedies and Histories were still above his comprehension. His mother introduced him to Cowper, Burns, Goldsmith, Campbell, and other poets, and to Addison, Johnson, Burke, and Robertson among prose writers. He pored over the pages of Rollin, but books of voyages and travels were his special delight. The narrative of Professor Silliman's journeys through England, Scotland, and Holland in 1806 took so strong a hold on his imagination that it became the desire of his life to see and know the author. He trembled at the thought that before he should be ready to enter Yale the great professor might have passed away; a needless fear, as the event proved, since Professor Silliman survived the graduation of his young admirer by more than six and thirty years. Like many other men of eminence, Dr. Barnard felt in after years that he owed far more of his intellectual development to the desultory reading of his early boyhood than to all the misdirected instructions of his teachers. The senseless task of learning the Latin grammar by rote, without understanding its meaning, might have been more injurious than it actually was, but for his promiscuous reading and the amusement

which he sought and found in mechanical contrivance. A friendly carpenter allowed him the freedom of his workshop and the use of his tools; sometimes the good man's indulgence went so far as to supply him with materials for his work. It was a proud satisfaction to Frederick that the desk at which he sat in his father's office while painfully memorizing the Latin grammar was of his own construction. His kites, sleds, barrows, wind-mills, water-mills, and trip-hammers were the envy of his companions; but notwithstanding the kindness of his friend the carpenter, there is reason to fear that the litter he made at home was sometimes the despair of the housemaid. The faculties of contrivance and construction which were thus brought into healthful activity were destined to contribute in no slight degree to his success in very different pursuits.

When Frederick was about nine years of age, he went to live with his grandfather, Dr. Porter, who had recently removed to the village of Saratoga Springs, and there, except when making occasional visits to his home at Sheffield, he remained for nearly three years in attendance at a school of some pretensions, called the Saratoga Academy. At that school he first began to find his Latin studies endurable, partly, perhaps, because a copy of Virgil with a prose translation chanced to fall into his hands, and he found the story so fascinating that he read it entirely through before he had completed the first book of the original. While at Saratoga he read the Æneid, the Georgics, and four of Cicero's Orations, and had occasion to test the value of the rule which forbade the use of any language but the Latin in communications between the classical scholars and the master. He found that his intercourse with his superior was somewhat restricted in range and some-

what meagre in the extent of its vocabulary, but on the whole he believed that the rule was not without its advantages. It was at Saratoga that he began the study of Greek, and he used afterwards to say that he found that study, under the conditions which then existed, to be "hardly less bewildering than the navigation of the Sargasso Sea by Christopher Columbus." The only Greek grammars then in use were written in Latin, and the lexicon in general use was the Greek-Latin lexicon of Schrevelius, which was limited in its vocabulary, and badly printed besides. The first Greek text to which he was introduced was the Gospel of St. John, of which he said many years later that "for simplicity of style and freedom from embarrassing idioms, he considered it the best example of written Greek that could be put into the hands of a beginner." From St. John he was advanced to the *Collectanea Græca Minora*, another text-book which has long since been laid on the shelf, greatly to the loss, as Dr. Barnard thought, of beginners in Greek. Besides his studies in the classics, he became proficient in geography and made some progress in map-drawing. He has recorded that he was deeply impressed by the knowledge of geometry displayed by his professor's ingenious contrivances — which the boy did not in the least understand — for describing meridians and parallels of latitude with their proper curvatures, also that his own maps were much commended by partial friends, and that he was very proud of the sinuosities of the rivers, which looked as if they might have been drawn from nature, but which were really the product of his own imagination.

An incident of his life at Saratoga was his learning the printer's trade as a matter of boyish amusement. His own account of it may be given at length. He says:

It was in the village of Saratoga that I first saw a printing office. Nothing had ever more impressed my young imagination than the mysteries of the typographical art, and nothing ever afforded me more unalloyed delight than the opportunity I now enjoyed to fathom these mysteries. I soon made acquaintance with all the printers, and was indulged in my passionate desire to be taught how to handle the "stick." I had at length a regular "case" assigned me, and for months I devoted to it all my hours out of school. I learned to "compose," "impose," "correct," and "distribute" type, became in fact familiar with all branches of the art, except the working of the press, to which my strength was not equal; but I learned to wield the "balls" with a certain dexterity. It is to be remembered that automatic printing was then unknown, and that even the ink-rollers now in universal use had not been invented. My skill thus became such that, had I at any time in my life been compelled to rely for subsistence on the labor of my hands, I could easily have earned my living as a practical printer. Many years later, on entering a printer's office in Tuskaloosa, Alabama, and observing a "stickful" of "matter" standing by itself on an "imposing-stone," the spirit of the craft impelled me to pick it up. Immediately there arose a loud outcry from the printers in the office, who expected to see the whole tumbled into a mass of "pi." Setting it gently down, I said to them, "Do not be concerned, gentlemen; I am a printer myself." I was always afterwards a great favorite in that office, for there is no craft in which the feeling of brotherhood is stronger than in the printer's. It seems to me that my voluntary apprenticeship to the printer's trade was by no means an unimportant element of my education. The "copy" which I "set up" embraced many pages of instructive matter, and the hundreds of "takes" which I put in type for the columns of *The Saratoga Sentinel* early familiarized me with politics and the forms of political controversy. But a principal advantage which I derived from this experience was the confirmation of those habits of concentration and persevering industry to which I have owed whatever of success may have attended me in life. I would not advise every father who destines his son to an

intellectual life to insist on his making himself an expert in some mechanical art; but if the boy manifests an inclination to do so, I would by all means encourage it; and that, if for no other reason, on account of the valuable mental discipline it will afford him.

To the close of his life Dr. Barnard cherished pleasing recollections of the years he spent at Saratoga and of his young companions there. He regarded the influence of companionship as one of the strongest educative forces to which a boy or a young man can be subjected, powerful for good or evil on the ethical side, and so powerfully stimulative on the intellectual side "that a lad can hardly fail to derive benefit from attending school, though he should do nothing more than attend." Of his Saratoga schoolmates some were unfortunate, but more succeeded in achieving honorable distinction in various walks of life. One was for years the most famous criminal lawyer at the New York bar; and another, whose mental and moral qualities won for him young Barnard's cordial admiration, was afterwards a representative in Congress from the State of Louisiana. Forty years later, when he met the latter gentleman once more in the village of Saratoga, he asked a question which elicited a rather sagacious reply. "Why is it," inquired Dr. Barnard, "that the people of South Carolina, who forced upon us our first protective tariff in 1816, are now such bitter anti-protectionists?" "However you may account for it," was the answer, "you will find it to be invariably true that when men's interests lie in a given direction, it will not be long before their honest conviction will lie in the same direction. The interests of South Carolina are not now what they were in 1816!"

Two letters written by Frederick have been preserved. The first was addressed to his father, and was evidently

intended as a specimen of his proficiency in English composition. The second, in a freer and more familiar style, was sent at the age of thirteen to one of his cousins, requesting him to purchase a microscope which Frederick needed "for a particular purpose."

CHAPTER II

Stockbridge Academy and preparation for college — The influence of "other fellows" — Barnard's schoolmates — His mechanical pursuits — Introduction to natural science — Juvenile social science — Schoolboy pranks — A case of discipline — The terrors of proportion — Entrance examination at Yale — Yale in 1824 to 1828 — College societies — Barnard's contemporaries — Social influences of college life — A distinguished career and a good degree — Barnard becomes a teacher in Hartford Grammar School, studies French, German, Italian, and Spanish — Becomes attached to the Episcopal Church.

At the age of twelve Frederick was sent to an academy at Stockbridge to prepare for Yale. The head master was a Mr. Jared Curtis, who was always called Major Curtis, but in what service he had held his military rank Frederick never learned. The school work at Stockbridge was less instructive than at Saratoga; in some particulars it seems to have been incredibly defective. Arithmetic was wholly neglected, and English composition, the only study of which Dr. Barnard seems to have retained any strong recollection, was taught in a way which he did not hesitate to call detestable. The unlucky boys were left to choose their own subjects and to write their compositions as best they might. They naturally chose the most ambitious themes, and treated them with a dreary verbosity which revealed their ignorance. Dr. Barnard used to say that teachers who follow such methods "ought to be proceeded against by the Society for the Prevention of Cruelty to Children."

Yet the years spent at Stockbridge were rich and fruitful in the educational development of Frederick Barnard;

for there, more than ever before, and more perhaps than ever afterwards, he was stimulated by his contact with "other fellows" and began to make the influence of his own personality felt by companions of no mean capacity. If the academy at Stockbridge was not a good school, it was not for the lack of good materials to work on. Many of the pupils became distinguished men. When young Barnard went there, David Dudley Field had just left; but Timothy and Matthew Field were there, and Cyrus and Stephen Field followed them a few years later. Among his other contemporaries were Chester Averil, who, before his early death, became a brilliant professor at Union College; Ashley Curtis, an eminent mycologist, whose life was spent in South Carolina; William Pitt Palmer, a poet of considerable promise, who quenched the spark of poesy in Wall Street; Theodore Sedgwick, grandson of Judge Theodore Sedgwick of Revolutionary fame, and himself an able writer on law and literature, who was president of the New York International Exposition of 1853; John Henry Hopkins, a well-known engineer; Albert Hopkins, afterwards professor of physics at Williams College; and a more distinguished brother of the last named, who was to become the famous college president, Mark Hopkins. Of all these it was a significant fact that Mark Hopkins was singled out as the natural but friendly rival of Frederick Barnard. After nearly seventy years one of the "Stockbridge boys" gave this account of them:

> In all our intellectual contests, debating societies and spelling classes, the two future college presidents, Dr. Hopkins and Dr. Barnard, were always pitted against each other as leaders of the contending forces. Our contentions were vigorous and earnest, but amiable and good natured, resulting in a pleasant *esprit du corps* among the boy students. The two

leaders were congenial spirits; both were born educators, and they were pure and lovable boys. With fine physiques, personly attractive, amiable in temper, genial in intercourse, refined in sentiment, dignified in manner, firm in their convictions of right and duty, and unfaltering in the pursuit of high ideals, they disarmed envy and prejudice, and made only friends. Their lives were pure in every way. They indulged in no profane, vulgar, or harsh language; much less were they guilty of any low or unkind conduct. Tobacco in all its forms, they eschewed instinctively. While keenly appreciating wit and humor, and both relishing and telling good stories, they had no tolerance for any of a coarse or offensive character. They were equally intolerant of jokes that could pain or mortify another. They saw neither humor nor smartness in crushing a comrade's hat over his eyes, or throwing his cap into a puddle, or pulling his hair "on the sly," or pinning absurd labels on his back. If he was weak in the attic, they tried to help encourage him; if he was intrusive, conceited, or overbearing, they would play the part of Socrates with him and lead him into some intellectual quagmire from which he could escape only by admitting that he did not know everything.

In the boyish sports and simple athletic exercises of the lads at Stockbridge Barnard held his own with the best, and in other amusements requiring mechanical ingenuity and dexterity in construction he had no competitor. It was remarked that Barnard's toy-pistol shot best, and that his kites flew furthest. The pistol was entirely of his own making. The barrel was a short piece of elder with the pith punched out and with the orifice bored a little larger; the missile was an arrow-like rod, with the feather-end projecting somewhat from the rear of the barrel; the projecting force was the impulse of a smart spring, made from the stem of the mountain ivy and attached by a stock to the barrel of the pistol. The kites were perfected only after long and patient experiment. It was found that a heavy kite could not fly high. It was also found that a

heavy string was like so much dead weight when attached to a light kite. The consequence of these observations was the invention of a "thread-kite," scarcely twelve inches in length by eight inches across the bow, which weighed hardly an ounce and required only a brown thread for a string. When made on this model, the kite could be sent off to a distance of more than a mile; but it was a great disappointment to Barnard that after rising to a certain considerable height, it would rise no higher, but when more string was "paid out" would only go further off horizontally. For that undesirable physical fact there appeared to be no remedy; but to expedite the tedious process of winding in a mile of thread when his play was over, Barnard invented a simple apparatus on the principle of a weaver's "quill-wheel," by which the spool was made to revolve with great rapidity by means of a driving-wheel and band. All of his inventions were not so successful as his kites and pistols. He became ambitious to construct a balloon, and having mastered the principles of the thing, he concluded that a hog's bladder would exactly suit his purpose. Unfortunately, he neglected to compare the weight of the membrane with the buoyant power of the gas with which it was to be filled, and when his balloon came to be inflated, it was found to have only one defect — it would not rise.

About that time itinerant lecturers began to travel through the country, discoursing on chemistry, electricity, magnetism, optics, pneumatics, and astronomy, usually illustrating their lectures with practical experiments. One of these lecturers, Mr. Josiah Holbrook, well known as an educational reformer, visited Stockbridge. His apparatus was simple and his experiments were slight enough, but such as they were, they fascinated Frederick Barnard. The glimpses they gave him of the

operation of the natural forces roused in him a strong resolve to learn more and inspired him with an ambition to make experiments on his own account. By dint of much labor, and by converting many homely utensils to unaccustomed uses, he contrived to supply himself with quite an array of scientific apparatus, and soon became an amateur lecturer on physics to his wondering schoolmates. He had no books; at that time there were hardly any school books on such subjects; but at length, during one of his vacations at home, he had the good fortune to light on a small text-book belonging to his sister, entitled *Blake's First Lessons in Natural Philosophy.* He read it through from cover to cover, almost without stopping; and meagre as it was, it contained very much that was new to him. Best of all, it suggested a variety of experiments which he was able to make for himself, and which he did make with infinite satisfaction. It was out of his own experience that Dr. Barnard came to the conclusion that, in the education of children, it is a fatal mistake to substitute the study of words for the observation of things.

> It has always seemed to me [he said] to be the great, as it is the almost universal, educational mistake of our time, that children, instead of being introduced to subjects which address the perceptive faculties, and which are adapted to furnish them with a flood of novel and clearly comprehensible ideas, are usually condemned to the dreary study of unintelligible words, which impose a heavy burden on the memory and are only apprehended after the understanding has become matured with advancing years.

His new acquirements and his aptitude as a "born teacher" soon made young Barnard's "Evenings at Home" both instructive and entertaining to the family

circle. Thus Mr. Holly, the friend of his boyhood, from whose reminiscences we have already given an extract, records that, at a pleasant gathering of young people one evening at Sheffield, one of the girls proposed to vary the amusement with lectures, and called on Barnard to open the course. He at once complied, and seeing an ornamental pair of bellows hanging by the fireplace, he took up the bellows and delivered a discourse on the properties of air, which was received with great applause. Song and other music followed, and he was called upon to deliver a second lecture. He again complied, and took for his theme the poetical side of literature, not omitting, however, when dealing with love and moonshine, to give some account of astronomical phenomena and the majestic courses of the stars.

Barnard was not idle in his vacations at home; but he seems to have been occupied with things rather than with books, and he had already begun to ponder the social problems in which he never ceased to take an interest. His favorite resort was the famous Salisbury Iron Works, where he watched with untiring interest the whole process of melting the ore and moulding the metal.

When the furnace blew out [says Mr. Holly], the stack continued to be red hot for several weeks, and the vapor was so dense that the bottom could not be distinguished. To look down into it was like peering into the depths of Sheol. Barnard happened to be at Salisbury late one fall soon after the furnace blew out. In an afternoon we strayed into the "top house," and after taking a look into the fiery depths we found the warmth at the top so agreeable and the gloaming light so genial that we sat down on two inverted boxes and soon fell into a train of familiar conversation on progress and reform. The reforms projected by our youthful imagination were of the most fundamental and comprehensive character. We held that every child born into the world is entitled to a living, to

care, food, raiment, training, and education. If parents failed to supply these, the State ought to compel them to do their duty; in cases of orphanage the State should take entire charge of the children. All wrong was ultimately to be, not righted, but prevented, by educating the minds, the souls, and the bodies of the people, so that no one should wish to do wrong. There were to be no empty stomachs to breed anarchy or agrarianism. Time was to be fairly divided into proper periods for education, work, rest, and recreation. Honest work was to be rewarded with bread, butter, tea, coffee, sugar, milk, and money enough to satisfy the reasonable wants of a good citizen. Whoever would not work should have only bread and water. Gardens of the gods were to be as plentiful as potato fields; the streets in towns and villages were to be bordered with trees, shrubs, and flowers, and the country highways were to be adorned in like manner with fruit trees of divers kinds for public use. Dancing and good manners should be taught in all schools, and music should be encouraged and sustained at public expense. Apothecaries should still be required to label poisonous drugs as poisons and severely fined for any injuries that might be caused by their neglect; but the State should accept no bribe from rumsellers for the privilege of selling unlabelled poisons without responsibility for the ruinous evils which are wrought by their traffic. Jails and penitentiaries were to be few; schoolhouses, academies, and churches numerous. The poorest human habitation should be a neat and commodious cottage, while public buildings should surpass in beauty and grandeur the most splendid architecture of all previous castles of Spain.

These were dreams of boyhood, visions of Utopia; but they were at least dreams of such a boyhood as develops into generous manhood; and the visions of a far-off or impossible Utopia were at least prophetic revelations of the strenuous and noble life that had begun to be.

But the man was still a boy, and his school life, blameless and studious as it was, had its occasional boyish frolics, as the following reminiscence of Mr. Holly testifies.

The main square of old Stockbridge [he says] was called Academy Square, because the Academy stood at its northeast corner. Diagonally opposite the Academy was an unusually large, three-story hostelry, kept by a kindly Boniface named Hicks, with stoops on the two streets, which afforded a central and convenient lounging-place and head-quarters for planning excursions. Among the inn refreshments for elderly people were "slings" compounded of spirits, sugar, and hot or cold water, according to the season, and spiced with grated nutmeg. In cold weather, a toasted cracker, about the diameter of the top of the tumbler and half an inch thick, was added. This was called a "toad." A milder beverage for younger people was a "sangaree" prepared in the same way, but substituting wine for stronger liquor. One pleasant Saturday afternoon in the autumn, while sunning ourselves on the south stoop and chatting about refreshments for a proposed picnic, crackers were mentioned but objected to because they were such dry and thirsty eating. It was suggested that we should test the matter experimentally, and a wager was laid that one boy could not eat six crackers while another boy walked around the square. The two champions were Fenn — years later Judge Fenn of a Massachusetts court — and myself. Fenn undertook the walk, and I took the crackers. Barnard and two other boys were to accompany Fenn to see that he did not run, while the other boys remained with me to see that there should be no surreptitious disposition of the crackers. Time was called and the work began, legs against jaws. My watchers encouraged me by asking occasionally, if I would like a little fine sand sprinkled on the crackers, or a few choke-cherries — a strong astringent — to eat with them. The boys with Fenn did him the like service by warning him not to swing his arms, lest he should hit somebody, or asking if he would like a few baked apple cores along the walk to give him a firm footing. Time flew; the home stretch was looked for with intense interest; the last corner was turned; Fenn was working his legs for all that they could accomplish while I was crushing between my palms the remains of the last cracker; but just as he reached the last column of the stoop next to the goal, I forced down the last crumb with a final and desperate gulp, winning, not by a neck,

but by a mouth, and of course the Fenn party furnished the "sangaree." Nearly half a century afterwards I accidentally met Judge Fenn at the same hostelry, and we had a "right gude willie waught for auld lang syne."

Playful as he was, Barnard, in all his school and college career, had but one dispute with his superiors, and that occurred at Stockbridge. The number of pupils at the Academy had increased so rapidly that Major Curtis was obliged to secure the aid of an assistant, a gentleman who was still alive in 1885. Dr. Barnard described him as, in some respects, the most extraordinary scholar he had ever known. In the class-room he never took a book in his hand, but seemed to carry the whole text in his mind, quoting sentences at length, referring to particular words, and even mentioning their places on the page, with unfailing accuracy. In or out of the class-room, if he was asked a question, he replied without hesitation, never referring to grammar or dictionary for a rule, an exception, or a definition. The boys regarded him as a prodigy, but he had the great misfortune to be deficient in the qualities by which he might have won their confidence and affection. In discipline he was something of a martinet, and he soon became a terror to every youngster in the school. The tutor called Barnard to account for some offence which he considered to be serious, but which Barnard did not admit to have been an offence. He did not seem to be disposed to resort to the extreme measure of reporting the boy to Major Curtis for punishment, and offered to let the matter drop, if Barnard would make a suitable apology. The boy refused, and chose rather to submit to a public censure in the presence of the whole school. He felt the public reprimand keenly; but he did not believe he had deserved it, and he would not avert his punishment by making an insincere apology.

The censure pronounced upon him he considered to be merely a technical disgrace, and in bearing it he had the great consolation of the abounding sympathies of his companions. Everything considered, this painful experience was doubtless salutary in its effects, by drawing out and strengthening that principle of unfaltering and uncompromising self-respect which, in after life, was so remarkable a feature of Dr. Barnard's character.

At length his school days came to their predestined close. In leaving Stockbridge young Barnard had little to regret, except, as he lamented afterwards, that he had not availed himself of certain opportunities of learning Hebrew and Spanish, and that his efforts to acquire the art of stenography had been only so far successful as to enable him to write mysterious-looking characters which he could not read a few hours after they were written. These, however, were light matters which the dread of his approaching examination for admission to Yale cast completely into the shade. It was a singular fact that since he left the village school of Sheffield he had paid not the least attention to arithmetic, and arithmetic was one of the subjects included in the Yale examination, for which he was otherwise well prepared. On reaching home in the early summer, he took counsel with a cousin who was then just out of his sophomore year at Yale, and was advised to devote the next two months to Webber's Arithmetic, paying particular attention to the doctrine of Proportion. His diligence was quickened by his apprehensions, for in those days the usages of Yale did not allow of half-way admission to college "on condition." After his examination a boy was either in college or out of it. He might "scramble through" and founder further on; but for the time being his examination was decisive, so that unless young Barnard could pass in arith-

metic, he had no right to expect that he would be admitted. It may be well to say here that after all his large experience as a professor and president of colleges, Dr. Barnard never approved of half-way admissions to college "on conditions." Happily, he found the text-book recommended by his cousin to be helpful to him, because "it told the why of things." He mastered its contents from beginning to end before the dreaded examination came on, and it was to that time that he referred his first taste for mathematics.

His account of the examination at New Haven is amusing.

At the appropriate time I went to New Haven, my father accompanying me. Arithmetic as a whole no longer troubled me, but that ominous advice about Proportion weighed like a ton of lead upon my heart. I suspected that Proportion was the particular club with which it was customary to knock too presumptuous sub-Freshmen on the head. The morning after my arrival I entered upon the scene of my anticipated torture. Singularly enough there is extant a letter in which, on the following day, I gave to my mother a full account of the proceedings. The applicants for admission were divided into squads of moderate numbers each. Mine consisted of eight victims besides myself. The examination was entirely oral, and was completed at a single session. One officer conducted the examination in all the subjects, while another sat by and looked on. My examiner was Professor Silliman, who, though Professor of Chemistry, took us up on Virgil, Cicero, the Greek Testament, Græca Minora, Xenophon, Geography, and Arithmetic, all apparently with equal facility. When at last I was called up on Arithmetic, the subject of Proportion projected itself before my mental vision in colossal dimensions; I felt quite sure that I should mix it up with the cube root and circulating decimals; but to my great astonishment and relief, this important topic seemed to slip the mind of my examiner altogether, and after asking me a question or two about numerators and denominators and ascertaining my general notions of vul-

gar fractions, he let the subject drop and passed on. I watched the entire examination carefully and noted with surprise that not a boy was asked a single word about Proportion! At one time during the proceedings the President walked into the room and took a seat; but he made no remark, and though he looked dignified and grave, I could not but think that he looked a little bored also. When the whole ceremony was over, we were requested to step into the corridor for a moment; but after a brief delay, "while one with moderate haste might tell an hundred," we were recalled and informed that we had all been admitted to the freshman class.

Thus Barnard was at last a collegian, and his career at Yale was a distinguished one. Though he was the youngest member of an unusually strong class, he took a high stand from the first. Before the close of his sophomore year he was recognized as the leader of the whole college in Pure Mathematics and the exact sciences. At his graduation in 1828 he stood second in the honor list, being outranked only by Horace Binney, Jr., of Philadelphia, who excelled him in the classics. His diligence and good behavior won for him the high esteem of his superiors, and his courtesy and geniality made him popular among his fellow-students. Few incidents of his college life have been preserved beyond those which he has himself recorded in the following notes. His account of Yale College as it was in 1824–1828 will be interesting to all Yale students, and his observations on the system which was then established there cannot fail to be of interest to educators.

The two or three years [he says] that followed my entrance into college were years of earnest and persevering labor; but although I was apparently surrounded by many educational influences, and enjoying, or supposed to enjoy, the instruction of many eminent educators, it was to me a period of almost literal self-education. There were two reasons for this: The first is

that no man at Yale who aspired to be ranked as a scholar was permitted by public opinion to obtain any assistance from any quarter whatever, even from his immediate tutor, in preparing himself for his daily scholastic exercises. He must stand up boldly before his class, relying on his own resources exclusively, and "take his chance." If he acquitted himself well, all honor was awarded him; if he "stuck" or "flunked," he lost caste in proportion to the gravity of the case. Scholastic rank in college depended, then, as literary or professional rank in the world depends always, upon the consensus of opinion of the community which sees and judges it. There was no such thing then as an artificial grade founded on numerical valuations of particular performances. A man's superiority was acknowledged because it was felt, not because he could point to a high "mark" on the term record. Every man was constrained to show what he was capable of doing without help, and for that reason students profited little from the aid of their instructors in meeting current difficulties. As a partial compensation, it was allowed to seek such aid when the ordeal had been met; but even then it did not tend to exalt the reputation of a scholar to avail himself of the privilege.

The other course, which seriously limited the magnitude of my apparent advantage, was that, according to the usages then prevailing at Yale, a student scarcely came into mental contact with a professor before his senior year. In the junior year, it is true, there were lectures from the Professors of Chemistry and Physics; but they were interjected into what were called the "study hours," the regular periodical exercises of the day not being interrupted on account of them. They added something to our knowledge, no doubt, but their proper educational influence was slight. Leaving these lectures out of view, the plan of operation was the following: Every class at entrance was broken up into divisions of about forty students each, and the tutor assigned to each division remained its sole instructor in all branches of study whatsoever to the end of the junior year. This tradition was first broken in the third year of my own class, when Professor Olmsted [then newly appointed to his chair] voluntarily relieved our tutor of his classes in mechanics and physics. He did so, as he told me himself frankly,

for the sake of getting himself up afresh in those subjects, to which he had paid no attention while filling the chair of Chemistry and Natural History in the University of North Carolina. I must admit that the Professor of Ancient Languages came into the class-room once or twice during our sophomore year; and I cannot omit to mention that the Professor of Oratory presided when we "spoke" in our turns in the chapel on Wednesday afternoons. It was his custom to hear us read our "pieces" before they were publicly delivered, and he usually made a few remarks on the merits or demerits of our performance when we had left the rostrum. The only one of his critical observations which survives in my memory was that there are only five words in the English language in which it is permissible to sound the termination *ed* as a separate syllable, viz.: blessed, cursed, learned, striped, and streaked — a limitation which I have since found to be too narrow.

My section, or "division," as it was called, was placed at first under the care of Mr. Josiah Brewer, who left us at the end of the first year to devote himself to a missionary life in Syria. He was succeeded by William M. Holland, Esq., a man of singular ability, afterwards a professor in Trinity College, Hartford, who passed away in the prime of life. To him I was indebted for many acts of kindness, and for more useful counsel and encouragement in my educational career than to any other of my instructors except Professor Olmsted, who treated me from the first with marked interest and, indeed, almost as a son. The President, Dr. Day, was a man of gentle and kindly heart, but grave in aspect and rather formal in deportment; and although he was regarded by the students generally with affection, it was rather a reverential than a glowing affection. During our senior year he gave us instruction in psychology and in political economy, and without being brilliant, he was always interesting. Professor Silliman was universally admired. He had a wonderful command of language, and in his unwritten lectures on chemistry, mineralogy, and geology, there were frequent bursts of genuine eloquence. Professor Goodrich, of Oratory, and Professor Kingsley, of Ancient Languages, though able men, left but slight impression on me. These gentlemen were all the instructors then holding

rank as professors in Yale College; but no fewer than seventeen tutors held office, though not all simultaneously, during my time. Of these, five subsequently became professors in colleges and four others college presidents. The most distinguished among them was President T. D. Woolsey, who succeeded Dr. Day at Yale, and held office for twenty-five years. He is still [1886], after fifteen years of retirement, in the enjoyment of a hale and honorable old age. President Woolsey was one of the tutors of my class, though not of my division.

As I look back upon it, no part of my training at Yale College seems to me to have been more beneficial than that which I derived from the practice of writing and speaking in the literary society to which I belonged. The general literary societies, open to students of all the classes, and numbering one or two hundred members each, were maintained at that time with great enthusiasm. I am told that they are now extinct at New Haven. They have been supplanted, I suppose, by the multiplicity of small secret associations which decorate themselves with Greek-letter titles, but which — if they are literary at all, as they possibly are, though I doubt it — can never furnish the stimulus of a large audience. I can only regret the change. It seems to me that, with the loss of her literary societies, half the glory of Yale has departed from her. In the old Linonia Hall I spent many of the most profitable hours of my college life; and I heard debates there which for interest and brilliancy were equal to any at which I have since been privileged to be present in assemblies of much superior dignity. There were some men of my time who made no very serious struggle for grade scholarship, and yet would sometimes "come out strong" in the society. For the sake of students of this class, who will always be more or less numerous in every college, I should esteem it a great advantage if the old societies could be resuscitated.

I cannot close these slight reminiscences of my college life without mentioning a few of my classmates. The name which stood, in alphabetic order, at the head of our catalogue, was that of Thomas Gold Alvord, who is still living [1886] in honorable retirement, after being nine times elected to the Assembly

of the State of New York. He was twice Speaker of the Assembly, and for one term he presided over the Senate by virtue of his office as Lieutenant-Governor. Another was Christopher Morgan, once Secretary of State of the State of New York, and member of Congress from Mr. Seward's district. A third was W. W. Hoppin, afterwards Governor of the State of Rhode Island. A fourth was Oliver E. Daggett, later Professor of Didactic Theology at Yale. A fifth was Henry N. Day, Professor of Sacred Rhetoric and Theology in Western Reserve College. Another was William Strong, who has served as an Associate Justice of the Supreme Court of the United States; and another still was John Van Buren, "Prince John," who was certainly one of the most effective political speakers our country has ever seen. He abounded in dry humor. On one occasion, replying to the assertion that the people wanted something or other, he inquired, "How do you know? I am one of the people and I don't want it."

As to the social influences of college life upon those who mingle in it, I have a word to say. In institutions like Yale, Harvard, Princeton, and others, where large numbers of young men are domiciled together, secluded from the world, screened from the eye of society, subjected to a merely nominal oversight by the academic authorities, and wholly unanswerable to municipal surveillance or control, the influence of "the other fellows" is powerfully effective in the formation of personal habits and opinions, and consequently in the moulding of character. With all restraint practically withdrawn at an age when the faculty of self-control is still feeble, and with temptations presenting themselves in the most fascinating forms on every side, a young man's natural love of pleasure and his propensity to self-indulgence do not need the stimulus of example or the attraction of companionship to make them dangerous. But in a body of four or five hundred young men of every variety of social condition, there can never fail to be some who are fonder of amusement than of study; and their amusements will not always be innocent. These young men are often attractive in manner and genial in disposition, and consequently they are popular. Popularity is a great thing in college. The popular man wields an influence over his fellows which is almost unlimited,

and when the popular man is also a vicious man, he becomes a fearful agent of moral contamination. This is strong language, but it is justified by the number of distressing moral wrecks which fell under my own observation during my college life. The greater number of the young men who resort to cloistered colleges no doubt escape demoralization; but of those who do escape, many are saved only "so as by fire"; and there is hardly one who will not confess that the tendency to vulgarity in language and the prevalent contempt for the conventional proprieties of life have often been such as to shock his moral sense. On the other hand, men of determined will, who struggle successfully against all this and succeed in keeping themselves unspotted from the grosser world, find in each other's society an improving and educating influence of the highest value; and of all the benefits derived by such men from their college experiences none are remembered with keener appreciation than those which resulted from their association with "the other fellows."

When a young man has taken his degree of Bachelor of Arts, it is customary to say of him that he has "completed his education." As a rule, and at the moment, the phrase expresses very well his own opinion of himself. But in so far as education consists in the acquisition of knowledge, he will soon find himself to have been deceived. It was so with me. In my undergraduate life I thought rather favorably of my attainments. It was only after graduation that I began to be conscious how little I knew. Commencement occurred in my year on Wednesday, the 10th of September, and on the Monday following I entered upon office as a teacher in the Hartford Grammar School — an institution in which, for time out of mind, it had been customary to break in recent Yale graduates for service as tutors of the college. As it was my purpose, while at Hartford, to prosecute my reading in physics and the higher mathematics, I became at once aware that, with a knowledge of no other modern language than my own, I could not make a single step of satisfactory progress. It seemed to me that I had a new education before me, in which I must begin at the beginning. I took up first the French language, and, without a teacher, by dint of hard study and resolute perseverance, I

fixed in my memory all the pronouns, connectives, and irregular verbs contained in the tables of Levizac [the grammar then in vogue], after which I learned to read rapidly. I would not venture to say that my method is the best. It is not Mr. Sauveur's, I believe; but any one who will try it as I did, will find it effectual. The successful study of French encouraged me to attack German, Italian, and Spanish in much the same way. More than twenty years later, when a translation of Miss Fredrika Bremer's *Hemmen i Nya Verlden* had been published in the United States — in which, by the by, the prudent publisher had suppressed everything she had said, and she said some things very plainly, about the "peculiar institution" of the South — I learned the Swedish language, only that I might get the whole story in the original. I afterward extended my study to the Danish.

It was during his college life that Barnard first became attached to the Protestant Episcopal Church. The Calvinistic Congregationalism in which he had been reared had never won his personal adhesion; but it had inspired him with somewhat vehement prejudices against other forms of Christianity. He regarded the Episcopal Church with particular aversion on account of its liturgy, its vestments, and even the use of the organ in public worship. It happened, however, that one of his college friends who was preparing to enter the Congregational ministry was a devout admirer of the Book of Common Prayer, and through him Barnard was induced to make a study of the Prayer Book which ended in a complete removal of his prejudices against liturgical worship. Another friend, a devoted churchman, who made very little pretension to personal piety, but who expected nevertheless to take orders as soon as possible after his graduation, was a strenuous maintainer of the peculiar claims of the Episcopal ministry by virtue of its apostolical succession. He urged his views upon Barnard, and

gave him several such works as Onderdonk's *Episcopacy Tested by Scripture*, Law's *Letters to Bishop Hoadly*, and Chapman's famous *Sermons*. The historical argument, rather, perhaps, than the critical, convinced Barnard that Episcopacy was either of direct apostolical institution or an universal, and therefore normal, development of the ministry established by the Apostles of Christ. Accordingly, he wrote with many misgivings to ask his father's permission to attend the Episcopal Church instead of the College Chapel. It soon appeared that his apprehensions had been groundless. Colonel Barnard appears to have been one of the many quiet and conscientious people who conformed to the prevailing type of Christianity and did nothing to discredit it, but who still preferred the older customs of their Mother Church. His consent to Frederick's request was given without hesitation and was accompanied with a frank confession that he himself would have been glad, if it had been possible, to attend the Episcopal Church and to bring up his family within its pale. Thus Frederick became an attendant at the services of that church, but he was not confirmed for several years. At that time the Episcopal Church in Connecticut and elsewhere was strongly leavened with Puritanism. Confirmation, and not baptism, was generally regarded as the act of "joining the church"; and in taking that grave step the candidate was understood to make a "profession of religion" rather than a confession of faith and an acknowledgment of sacred obligation. Barnard, as appears from his correspondence, was deeply impressed with the importance of religion, but he was not prepared to make any profession of religious attainment, and his confirmation did not take place at that time.

CHAPTER III

Barnard as a teacher — Enters on the study of law — His associate, William Carter — Newspaper controversies — Miss Catherine Beecher and her school — Fanny Fern as a girl — George D. Prentice, John G. Whittier, and *The New England Review* — Barnard as an editor — His first essay in authorship — A Fourth of July oration — Barnard's hearing impaired — His early literary efforts — Park Benjamin — Barnard becomes a tutor at Yale.

On September 15th, 1828, Frederick Barnard began his career as a teacher in the Hartford Grammar School, a classical school which had long served the double purpose of preparing boys for college and of exercising future tutors of Yale College in the art of teaching. The plan of the school had recently been so extended as to make its advantages available to boys who were intended for business life as well as for lads who were to enter college. Mr. Barrows, — afterwards the Rev. Professor Barrows, — a graduate of two years' standing, had chosen to retain his position in the Grammar School instead of returning as a tutor to Yale, and by virtue of his seniority became head master. He was a man of earnest and devoted piety, beloved by all who came into contact with him, and distinguished for the zealous energy with which he performed the duties of his office. His chief assistants were Mr. Barnard, who had general charge of the classes in mathematics, and Mr. — afterwards the Rev. — William Carter, who taught the classics. A third assistant was employed to teach writing and arithmetic. Each instructor had a separate room in which to hear the recitations of his classes, and in each

of those rooms a certain number of pupils had their permanent desks. Among those who were thus under Mr. Barnard's special charge were two lads who afterwards became presidents of colleges.

After more than half a century had passed away, Dr. Barnard could not forget the feeling of blank dismay with which he faced for the first time the handful of small boys to whom he now stood in the relation of master.

> I have since addressed great and imposing audiences [he said] such as legislative bodies, popular assemblies, religious organizations, temperance conventions, scientific associations and meetings of all sorts, embracing every variety of age, intelligence, and culture; but I have never felt again the inward tremor with which I presented myself for the first time before the squad of boys who were waiting to greet me in the Hartford Grammar School.

He had the instinctive tact, however, to make his pupils understand that he felt sincerely interested in them. He was at pains to catch their way of thinking, and by striving to sympathize with them he won their sympathy and confidence. He joined heartily, and yet with no loss of dignity, in their sports, and in the hours of study the boys with whom he had been playing were easily managed by a master who had won their goodwill. There is no doubt that he made a singular impression on his pupils. One of them, the Rev. Dr. A. L. Chapin, President of Beloit College, Wisconsin, wrote of him in these terms in 1870:

> Mr. Barnard, more than any of the others, impressed the boys with a sense of his superiority. Like almost all men of genius, he was somewhat variable and moody, but at times brilliant. Sometimes, in a fit of abstraction, he would sit for half an hour together with his head bowed on his desk, observ-

ing nothing that passed, the boys meantime being restrained from disorder only by a kind of unconscious sympathy with the teacher's mood. Then he would rally, and throw, perhaps into the elocutionary exercises of Porter's *Analysis*, a glow of life that thrilled and quickened the favored class assigned to him, and especially when for variety of illustration, he would give a reading of his own from Shakespeare. Some passages from *The Merchant of Venice* always bring him before me. Under his instructions, too, though somewhat outside of his regular department, the Latin of Cicero's *De Amicitia* or of the *Agricola* of Tacitus was clothed with a charm it has never lost for me.

There were good reasons for the occasional abstractions of the young teacher. In the second year of his service at the Grammar School there fell upon him the first gloom of a heavy cloud, to be mentioned presently, which was to shadow his whole life; but independently of that, he was by habit and principle an ardent student. His delight was in the higher mathematics, and in order to pursue his mathematical studies to advantage he set himself diligently to the acquisition, first of French, and afterwards of German, Spanish, and Italian. At the same time he began the study of law under the direction of Jonathan Edwards, Esq., a member of the Hartford bar with whom he had entered himself as a law student. Law, and not teaching, was the profession to which he expected and desired to devote his life; and during his first year at the Grammar School he became profoundly interested in Blackstone's Commentaries. Thus mathematics, languages, and law kept him constantly engaged. On his desk he had always some book to be used in the intervals between the recitations of his classes and in the tedious hours when idle lads were "kept in" after school to atone for sins of omission or commission during the day. It is not improbable that he sometimes uncon-

sciously lengthened the intervals between his recitations, and it is barely possible that other motives than the sympathy mentioned by President Chapin may have kept the boys from disturbing the brown studies of their teacher.

Mr. Barnard's relations to his associates in the Grammar School, and particularly to Mr. Carter, were exceedingly happy. Carter had been a classmate and an intimate friend of his in college, and after their association at Hartford they served together as tutors in Yale. Their friendship was founded on sincere mutual esteem and lasted all their lives. Carter, while still in his sophomore year at college, had become deeply religious and had devoted himself to the ministry. He was a man of sternly unbending principle, keenly sensitive to injustice, and always ready to espouse the cause of the oppressed. During the popular agitation which attended the proposal to remove the Creek and Cherokee nations from the lands guaranteed to them by treaty in Georgia, he was roused to indignation at the cruel wrongs of the Indians and gave utterance to his sentiments in several scathing articles which were published in the Hartford newspapers. In another newspaper controversy Barnard and Carter were engaged on the same side. A teacher in a neighboring town had adopted some variation of Locke's method of teaching languages, using a classical text with a literal interlinear translation, and discarding grammars and dictionaries. To say the least, this method, however defective, was far less irrational than that which Barnard himself had been doomed to follow in his early classical studies, and he would hardly have condemned it outright if its advocate had not in an evil hour made open war on the method pursued at the Grammar School. Unfortunately for himself, the impetuous reformer assailed

the Grammar School by name in the Hartford newspapers, declaring its method of instruction to be preposterous, and announcing himself as the champion of a system which would sweep the old-fashioned system from the face of the earth. It could not be expected that young men like Carter and Barnard, however ready they might be to give candid consideration to a proposed improvement of the established methods of instruction, would sit tamely down under such an attack. A hot and rather wordy newspaper controversy followed, in which the champions of the Grammar School turned the attack on their assailant. It may be admitted that there was nothing very profound in their arguments, but they were at least too strong for the adversary, and at nearly eighty years of age it was still a satisfaction to the president of Columbia College to believe that he and Carter had "beat the enemy out of his boots!"

The following paragraphs from one of Barnard's contributions to this controversy is of interest, since it shows that he had already clearly apprehended the true nature and value of education as a training of the mental faculties, and not merely nor chiefly as the acquisition of knowledge:

One who attempts to read the Latin or the Greek scientifically is engaged every moment in the processes of analyzing, of comparing, of reasoning, and of judging. By practice he learns to perform these operations with great rapidity; but even the most perfect scholar can perceive them going forward in his mind. He is conscious of a reason — a reason founded upon scientific principles — for every step he takes in the process of translation. If any difficulty occur, the operations of his mind become at once more deliberate and marked. The process of analysis is perfectly distinct. It commences by setting aside those obvious relations which have no direct bearing upon the point under consideration, and proceeds by

disclosing, one by one, those which, at first sight, are not so obvious. Thus it exhibits the whole sentence before him resolved into its elements. His knowledge of grammatical principles points out to him the bearing of each upon the others, and finally the judgment is called in to decide upon the true meaning. The process is similar to that by which a machinist determines the effect of a certain combination of wheels and levers. Often it is necessary likewise to take into consideration the connection of the given sentence with those which precede and follow it, or even with the whole paragraph, and perhaps the whole drift of the Latin work. Here is ample room for "nicely balancing the evidence." With a beginner, something similar to this takes place in every clause; and that, too, in the simplest sentences, for it is only with these that he should have to do. If he studies as he ought to study, every time that he associates two words together he assigns to himself a reason for so doing. In this, then, consists the mental discipline for which the ancient languages afford so excellent an exercise. But it will be at once perceived that these advantages spring from the study of the structure of the language, and further, from the study of that structure as a means of reading and understanding it.

It were needless to remark that, to one who pursues the system we are considering, these advantages are wholly lost. The structure of the language, if it be ever studied, is studied when it can assist the student very little in his reading. It is not studied for the sake of affording him this assistance. Probably the gentleman is disposed to think with the philosopher whom he claims as his great prototype that, "if grammar ought to be taught at any time, it must be to one that can speak the languages already." Be that as it may, supposing the system in question wholly to accomplish its professed end, what power of mind is here called into exercise, except the memory? Through the medium of this alone the knowledge taught seems to be wholly communicated. Indeed, Locke, whose system seems to us much better calculated to discipline the mind than the one we are considering, declares implicitly at least, that little else besides memory is concerned in this mode of instruction. On this point argument seems to be

unnecessary. But, in the words of the report we have already quoted, "a costly edifice ought not to be left to be supported by a single pillar," and we may add, much less by the one which is weakest of all. Now, between two systems, of which one proposes to exercise and to strengthen all the powers of the mind, and the other but a single one, which shall we choose?"

The young schoolmasters had occasion to test another method of classical instruction which was followed by a very different person. One of the famous schools of Hartford at that time was a seminary for young ladies under the charge of Miss Catherine Beecher, a sister of Henry Ward Beecher and of Harriet Beecher Stowe. The text-books in Miss Beecher's seminary were almost all of her own composition, and on one occasion, when visiting a printing office, Barnard chanced to see the forms of a new Latin grammar which she was then just bringing out. In the page on which his eye first rested he discovered a serious error and asked the foreman to tell him who was the author of the book. Instead of a reply he received a stern rebuke for the impropriety of looking at "matter" "in form," which is everywhere forbidden by the rules of the craft. He confessed his fault, but excused it on account of the advantage to the author of his discovery of a mortifying if not discreditable error. The printer was incredulous, and insisted that, as he had received Miss Beecher's own last revises and corrected the proofs in accordance with them, he should put the forms to press without delay. Barnard remonstrated, and with some difficulty persuaded the proprietor to overrule the foreman so far as to delay the press-work until Miss Beecher could be consulted. The lady was grateful for Barnard's interference and ordered the printing of the work to be suspended until he could revise the whole of it. This inci-

dent led to a discussion with Miss Beecher of her method of teaching Latin, and as he did not approve of her plan in theory, she proposed that they should test it by a practical experiment. Sincerely believing that the experiment would end in a disappointment to Miss Beecher, and being unwilling to incur her displeasure by pronouncing it to be a failure, Barnard begged that Carter might be associated with him in testing its results. Miss Beecher gladly complied. A class of girls was formed and entered on the study of Latin on Miss Beecher's plan. At the end of three months an examination was held by Carter and Barnard, and both of them were candid enough to admit, though with unconcealed reluctance, that they were astonished at the progress which the girls had made in so short a time. It is unfortunate that in writing an account of this incident Dr. Barnard gave no description of Miss Beecher's method; for although it was not adopted in the Grammar School, and although Miss Beecher afterwards discontinued it in her own school, he always continued to believe that it had genuine merit.

Barnard had many opportunities of entertaining conversation with Miss Beecher, but comparatively few with her sister and assistant, Miss Harriet. The latter was bright and spirited, but not beautiful, though Barnard considered her handsome and particularly admired the expression of her eyes. In 1828 no one suspected that Harriet Beecher would ever write such a book as *Uncle Tom's Cabin;* and at his age it was natural that he should be more attracted by the pupils than by the teachers of the seminary. He seems to have been a pretty regular attendant at the weekly *soirées* which were given at the seminary, having the *entrée* to those reunions, partly through Miss Beecher's favor and partly on account of a distant relationship to some of the young ladies. One of

Miss Beecher's pupils with whom he formed a somewhat intimate friendship was Miss Sarah P. Willis, a sister of Nathaniel P. Willis, and afterwards well known to the world as Fanny Fern. Miss Willis was brilliant in conversation and attractive in person, and was deeply devoted to her brother, whose early poems had given promise of a future excellence which he never quite attained. Such as they were, Willis' early poems were much admired; perhaps they were somewhat overpraised; and the rising fame of the young poet was displeasing to another young man, George D. Prentice, who was then living at Hartford as editor of *The New England Review*. Unfortunately for himself, as the event proved, Prentice assailed Willis with a severity which, to say at least, was excessive. It was just then that Miss Willis appeared at Hartford as a pupil in Miss Beecher's school. Prentice fell violently in love with her and made desperate efforts to secure an introduction, but in vain. Sarah refused to meet him or to allow his name to be mentioned in her presence. The discomfiture of her admirer was signally complete, and it is said that in all his life he never met with a rebuff which wounded him so severely as this.

For a while Barnard's intercourse with Prentice was intimate; but the two men were not really congenial to each other; and at last Barnard entertained a rather strong aversion to the brilliant journalist. Prentice was not handsome either in person or in countenance, but he was fascinating in manner and singularly charming in conversation. His wit was swift and dazzling, and it was often said that he carelessly threw off more good things than he ever put into his editorials. He wrote with great facility, filled a large part of his journal with matter of his own composition, and yet had the editorial faculty of attracting and keeping other able

men in association with him. One of them was John G. Whittier, then first making his appearance in the world of letters. Another was the well-known Park Benjamin, who became a resident of Hartford during Barnard's second year there. Prentice's retirement from *The New England Review* was bitterly resented on account of the circumstances which attended it, and what was regarded as the political tergiversation which followed. In 1830 William Lloyd Garrison was indicted for libel in the antislavery organ he had established in Baltimore, and his indictment was quickly followed by fine and imprisonment. Nothing could have been more fortunate for his fame or his cause. New England was ablaze with excitement, and in all New England none expressed more cordial admiration of Garrison's intrepidity, or heartier sympathy for him in the persecution he endured, than George D. Prentice in the columns of *The New England Review*. Presently, however, he was chosen to prepare a Life of Henry Clay, to be used in the contest for the presidency of the United States in 1832, and went to Kentucky with a professed intention to return to Hartford as soon as he should have collected the materials for his biography. He never returned, and it was believed that he had never really intended to return. His numerous debts and Miss Willis' scornful rejection of his advances had made Hartford odious to him. In his subsequent career as editor of the Louisville *Courier*, he became a bitter opponent of the principles he had advocated in New England, and Barnard met him no more. Mr. Whittier was engaged to conduct *The Review* during what was expected to be only a temporary absence of the editor. Month after month passed away; the drudgery of editoral work became unendurable to the youthful poet, and at length he retired to Haverhill, leaving Bar-

nard in charge of the paper. He could not make up his mind to resume his editorship, and so it happened in the latter part of 1831 that Barnard, who was then again living in Hartford, held for a short time the place of editor. He had the discretion not to retain his editorial honors very long. He was succeeded by a gentleman who was rather a politician than a man of letters. *The Review* soon degenerated into a merely political organ, losing, of course, the patronage it had enjoyed as a literary journal. It has long been extinct.

To this first year at Hartford must be assigned Mr. Barnard's first appearance as an author. His work was by no means an ambitious one, since it was only a school arithmetic; but its plan was decidedly ambitious. It was intended to include elementary mental arithmetic, together with a treatise on written arithmetic in all its parts, and elaborate exercises to illustrate every rule. It is needless to say that in this work the young author endeavored to give "the why of things." The book had merit enough to be adopted by the authorities of Yale College as the text-book in which students should be examined at their matriculation; but, to Barnard's great disappointment, it never came into general use.

So the first year at Hartford came to a close. It was a year of hard study, hard work, and much observation — on the whole a good and fruitful year, in which Barnard had many opportunities to try his powers. He was fortunate in his association with his fellow-teachers, and the few hours of recreation he allowed himself were passed partly in attendance at Miss Beecher's *soirées*, where he seems to have quite forgotten his dignity as a teacher in order to enjoy once more the freedom of a boy. At the close of the session he had the proud satisfaction to be notified by the inhabitants of Sheffield that, in making

preparations for the customary celebration of the Fourth of July, they had unanimously chosen him to be "The Orator of the Day." While pondering the words of patriotic wisdom with which he should electrify his audience, he was not above the temptation to plan a frolic with Miss Sarah Willis and one of his distant cousins at the seminary. Miss Beecher's school year was closed with a public reading of original compositions of the young ladies by some skilled elocutionist, usually Dr. Thomas Gallaudet. The exhibition was held in the great auditorium of the Central Public School, to which Miss Beecher and her pupils marched in procession from the seminary. The proceedings on the occasion were a trifle dull to the girls, and the dulness of the exhibition of 1829 was anticipated with more than usual dislike because an attractive concert was to be given on the same evening in another hall. Barnard and the young ladies sadly misused Miss Beecher's confidence by secretly arranging at one of the *soirées* that, on the evening of the exhibition, Miss Willis and her friend should escape from the procession and accompany Barnard to the concert. Somehow the plan miscarried; and in the middle of the following night, when Miss Willis was travelling in the mail-stage to her home in Boston under Miss Beecher's charge, she was startled to hear the solemn voice of her instructress addressing her with the question, "Sarah, did you really mean to run away last night?" The plotting of the youngsters had not escaped Miss Beecher's vigilance, and if their escapade had been actually attempted, it would have ended in an ignominious fiasco. Sarah confessed that she had wanted to run away, but that her courage had failed her. She admitted, too, in answer to Miss Beecher's questioning, that the wish was naughty. "But then [she said] how could I help it?

Your father — Dr. Lyman Beecher — says we are all naughty by nature, and you know I didn't make my nature!"

The oration which Barnard had prepared for delivery at Sheffield was on the slavery question, concerning which he was ready to take a decided position. "The irrepressible conflict" had already begun, as moral conflicts always begin, in the minds and hearts of the people. No one in New England believed that slavery was morally defensible. A few extreme abolitionists held it to be the duty of the national government to abolish it, but the general sentiment was opposed to violent measures and would have been content with any prospect of gradual and constitutional emancipation. A society of which Bushrod Washington, a nephew of General Washington, was the first president, and of which Henry Clay was an ardent supporter, had been formed for the purpose of gradually deporting the blacks of the South to Africa; and it was in the character of an advocate of that well-meant but visionary project that Barnard originally intended to make his first appearance as a public orator. There were many, however, who did not favor the Colonization Society, considering it to be merely insignificant in comparison with the end to be attained, and therefore more likely to prolong the existing agitation than to accomplish the object at which it aimed. As it would have been out of place on such an occasion to deliver an address which might not be acceptable to a portion of the audience, Barnard wisely submitted his oration to the judgment of a council of the elders. His sentiments were unanimously approved, but he was advised with equal unanimity not to deliver the address he had prepared. Accordingly, he wrote and delivered a totally different address, in the usual spread-eagle style of Fourth-of-July oratory, which

offended nobody and was received with rapturous applause. At night there was the customary banquet, with the customary toasts. Invariable usage required that the first toast "To the Memory of Washington" should be drunk standing and in silence; an equally imperative usage required that the thirteenth and last regular toast should be "To Woman." The toasts were drunk in a quite literal way, and the toast-master, after twelve successive potations, was somewhat incapacitated for the duties of his office. The Toast Committee had attached to the thirteenth toast the then fresh but now hackneyed lines from Scott, beginning "O woman, in our hours of ease," which the toast-master unluckily misread, "Old woman," etc. The poetic sentiment was never finished. A burst of irrepressible laughter drowned the stentorian voice of the reader, and a notable day in the life of Frederick Barnard was at an end.

After a vacation passed at Sheffield Barnard returned to spend a second year at the Hartford Grammar School. The only incident of that year worth recording was his discovery of the slow approach of an infirmity which disconcerted all his plans and materially curtailed his powers of usefulness throughout his life. He found that he was gradually becoming deaf. The affliction was undoubtedly hereditary. His mother had become distressingly deaf, though she had two sisters whose hearing was perfect; and his brother and sister were both afflicted to some extent in the same way. His own deafness came on at first so slightly that his friends could not believe it to be real. Barnard himself was only too willing to think he was the victim of a morbid fancy. The experience of the schoolroom soon proved that his deafness was neither imaginary nor temporary. It was real, and it steadily increased. He could still discharge his duties without serious inconven-

ience, but he allowed himself to cherish no illusions concerning the future. The hereditary character of his infirmity forbade him to hope that it could ever be cured. It might indeed stop short of an entire loss of hearing; but even partial deafness would incapacitate him for the legal profession for which he had been preparing himself, and he closed his Blackstone "with a feeling of gloom bordering on despair." It was no light affliction to a youth of twenty to find himself thus compelled to abandon the profession he had chosen and the well-grounded hopes of distinction he had cherished. It was hard, indeed, for so young a man to realize that the calamity which had fallen on him would exclude him from nearly every profession in which an educated man might hope to earn his living, and that it was almost sure ere long to cut him off from all the social enjoyments which were so congenial to his joyous nature. It was under the shadow of these thoughts that Barnard spent his second year at Hartford.

Yet he did not allow his heavy affliction to overwhelm him. He made friends, and made the most of his association with them. One of them was an old classmate, Mr. David Ely Bartlett, a noble fellow, who now became his most intimate companion and correspondent, and remained one of his closest friends through life. Bartlett, immediately after his graduation, had engaged himself as an assistant in the American Asylum for the Deaf and Dumb, an institution founded at Hartford in 1817 by the famous Dr. Thomas Gallaudet. He was a born philanthropist and an enthusiast in his profession; and when Barnard's deafness began to come on, Bartlett urged his despondent friend to join him in the same pursuit. He had the tact to call attention to the scientific interest of his work, as well as the comparatively fresh

field of philanthropic effort which it offered. At first Barnard was not attracted by the invitation. Perhaps he still clung more tenaciously than he himself knew to the hope that his infirmity might pass away and leave him free to follow the bent of his own untrammelled choice; but at least he felt relieved to know that, if his worst apprehensions should be realized, he could find in the instruction of deaf-mutes "an occupation in which a man might make his bread though he might have no ears at all!" It is not so strange, perhaps, as it seems, that he never thought of making literature his profession. "It never occurred to me," he said afterwards, "that I might possibly live by my pen. Never, even in my most hopeful days, had I indulged in the fond fancy which is so common in the young, that a future of literary celebrity might be in store for me." The truth is that the course of what had been meant to be his education could hardly have been better planned if its purpose had been to make literary work distasteful to him. English he was never taught; he was taught Latin absurdly. It does not appear that he ever wrote a single Latin sentence, and after learning the grammar merely by rote, he was set almost at once to reading Virgil and Cicero. In other words, he was never taught the principles of composition in any language; and his first text-books were the works of a poet and an orator whose complicated sentences were such as could not be used in ordinary speech or writing. When he was required to write English prose compositions at Stockbridge, it was inevitable that he should take those authors as his models and use as much as possible of their vocabulary. He felt that there was something wrong in his style, but he did not know how to rid himself of the stiff and "dreary verbosity" which he deplored. It may as well be admitted here that he never became an

expert in the art of easy and graceful English writing. He does not seem to have made any great effort to acquire it. Most of his writing, and all of his best writing, like very much of his public speaking, was strictly extemporaneous. His essays were full of instruction. His views were brilliantly illustrated. His conclusions were powerfully enforced. On the other hand, however, the arrangement of his matter was seldom perfectly consecutive, and his style was certainly not compact. Yet there is ample reason to believe that, if he had chosen to apply himself to literature, he would have achieved distinction as a man of letters. His encyclopædic knowledge was fairly equalled by his faculty of imagination and was almost surpassed by his poetic gift of comparison. At times, when writing on a subject in which he was deeply interested, his style became vigorous, energetic, and compact to the point of epigram; and in speech his utterances not infrequently rose to eloquence. Moreover, if he had cared to study niceties of form, there are evidences that he would easily have surpassed all ordinary excellence. Thus, at this very period of his life, he composed a short poem, modelled after Sir William Temple's imitations of Hafiz, which is a fair indication of what he might have done as a writer.

A SERENADE

I

Wake, Lady, wake! The night is fair:
  Soft as a summer shower, I feel
The breathing of the evening air,
  As through thy fragrant bower I steal:
The stars, like diamonds, rich and rare,
  Glow silently. This blessed hour
To stillness and to love is dear.
  How sweet their blended power I feel!

I wander in the moonlight, where,
By rippling rill and moss-grown tower,
Oft thou hast wandered, love, and there
Full many an odorous flower I steal.

II

The bird of night upon the spray
Is warbling; strains of love he sings;
Where moonbeams in the dewdrops play
And zephyrs gently move, he sings;
Where mournful minstrels love to stray
Beneath the widely arching grove,
Where lovers fond and maidens gay
Steal off, apart to rove, he sings.
And then a wild and witching lay,
Like spirit-voices, interwove
In pale Diana's silver ray,
To spangled skies above, he sings.

III

The solemn clock in turret gray,
With slow and mournful peal, I hear,
Telling the hour when elf and fay
Their mystic circle wheel, my dear.
In yon lone dell, far, far away,
Where mists of night all shapes conceal,
Save where, sometimes, a struggling ray
Seems fitfully to steal, I hear,
Or seem to hear, their frolic play,
And seem to see them weave the spell
They ever, ere the break of day,
Weave for our woe or weal, my dear.

IV

But e'en the rapt star-gazer now
Nods on his tube: no more, away,
His thoughts, 'mid heaven's eternal glow,
On restless pinion soar away;

The lover breathes the parting vow,
So often softly breathed before;
The student turns with aching brow
From books of learned lore away.
All, all woo gentle slumber now:
So should'st thou too! My lay is o'er.
Oh! rosy be thy dreams, till thou
Shalt bid them flit once more away!

It would be idle to say that the technique of these verses is perfect; but if we recollect that they were written under such disadvantages at the age of twenty-one or twenty-two, it is not too much to say that if Frederick Barnard had chosen to study the structure of melodious English prose as carefully as he studied the difficult rhyme and rhythm of Sir William Temple's stanzas, he might have become a classical writer of his mother tongue. It is no misfortune to the world that he did not do so, but preferred, when the misfortune of his life fell upon him, to drift along in the performance of his daily duties, leaving the future to care for itself.

It was during his second year at Hartford that he made the acquaintance of Park Benjamin, with whom he became intimate a little later. He has left an account of that extraordinary man which may properly be inserted here.

Physically, mentally, and, perhaps, I might say morally, Benjamin was a bundle of inconsistencies. He had a fine, open, and even handsome countenance, with mobile features and a wonderful play of expression. In person he was well-formed and above the common strength; his hands, with a grasp like a vice, might have been a sculptor's model; but his lower limbs were imperfectly developed and so singularly deformed as to be useless for walking. He moved with difficulty, and only with the aid of crutches. Intellectually he was a phenomenon. Gifted with a lively imagination, a

brilliant wit, and an exhaustless flow of language, in social intercourse he was the most fascinating man I ever met. His powers of elocution were truly wonderful; if he had been able and disposed to tread the boards, he could not have failed to take the highest rank in either tragedy or comedy. His talent for mimicry was extraordinary. He could catch and imitate the tone, the manner, the facial expression, and, what was more wonderful, the style and language of any public speaker whom he happened to have heard, with an exactness which never failed to excite admiration and astonishment. Some of the elocutionary performances into which he seemed often to drop without premeditation were so remarkable, considered merely from a literary point of view, that, although they seemed to be spontaneous improvisations, I could not help suspecting that they had been deliberately prepared. He was a natural versifier and composed in verse almost as easily as in prose. On one occasion I witnessed a remarkable illustration of his facility in versifying. A friend of ours who had come across Schiller's ballad of Roland and his life-long watch above the cloistered garden of Nonnenwerth, was so enraptured with it that he could not rest until he had obtained an English translation of it. Being unable to make it for himself, he asked Benjamin to make it for him. Benjamin objected that he could not read the original. "Never mind," was the rejoinder, "we can divide the work. I will translate the German, stanza by stanza, and you shall put it into verse." The proposal was accepted, and I saw Benjamin turn the ballad into smooth and elegant English verse, taking scarcely more time to produce it than our friend took for the translation. The version was printed at the time in one of the Hartford papers, but whether it was ever included in any published volume, or whether Benjamin's numerous fugitive poems were ever so collected, I do not know. With all his brilliant faculties, and with all his genius, — for his was a true genius, — he lacked the powers of mental concentration and persistency of effort which are indispensable to the creation of any great and lasting literary monument. He was versatile and dazzling; but his brightness was that of a spray of a cataract, testifying to

the reality of a power which is running to waste. He produced much, but his writings were desultory, and, for the most part, ephemeral. He was a born journalist, and in journalism most of his literary life was spent. It was not from his writings but from himself that those who knew him have derived their most vivid impressions of him. Wherever he happened to be, he was the life of the party, always contriving to interest or amuse, and often convulsing his companions with irrepressible laughter. The singular flexibility of his countenance endowed him with a power of grimace which, in his merry moods, he would occasionally use with startling and irresistibly comic effect. His readiness in repartee was sometimes exhibited in epigram, in which he was equally facile and felicitous. Once, when he was expressing his contempt for self-sufficient meddlers who are always setting the world to rights, or, as Shakespeare expresses it, to "turn the coat of the commonwealth and put a new nap on it," he concluded with this little bit of off-hand epigram:

"How well it is the sun and moon
Are hung so very high
That no presumptuous hand can reach
Their places in the sky!

"If 'twere not so, I do believe
That some conceited ass
Would soon propose to take them down
And light the world with gas!"

Benjamin naturally gravitated to New York. He engaged there in several literary ventures, among others, *The New York World*, a literary journal, not the journal now known by the same name; but he transformed it into a mammoth sheet called *The Western Continent*, adopting as its motto:

"No pent-up Utica contracts our powers;
The whole unbounded continent is ours."

During my first residence in New York, from 1832 to 1837, I was in intimate association with him, and he continued there after my departure to the end of his life. During my subsequent residence in the South I maintained a correspondence

with him for several years, but it was gradually dropped. Quarter of a century later, when I was called to New York, I had quite lost sight of him; but the notice of my call to Columbia College caught his eye, and he wrote me a note inquiring rather unceremoniously, "Are you that same old Fred Barnard that I used to know in Hartford?" I need not say that I promptly answered the inquiry. I followed my note in person with the least possible delay, but to my very painful surprise I was told that he was seriously ill, and I did not see him. A few days afterwards, on September 18th, 1864, he passed away; so that I never again met Park Benjamin, one of the most gifted and highly prized of all my life's early friends.

Among the other persons whom Barnard knew, but with whom he made only a slight acquaintance while in Hartford, were Mrs. Lydia Hunt Sigourney, who then filled a considerable place in the literary world of this country; Professor Horatio Potter, who afterwards became Bishop of New York; Henry L. Ellsworth, Commissioner of Patents under President Van Buren; John M. Niles, afterwards Senator of the United States; Lewis Gaylord Clark, who was then frittering away his time in pretending to edit *The Mirror*, but who was afterwards to be widely known as the laborious and accomplished editor of *The Knickerbocker Magazine;* Junius L. Morgan, then a mere boy, but afterwards a power in the financial world of both hemispheres; and Gideon Wells, Secretary of the Navy under President Lincoln. At that time Mr. Wells was "a democrat of the deepest dye"; and when Dr. Barnard next saw him transformed into a "black republican" cabinet minister, he began to think it possible that an Ethiopian might change his skin or a leopard his spots!

At the close of the school year of 1829–30, Barnard received his expected call to a tutorship in Yale College.

His deafness had not yet become so great as to incapacitate him for the duties of that office, and there was still a chance that it might become no greater. Accordingly, he accepted the position with some faint hope that he might be able to retain it, and bade farewell to the Grammar School in which he had begun what was destined, but not intended, to be his life-work as an educator. As events turned out, he was soon to spend another year at Hartford, but most of the persons and incidents connected with his sojourn in that place have been mentioned, partly by anticipation, in the present chapter.

CHAPTER IV

College government at Yale in 1830 — Morning prayers — A case of discipline — Increasing deafness — Barnard resigns his tutorship and accepts a position in the American Institution for the Deaf and Dumb at Hartford — Theory and practice of deaf-mute education — Julia Brace — The cholera season of 1832 — The New York Institution for the Instruction of the Deaf and Dumb — Barnard visits New York — A city of desolation — New York as it was in 1832 — Barnard accepts a position in the New York Institution — A congenial faculty — Scientific studies — The star shower of 1832 — Barnard is confirmed — Meeting with Dr. Manly of Alabama — Professorship of Mathematics and Natural Philosophy in the University of Alabama accepted.

Mr. Barnard had no sooner entered upon his duties as a tutor in Yale College than he succeeded in securing the beginning of a much-needed reform. While he was an undergraduate he had seen the disadvantage to the students of being instructed for the first three years of their course by a single tutor in all branches of study, instead of having the instruction of experts in every several branch. On his return as a tutor he was assigned to the freshman class then just entering. His associates were Mr. Larned, afterwards Professor of Rhetoric and Oratory, and Professor Gibbs, who was then Professor of Sacred Literature, but was obliged, on account of the inadequate endowment of his chair, to take additional duty as a tutor. Of the three, Barnard was easily the first in mathematics, Gibbs excelled in Greek, and Larned in Latin. Barnard proposed that they should divide their work accordingly; the permission of the Faculty was obtained, and thus an important reform of method was happily inaugurated to the great advantage

of the students. The new arrangement worked well for the tutors also, and Barnard, having little need of preparation for the duties of the class-room, had ample time to pursue his own studies in the higher mathematics.

The Governing Board, or Faculty, of Yale College differed from that of other colleges in this respect, that it included the tutors as well as the professors among its members. The tutors, however, were further organized as a subordinate body, called the Sub-Faculty, which met twice a week and had full charge of the petty discipline of the college. To each tutor was entrusted the personal oversight of the students in a particular part of the buildings, and he was required to report all breaches of good order to the Sub-Faculty. Minor censures, such as "admonitions," "warnings," and "letters home," were imposed by the Sub-Faculty alone; graver cases, requiring the heavier penalties of suspension or expulsion, were reserved for the judgment of the Faculty. The tutors were mostly very young men, and when not required to pose as dons, some of them were quite ready to enjoy a frolic of their own.

The senior tutor, who presided at the meetings of the Sub-Faculty, was a man of ability, an excellent officer, and a good disciplinarian, but excessively sensitive to public opinion and unduly anxious to be considered popular with the students. His amiable foible made him an easy victim of some of his associates, who played all manner of tricks upon him, and, on one occasion, two of them actually "smoked" him by filling the key-hole of his room door with burning tobacco. At the semi-weekly meetings of the Sub-Faculty these indignities were reported, of course, by the senior tutor, and were sympathetically discussed by the perpetrators themselves as evidences of the undeserved and unaccountable aversion

of the students for the president of the Sub-Faculty. The gravity of these discussions was the most ludicrous part of the performance, and it occasionally happened that the time of a Sub-Faculty meeting was almost entirely consumed in the solemn consideration of some mischievous prank which had really been played by one or more of the tutors themselves.

The meetings of the Sub-Faculty were invariably opened with prayer, which was offered by each of the tutors in turn. Some of those gentlemen had great "freedom in prayer" and seemed to be both able and willing to "pray without ceasing"; but Barnard was not a "professor of religion," and his sense of the fitness of things, as well as a certain natural diffidence, made this duty extremely irksome. He was still more painfully embarrassed when his turn came to officiate in the public services of the College Chapel. They were held morning and evening, and were conducted in turn by the professors and tutors, one professor and one tutor being assigned to each service according to a settled programme. Morning prayer took place at six o'clock all the year through, and in winter, of course, long before the dawn of day. The service consisted of a brief invocation, a lesson from the Bible, a hymn, and the "long prayer." The first part of the exercises was taken by the officiating tutors, and the second by the professor. When the appointed professor was necessarily absent, the whole service was performed by the tutor. Barnard waited in great anxiety for his turn to officiate.

There was no part of my duty [he wrote] to which I looked forward with so much apprehension, and, I might even say, with so much dread. I distrusted my readiness in extemporary prayer, and I fear I had a more oppressive sense of the critical congregation of three or four hundred young men

before whom I must stand up than of the august Being I was to address. As one of the junior tutors, my name stood low on the list, and as I saw my turn approaching, I made some preparation. When the dreaded morning arrived, I had nerved myself to meet the exigency; but it came to me in a form I had little expected. A messenger informed me that the president, whom I was to have assisted, had been called to Hartford, and that I should be alone in the pulpit. This announcement almost took my breath away; but there was no retreat. The duty must be done, and there was nothing before me but to do it as best I might. It was well for me that I had thought the whole matter over in advance, and I suppose that such imperfect preparation as I had made was of some assistance to me; but I hardly knew what I was saying, and when the service was over, I had no idea whether I had done well or ill. A few days later, however, my friend Carter, who was a praying man, gave me much comfort. "Do you know," he said to me, "what I thought of your chapel service? I could not help wishing that you might make as good a prayer as that every day."

It may easily be imagined that such an experience would go far to confirm Barnard's belief in the expediency and propriety of using precomposed forms of prayer in public worship.

At the meetings of the Faculty, in considering the penalties to be imposed for grave breaches of discipline, it was customary to take the opinions of all the members severally, beginning with the youngest; and soon after his tutorship began Barnard's inclination to mildness brought down upon him what he felt to be a severe rebuke from an older member of the Faculty. The recognized head of the senior class of that year was a young gentleman from South Carolina. In a dispute with one of his fellow-students he was grossly affronted, his antagonist going so far as to impeach his honor and his personal courage. The fiery South Carolinian thought

it necessary to avenge the insult by administering an ignominious flogging to his assailant in the open street. He was promptly summoned to appear before the Faculty and show cause why he should not be summarily expelled. The trial was brief. No witnesses were called. The culprit acknowledged his offence, but entered a plea of extenuating circumstances.

His speech to the Faculty [says Dr. Barnard] was both eloquent and impressive, and his bearing was manly and dignified. He said that in the community to which he belonged such an affront as had been offered to him could not be allowed to pass unpunished without overwhelming disgrace. If he had failed to resent it as public opinion in Charleston required, he could never again have shown his face in his native city. He had had no alternative but either to call his adversary out and shoot him or else to inflict a personal chastisement, and he had chosen the course which he had thought to be the less censurable. He admitted that he had violated both the municipal and academic law. He did not expect to escape censure, and he professed his readiness to submit to it; but he thought that the moral and social constraint under which he had acted might to some extent commend him to the sympathy of his judges and incline them to mitigate their sentence.

After this defence, it fell to Barnard, as the junior tutor present, to be first called to express his opinion of the case. He modestly said that he could not help feeling the force of the plea which had been offered by the student. He admitted that the young man could not be allowed to remain in the college; but, considering the high standing he had held in his class, Barnard thought it would be punishment enough to deprive him of his brilliant prospect of academic honors by requiring him to withdraw from the institution, without putting upon him the stigma of a public expulsion. These views did

not commend themselves to the other members of the Faculty. One by one, not indeed with great severity, and not with entire unanimity, but with a substantial agreement, they maintained that the public expulsion of the offender was necessary. At length Professor Goodrich, turning to Barnard and directly addressing him, exclaimed:

"I will never for one moment countenance or tolerate principles which are a tradition from a savage state of society and a disgrace to civilization. A man who will swerve one hair's breadth from the right, out of respect to a perverse, irrational, and unchristian public spirit, is no man at all; and whatever other communities may do, a Christian people like that of New England, and a Christian institution like Yale College, must not fail to stamp with its most indignant and uncompromising condemnation the spirit of vindictiveness which, in South Carolina, is dignified with the name of honor."

It is hardly necessary to add that the unfortunate South Carolinian was expelled. Barnard left the Faculty meeting feeling that he must have been almost as culpable as he; and yet it may be doubted whether the young tutor's desire to temper judgment with mercy was not less vindictive and more Christian, as well as more becoming the character of a considerate teacher, than the uncompromising verdict of the strenuous professor.

Barnard's time of service at the college was a time of great depression on account of his increasing deafness. In the class-room he discovered that he could hardly hear the students who were seated on the farther side of the room. He made daily experiments with his watch, carefully measuring the distance at which its ticking ceased to be audible, and finding to his dismay that it was gradually but steadily growing less. In the society of persons with whom he was not intimately acquainted he was much

embarrassed, and he began to avoid society. His health in other respects was not good. He suffered from a chronic cough, caused by an inflammation of the mucous membrane of the air passages of the lungs, which continued to trouble him for several years. Even his favorite studies failed to distract his mind from the gloomy prospect before him; and yet he worked bravely on, and he had the satisfaction to know that his merits were appreciated. Professor Olmstead, who then held the united chairs of Mathematics and Physics, desired to be relieved of the former by the appointment of a professor of that science alone. The trustees of the college were favorable to the change, and resolved to make it as soon as means could be obtained for the support of an additional professor. It was hoped and believed that the necessary means would be forthcoming, and Professor Olmstead proposed to Barnard to become his colleague when the professorship should be established. There was no other candidate; no one else seems to have been thought of. Thus, at the early age of twenty-one, the line of promotion was wonderfully opened before him. He already stood well with the Faculty and the trustees of the college, and he had every prospect of being advanced within a few years to the dignity of a professor in his alma mater. If the chair of Mathematics had been established immediately, he would doubtless have accepted it, hoping, even against hope, that he might be able to perform its duties. But he did not feel justified in waiting an indefinite time. His friend Bartlett had renewed his efforts to induce him to take service in the American Institution for the Deaf and Dumb at Hartford, and he now became anxious to do so. For a time, however, the negotiations lagged on account of an objection that Barnard was not a "professor of religion." If that

objection had been pressed, he would never have consented to remove it; but it was at length abandoned, and he accepted the position offered. In the month of May, 1831, he resigned his tutorship and went to Hartford.

The earlier teachers of deaf-mutes in the eighteenth century aimed at nothing less than enabling the dumb to speak, and it was found to be possible to accomplish that difficult undertaking. When it had been done, however, there remained the still more difficult task of teaching the deaf person to follow spoken language by observing the motion of the lips. The time and labor required for these two courses of instruction made it impracticable to apply them to the relief of more than a few persons, and the Abbé de l'Epée, whose philanthropic efforts were begun in Paris in the year 1755, was fully convinced by his own experience that it was useless to attempt to teach the majority of deaf-mutes anything more than the use of written language.

The natural and only possible medium of communication between uneducated deaf-mutes, or between them and persons who can speak, is pantomime, or the use of suggestive and imitative signs; and in the earlier stages of elementary instruction this natural sign-language is necessarily used by the teacher. It happily occurred to the Abbé Sicard, the eminent successor of the Abbé de l'Epée, that something of the definiteness and copiousness of oral speech might be imparted to the sign-language by attaching a distinctive sign to each particular word, and by introducing auxiliary signs to denote grammatical relations. The new system of signs which he devised in the application of this idea was to a great extent arbitrary and artificial, but as it required nothing more from the pupil than the exercise of attention and the use of faculties which he naturally possessed, it was

mastered with comparative ease and was found to be of great use in teaching deaf-mutes to read and write. It was seldom used, however, in colloquial intercourse, but was strictly followed in the dictation exercises of the class-room.

One of the Abbé Sicard's most eminent disciples was the famous Dr. Thomas Gallaudet, who was completely trained by him and who introduced the system of *signes méthodiques* into this country. In 1817 he organized the American Asylum for the Deaf and Dumb at Hartford, and for thirteen years he directed its operations with great success. In 1830 he resigned his position on account of differences with the board of managers, and was succeeded by Mr. Lewis Weld, who had himself been trained in the American Asylum. It was under Mr. Weld's supervision that Mr. Barnard entered on his duties. The new superintendent was a good deal of a martinet, and his accession to the headship of the Asylum had been marked by the introduction of certain innovations which were distasteful to his subordinates. Among other new arrangements he established a regular weekly drill in the elements of the sign-language, and required all his associates, nearly a dozen in number, to follow his personal exemplifications of the work. To some of them, as, for instance, to M. Laurent Clerc, a deaf-mute proficient who had been trained by Sicard and had been brought over by Dr. Gallaudet fifteen years before in order to serve as a living expositor of the system, these exercises in the elements of a science in which they knew themselves to be experts were needlessly humiliating as well as useless and irksome. The result was a certain spirit of dissatisfaction among the staff of teachers; but however others might complain, beginners like Mr. Barnard had every reason to be thankful for the

careful instructions given by their principal in his weekly and semi-weekly sign-drills.

To acquire the sign-language was the first indispensable step in preparing himself to become a teacher of deaf-mutes, and here he found that his habits of observation and his natural faculty of comparison made his progress far more rapid than he had expected.

My first need [he afterwards wrote] was to form a just conception of the principles on which the pantomime signs are formed. The natural language of pantomime is not, like spoken language, a body of definite symbols of invariable form. It consists of any and all forms of manual or bodily action which can be used to represent or suggest the object or idea intended by the actor. Thus a book may be denoted by rapidly indicating its form with the finger, imitating the motions of opening and closing a volume and of turning the leaves, and then holding the hands before the face as in reading. After the idea has been distinctly conveyed and understood, it suffices to use only the gesture of opening and closing a volume, without other details; and it is by following this simple method that the entire vocabulary of abridged signs which is colloquially used by deaf-mutes has been formed. Every sign is simply some characteristic gesture taken from a detailed pantomimic description. Abstract ideas are represented in the same way; for nothing is clearer than that, even in spoken language, abstract ideas are first represented in words which signify some physical action or operation. Thus, the word *abstract* itself is derived from *ab* and *traho*, and represents the action or process of *drawing* one thing *from* another through a perceptible space. I have often been asked how it is possible to convey abstract ideas to a deaf-mute; but there is no insuperable difficulty to prevent it. In fact, it is as easy as to convey the same idea to a speaking person by means of verbal definitions which often do nothing more than substitute one intelligible word for another.

Entering, as he did, upon his new study with intelligence and industry, Mr. Barnard found it far more inter-

esting than he had anticipated. He rapidly learned all that there was to be learned in the institution at Hartford, read all the books on deaf-mute instruction that were to be found in the library, and so prepared himself for other duties and for more advanced studies in his next position. So devoted was he to his work that during his vacation he invented parlor games or charades in which the art of pantomimic gesture was used to represent all sorts of objects and ideas, to the great amusement and instruction of his friends in Sheffield. In short, he devoted his whole time and thought to the principles and practice of deaf-mute instruction, and speedily became a master of the former and an adept in the latter.

Among the pupils at the Hartford institution was a young girl, Julia Brace, who had been deaf, dumb, and blind from the age of four years, and whose attainments were nearly as wonderful as those of Laura Bridgeman. When she went to Hartford, she had long lost all recollection of speech, but by the persevering assiduity of her teachers she was taught to use the manual alphabet and as much of the sign-language as could be communicated to her through the sense of touch. She became an accomplished seamstress and usually made all her own garments. Strangers were astonished to see her thread a needle by touching it with the tip of her tongue, which she did more rapidly than most persons who do it with the fingers. Her perceptive powers were wonderful. She never forgot a person who had once been presented to her, and seemed always to be aware of their presence even when they made no effort to attract her attention. Every member of the small community in the Asylum was designated by a distinctive sign which answered the purpose of a proper name. Mr. Barnard, for example, was designated by placing the thumb nail of the closed

right hand against the chin, and whenever he approached her, she invariably made that sign. Many strangers went to the institution to see her, and would often test her powers by placing in her hands a number of small objects, such as handkerchiefs, gloves, watches, rings, snuff-boxes, pencil-cases, and the like, which she would examine with interest and would never fail to return to their several owners. Until the better known case of Laura Bridgeman, who was trained by Dr. S. G. Howe of Boston, Julia Brace was perhaps the most remarkable illustration on record of the extent to which persons who are both blind and deaf can be relieved of some of the consequences of their great affliction.

The Asiatic cholera had ravaged India for several successive years. In 1832 it spread with frightful rapidity across the continent of Europe, leaped the Atlantic, appeared in Quebec, and, before the summer closed, its desolating presence had brought dismay and death to nearly every great centre of population in the United States. Its movements were capricious; some considerable towns escaped the scourge, while the population of others was nearly decimated. Hartford was happily spared, but throughout the season the anxiety of the inhabitants was extreme. Many of them left their homes. Mrs. Sigourney's elegant suburban residence, surrounded with ample ornamental grounds, was situated in the neighborhood of the Asylum, and before her departure she begged Mr. Barnard and his friend Bartlett to occupy it as a protection against burglars. The young men had no fear of the burglars, and they readily consented; but the frightful accounts of sudden death from cholera which filled the newspapers often caused them a feeling of dread least they might be attacked at night and perish before they could even call for help. At length

the terrible summer passed, and with its close came an important change of position to the two young men. The New York Institution for the Instruction of the Deaf and Dumb was then in process of reorganization, and they had both been invited to join its corps of teachers. It had been founded in 1818, just one year later than the Hartford Asylum. It had been generously aided by the State and zealously fostered by its founders. Its projector, Dr. Samuel Akerly, though not himself a practical teacher, was its principal manager. He was a man of noble impulses, of active benevolence, of great perseverance and untiring industry, and was thoroughly devoted to his special work. He had prepared and published an elaborate system of progressive lessons for training the deaf to the use of language; but it was his great misfortune to believe so entirely in the perfection of his theory as to fancy that he had nothing to learn from others. He might have reached a different opinion if he had attempted to work his theory in his own person; but as he committed its practical application to his subordinates, the result was not satisfactory. After several years of dissatisfaction there arose a demand, which could not be resisted, for a complete reform of the methods of the institution; Dr. Akerly resigned, and the board of managers proceeded to reorganize the corps of teachers. In 1831 they elected Mr. Harvey Pringle Peet, an accomplished instructor of the American Asylum at Hartford, as principal, and they simultaneously called Mr. Léon Vaysse, an equally accomplished teacher from the school of Sicard at Paris, to introduce and illustrate the latest methods of the French system. On taking office Mr. Peet was allowed *carte blanche* in the choice of his assistants; and he resolved first, that, if possible, he would have no man who had not been liberally educated, and

second, that he would endeavor to have none who had not already had some experience in the art of teaching deaf-mutes. Among the first persons whom he invited to join him were Messrs. Bartlett and Barnard. The overture was not immediately accepted; but they agreed to consider it. During the latter part of the summer of 1832 they both went to Sheffield to attend the marriage of Barnard's sister to the Hon. Augustus Porter of Detroit, and after the wedding they joined a party of friends who escorted the happy pair as far as Albany on their western journey. At Albany it occurred to them that it would be well to return to Hartford by the way of New York, and to avail themselves of that opportunity to visit the New York Institution. They did so, and the impression made upon them by the aspect of the city at that time was never forgotten. New York was like a city of the dead. Business was completely at a standstill. The streets were deserted. The cholera epidemic was over, but there were still sporadic cases, and so gloomy did everything appear that the two young men were sorely tempted to depart without attending to the business which had brought them there. Only their pride kept them from making their escape. On visiting the Institution, however, they were so much pleased with its arrangements and with the gentlemen connected with it that they at once resolved to accept the invitation to take service there. Returning, therefore, to Hartford, they resigned their positions and were soon engaged in their new duties in New York.

New York, as it was in 1832, was very different from the same city as it appears in 1892. To say nothing of the architecture, the streets on the East Side had extended only as far north as about Thirteenth Street, and there in a straggling way. On Broadway there was only one

house above the bend where Grace Church now stands, and that solitary dwelling was unoccupied on account of malaria. Union Square had not been laid out; the space which is now included within it was then occupied by a rocky hill. A little northward, nearly where the Clarendon Hotel now stands, was an elegant country villa belonging to Mr. Pierson, a wealthy merchant and an earnest disciple of a singular religious impostor who called himself Matthias, and who was usually the guest of Mr. Pierson. The strange story of this remarkable man was told by Colonel William L. Stone in a small volume published in 1835. In that vicinity the ground was all above the grade of the streets, which were cut through the rock, leaving the adjacent building lots to be reduced by their owners. During the next five years the work of opening and grading streets was carried as high as Twenty-Second Street. It was not expected that the city would extend further, and a sustaining wall was built on the north side of that street. During the same five years the Harlem Railway was chartered and constructed to connect its terminus at Prince Street in the Bowery with Harlem Village. Its line passed on an embankment through a considerable pond, which was called Sunfish Pond, not far from what is now Madison Square. The cut through Murray Hill and the tunnel at Yorkville were regarded as great works of engineering. Near the present site of the Fifth Avenue Hotel was the House of Refuge for Juvenile Delinquents. Beyond lay a wide space of land, uninhabited and uncultivated, and traversed only by a country road, from which, a little south of what is now Fiftieth Street, a rude wheel-track led eastward to the Institution of the Deaf and Dumb, and also to the burial place of the pauper dead, known as the Potter's Field.

The Institution was a rather imposing building of considerable dimensions, with a tasteful colonnade, standing on a slight elevation, and fronting an extensive lawn towards the south. It was furnished with a small but excellent library in which were all the important works then extant on the education of deaf-mutes. The little band of teachers was composed of men of spirit and intelligence. With the exception of M. Vaysse, who had been educated at the College of France, and Mr. Cary, a singularly gifted graduate of Princeton whose promising career was too early closed by death, all of them were Yale men: Peet the principal; Bartlett, who afterwards returned to the Hartford Asylum; Barnard; Samuel R. Brown, who spent his later life in the service of the Morrison Education Society in Japan; and George E. Day, afterwards Professor of Biblical Literature at Yale. These gentlemen were earnestly devoted to the study of the principles and practice of their profession. Mr. Peet was admitted by all of them to be the most accomplished master of the sign-language they had ever known. M. Vaysse was thoroughly versed in the methods and the philosophy of the French institution. Mr. Bartlett was peculiarly happy in his practical teaching in the class-room. Messrs. Day, Cary, and Barnard had special aptitudes for the study of principles. Remote as they were from ordinary society, it was fortunate that they were congenial to each other, and that they found their association with each other to be both stimulating and agreeable. In the daily routine of their work there was nothing unusual. The ordinary studies of the pupils were pursued in the mornings and afternoons, after which they were employed in learning some handicraft under the instruction of skilled mechanics. The evenings were spent in large study rooms. Week by week one of the teachers was

appointed to see that this routine was duly followed, to conduct the chapel services and to superintend the evening studies. The evening duty was particularly laborious on account of the painful restlessness of the male pupils, which exceeded anything that Mr. Barnard had yet seen. The teachers had few recreations except music, of which Barnard was passionately fond. His hearing, if it had not improved, had grown no worse since he had left New Haven; and although his infirmity was a painful embarrassment to him throughout his life, his worst fears were never realized, since it did not disqualify him for the profession of a teacher. In the study of music he took great satisfaction. He practised on the piano as much as he could, but his favorite instrument was the flute. His brother John was an expert on the same instrument, and as he was then engaged as a lieutenant of engineers in the construction of Fort Schuyler near the head of Long Island Sound, he usually spent his Saturdays and Sundays with Frederick at the Institution. Then the young men would organize concerts, with none but themselves for an audience. Vaysse was a vocalist of some pretensions. Brown was an excellent tenor. Barnard was a basso profondo. Bartlett played the organ and the violoncello, and on occasion could take the part of a contralto. Those were the earliest days of the opera in New York, and the first performance took place in the old Park Theatre in Park Row, directly opposite the site of the present post-office. The distance from the Institution was about three miles and a half, and in 1832 there were neither tram-cars nor omnibuses; yet the whole staff, with the sole exception of Mr. Peet, would often walk to the theatre, returning to the Institution considerably after midnight. On their homeward way they would halt in "the wild untenanted waste at the top

of Murray Hill" to rest and refresh themselves with snatches of song.

A cheerful, innocent, and brotherly life that of the young teachers of the deaf and dumb seems to have been; but it was not all, by any means, devoted to routine duty and the study of music. Most of them, and Barnard most of all, were attracted to scientific investigations. During the five years of his residence at the Institution numerous atmospheric and celestial phenomena occurred which could not fail to attract his interest, and which offered opportunities for varied applications of his mathematical knowledge. There were frequent electrical displays on a scale of marvellous splendor, such as he never saw equalled elsewhere. "In the absence of rain, and in intervals between showers, while the sky was totally overcast with dense clouds, there would occur a continuous succession of dazzling flashes of lightning, breaking out with instantaneous suddenness in every quarter of the heavens, and darting fiery zig-zags which seemed to chase each other, sometimes for an hour or more together, all over the celestial arch." This, too, as he has recorded,

was one of the periods of maximum frequency and maximum brilliancy of the aurora borealis, periods which, whether recurring regularly or not, do certainly occur at wide intervals. I kept up, in concert with observers elsewhere, and especially with Edward L. Herrick, Esq., of New Haven, an assiduous observation of these phenomena, and was rewarded by the enjoyment of some of the most magnificent displays of celestial chromatics that man has ever been permitted to witness. Of one of the most remarkable of these displays, which occurred as late as 1837, I attempted a descriptive account for publication, accompanied by some estimates of the height of the meteor above the earth, as deduced from a comparison of the various aspects of the synchronous phases which had been ob-

served from many widely distant points. The publication of this paper incidentally became the occasion of the termination of my connection with the Institution and of my entrance upon a new field of labor in a distant State.

Barnard unfortunately missed seeing the famous star-shower of November, 1832. It was seen by most of his associates with mingled admiration and alarm, but in their excitement they did not think to call him; he slept quietly during the whole time that the phenomenon lasted, and when he heard of the almost appalling grandeur of the spectacle, he could hardly forgive their negligence. His friend Herrick at New Haven had been more fortunate, and was one of the first to put forth the hypothesis that these meteoric showers are periodic and that their cause is probably cosmical. By a laborious investigation of old records he satisfied himself that there is an unusual abundance of shooting stars, if not literally of star-showers, at other times than the month of November, and he indicated the months of April and August as the times at which their appearance is most remarkable. Both of these conclusions have since been verified. Besides the brochure above mentioned, Barnard made several notable contributions, chiefly of a scientific nature, to the periodical literature of the day, and during the latter part of his service at the institution he published a work on the sign-language, entitled "Analytic Grammar, with Symbolic Illustrations," in which he developed the system of Sicard by modifying the symbols so as to indicate cases, moods, and tenses, and in fact to exhibit the complete grammatical structure of sentences without the use of words. Soon after its publication the stereotype plates of this work were destroyed by fire, and after the first edition had been exhausted, it fell into disuse. Copies of it have been eagerly sought by instructors of the deaf and dumb

in recent years, and so it has continued to be useful to the present time.

Throughout these years Mr. Barnard was a regular attendant at St. Thomas' Church at the corner of Broadway and Houston Street. Its rector was Dr. Francis L. Hawks, who was then at the zenith of his fame and power as a pulpit orator, and under his ministry it is believed that Barnard was confirmed. Eighteen months before he left New York, he became a candidate for holy orders under Bishop Benjamin T. Onderdonk; not that he had any intention or expectation of engaging in the parochial ministry, but because it was thought that to be clothed with the ministerial character would contribute to his usefulness in the profession of a teacher, to which he had now definitively given himself. When he left New York in 1837 his candidature lapsed, and it was many years before it was renewed under Bishop Cobbs of Alabama.

In the autumn of 1837 the remarkable investigations of Professor Faraday at the Royal Institution in London had excited a general and lively interest in electro-magnetism on both sides of the Atlantic, and Barnard was engaged to write an article on that subject for a magazine conducted by Park Benjamin. In the preparation of his article he found it necessary to visit New Haven in order to obtain certain information which was to be had only in the library of his old friend and instructor, Professor Silliman. Having completed his work, he walked to the steamer to return to New York in company with Mr. Gregory Pericaris, an accomplished Greek gentleman who had been driven from his home in Scio during the Greek war of independence. As they approached the steamer, they observed Dr. Day, the President of Yale College, in company with another gentleman, whom Mr. Pericaris

recognized as Dr. Basil Manly, a distinguished Baptist clergyman of Charleston, South Carolina, who had recently been elected to the presidency of the University of Alabama. Barnard did not fail to observe with satisfaction that Dr. Manly was unconventional enough to carry his own valise, an act which would have been deemed highly improper for a gentleman in Charleston. The two college presidents were likewise on their way to New York, and Barnard gladly accepted the offer of Mr. Pericaris to introduce him to President Manly. With President Day, of course, he was already acquainted.

During the trip to New York Dr. Manly had considerable conversation with Barnard, whose paper on the aurora he had read with interest. He explained that the University of Alabama had been in existence only about six years when it was completely broken up by the tumultuous insubordination of the students, and every member of the Faculty had either resigned or been removed. His object in visiting the North, he said, was to consult with experienced educators, and particularly with the presidents of Yale and Harvard, on the best methods of reorganizing the institution, and to induce competent men to become candidates for the various professorships. He had found suitable men to nominate to the Board of Trustees as candidates for all the chairs except that of English Literature, and he frankly asked Barnard how he would like to undertake that department. Barnard replied that his preference had always been for scientific studies, and that he would more willingly have accepted the chair of Mathematics or Natural Philosophy. Dr. Manly suggested to him that he might at least send on his testimonials. The testimonials were forwarded, and two months later Barnard received from Governor Arthur P. Bagley, *ex officio* President of the

Board of Trustees of the University of Alabama, a formal announcement of his election to the Professorship of Mathematics and Natural Philosophy, with an urgent request that he would enter on his work without delay. For this result of his candidature he was doubtless indebted to the favorable account of him which had been personally given to Dr. Manly by Dr. Day.

While he was ready and glad to accept the position offered him, it was unfortunately not possible for him to go at once to Alabama, as he had just made a positive engagement to present the claims of the deaf and dumb to the Legislature of Virginia. Accordingly, before going to the further South, he visited Richmond, taking with him half a dozen of the most proficient pupils in the New York Institution. Several public exhibitions were given before the Legislature and citizens of Richmond in exemplification of the best methods and results of the scientific instruction of deaf-mutes, and the result was the passage of an act establishing an Institution for the Deaf and Dumb at Staunton, Virginia. Thus a month passed before Barnard could leave New York, and as no railways had yet been constructed to connect the South with the North, he was obliged to take passage on a sailing-vessel to Mobile. His voyage lasted nearly three weeks, and when he arrived at Mobile he found that very slight hopes of the success of the University were entertained by the citizens of Alabama. One of the trustees on whom he called bluntly said to him, "You will never be able to govern those boys at Tuskaloosa while the world stands." Barnard was not discouraged, however, believing, as he did, that he knew more of the art of governing boys and young men than the trustee either knew or could know. He went, therefore, in good heart and hope to Tuskaloosa, arriving

there about the first of March; and although there were serious difficulties of discipline while he was connected with the University, there were none which directly concerned himself, and none which he was not more or less useful in solving.

FREDERICK A. P. BARNARD

PROFESSOR OF MATHEMATICS AND NATURAL PHILOSOPHY IN THE UNIVERSITY OF ALABAMA

1848

CHAPTER V

Barnard at the University of Alabama — His varied services — Foucault's experiment — Becomes Professor of Chemistry — Invents an improvement in photography — Barnard as editor — An editorial mystification — Magazine literature — A Masonic oration — Appointed astronomer to the Boundary Commission of Florida and Alabama — Barnard's marriage — A fortunate union — Barnard becomes a candidate for orders — His service to the temperance movement — A noble discourse on the Union, and its effect.

Professor Barnard's connection with the University of Alabama continued from the spring of 1838 until the autumn of 1854, and included some of the happiest and most fruitful years of his life. His natural gayety of character and his rare attractiveness of person soon made him a favorite of the young; his varied accomplishments, which enabled him to render any service required in any department of the University, commanded the admiration of his colleagues; his untiring industry and his soundness of judgment won for him the respect and confidence of his superiors; his technical knowledge enabled him to render an important service to the State. He did more duty at the University than any one of his colleagues; his hours of leisure were spent in editing one newspaper, writing for another, contributing to a literary journal, making original scientific experiments, improving the new art of photography, and extending his mathematical investigations, — and all the while he was maturing those advanced views of college and university organization which caused him in due time to be recognized as a master of the art and science

of education. During his residence in Alabama his physical health was perfect, and his intellectual powers were at their best. If he neither hasted nor rested, it was because his energies were inexhaustible, and a change of occupation never failed to yield him recreation and repose. A rapid sketch of those laborious but joyous years will sufficiently illustrate and justify these observations.

From 1838 to 1848 Professor Barnard held the chair of Mathematics and Natural Philosophy, and the universal testimony of his pupils is that he made those departments of their curriculum exceptionally interesting and attractive. He was obliged, of course, to use the text-books of the time; but he used them only as texts for his own original comments, and the methods of instruction which he followed then have since been approved and adopted in the best institutions of the country. In 1846 he induced the trustees of the University to establish a small astronomical observatory which he took great delight in furnishing; but before he had been able to do much work in it, he was transferred to the chair of Chemistry and Natural History, which he held until 1854, and the observatory passed into the charge of his successor in the chair of Mathematics, the distinguished Professor L. C. Garland, afterwards President of Vanderbilt University.

During the earlier years of his residence in Tuskaloosa that town was the capital of the State, and the sessions of the Legislature which were held there were seasons of much excitement and social activity. Presently there arose a violent agitation for the removal of the seat of government. The two principal competitors of Tuskaloosa were Selma and Montgomery, both on the Alabama River, the latter being at the head of navigation, but the

former having the advantage of being nearer the geographical centre of the State. The claims of Selma were urged by one of its advocates in a rather curious way. He caused a metallic plate to be cut in the form of a map of the State and showed that the plate would exactly balance on a point corresponding with the position of Selma on the map. His argument, ingenious as it was, did not prevail, and on a popular vote Montgomery was chosen as the capital by a large majority. The substantial edifice which had been used as a State-House was given by the Legislature to the University, but little use was made of it for a considerable time. Professor Barnard used it, however, for the purpose of repeating the interesting experiment of Foucault, demonstrating the fact of the earth's rotation by means of a pendulum. From the dome of the building he suspended a pendulum ninety feet long. The bob was a leaden globe, eight inches in diameter, which he turned on the lathe with his own hand to a perfect sphere, and suspended by a steel piano-wire on knife-edges acting on the principle of the universal joint. The editor of one of the journals of Tuskaloosa was unwise enough to ridicule the experiment, but the only effect of his satire was to advertise it to the public. All classes of citizens attended to observe it for themselves, and their interest in the experiment was fairly equalled by their admiration of the professor by whom it was conducted.

After he became Professor of Chemistry, Barnard paid considerable attention to photography, and while the daguerreotype process was still in general use, he discovered a method of accelerating the luminous impressions by the use of gaseous chlorine. He also invented a method of producing stereopticon plates for binocular vision, both impressions of the pair of plates being made

at a single exposure. Specimens of his invention were sent to Philadelphia for exhibition at a fair of the Franklin Institute, but unfortunately too late for entry. He had the satisfaction, nevertheless, to be assured by Professor Dana of New Haven, who was chairman of the jury, that his exhibit would undoubtedly have received the first prize, if it had arrived in time. Stimulated by this encouragement, he threw himself more enthusiastically than ever into the study of photography, established a gallery for taking portraits, and devoted to it all the time he could spare from his academic duties. Though he had a partner in this enterprise, a friend has recorded that "he went into the business with sleeves rolled up, and manipulated the camera with such skill as to produce really fine specimens of the art, so that the faces of the belles and beaux of Tuskaloosa were speedily duplicated to the infinite gratification of young and old. The interest he took in such things as these, when he did take hold of them, was absorbing, and this he made no effort to conceal."

During his sixteen or seventeen years of constant service in Tuskaloosa, it frequently happened that one or other of the members of the Faculty was absent or temporarily disabled, and in every such case Professor Barnard was ready to take additional duty. On two several occasions the chair of English Literature remained vacant for a whole year, and in both instances he supplied the vacancy without allowing the additional labor to interfere with the work of his own department. At the same time he was actively engaged in journalism, and he seems to have regarded his editorial occupation in the light of an amusement. Tuskaloosa had the questionable advantage of two political newspapers, severally representing the two great political parties of the time. In his political principles

Barnard was an ardent Whig, and when Mr. Miller, editor of *The Monitor*, the leading organ of that party in Middle Alabama, retired from his position to write a biographical work on *The Bench and Bar of Georgia*, Professor Barnard became, and for several years remained, the actual but unavowed editor of the paper. It is said that *The Monitor* was never so sprightly or so prosperous as under his administration. He certainly took every means to make it so, and he generously contrived to make the prosperity of his own publication contribute to that of its antagonist. In fact, he wrote for both, and it often happened that the most trenchant attacks of the Democratic organ upon the principles and conduct of the Whig party were really from the pen of the editor of *The Monitor*, who would proceed next week to repel his own assault and follow it up with a caustic criticism of the unprincipled misconduct of the Democratic party. This humorous mystification was so admirably managed, and the secret of it was so thoroughly well kept, as never to be suspected by the readers of the two papers. During the sessions of the Legislature at Montgomery, another harmless deception was practised on the rural politicians of Middle Alabama. The Montgomery newspapers of both parties were published daily; the Tuskaloosa papers were published weekly. With the aid of the Montgomery papers, Barnard used to prepare complete summaries of the transactions of the Legislature in the form of letters, dated from Montgomery, which duly appeared in each of the Tuskaloosa papers, with political speculations and forecasts of probabilities colored to suit the prepossessions of their several supporters. It was often a source of humorous satisfaction to Barnard to hear his fellow-citizens of both parties remark that the weekly correspondence of the papers in Tuskaloosa gave them a clearer

understanding of the movements of the political world than they could ever gather from the more voluminous reports of the Montgomery daily newspapers!

In 1845, a literary monthly magazine, called *The Southron*, was established at Tuskaloosa, by the Hon. Judge A. B. Meek, a graduate of the University of Alabama, and a poet of considerable local reputation. He was assisted in his enterprise by several well-known writers, and among them by the Hon. W. R. Smith, a member of Congress from that district, who, at one time after the war, became President of the University. To this magazine Professor Barnard was a large contributor of prose and verse, and even his prose seems to have been made the vehicle of poesy. In the specimens of his composition which have been preserved, there may be nothing to indicate poetic genius of a high order, but there is more than enough to prove that if he had chosen literature as a profession, he might have taken high rank among the writers of his country. Three short pieces will suffice to illustrate his facility in versification. The first is a graceful sonnet entitled

A VALENTINE.

As one who loveth on the stars to gaze,
  Oft chooseth out the fairest for his own,
His rapt eye nightly feeding on its blaze,
  With a deep gladness known to him alone;
  Nor heedeth from how far its light hath shone,
And ever must, though soft it round him plays:
  Since to its worship so his heart hath grown,
  He would not snatch it from its azure throne,
To mingle earth's pollution with its rays:
Thus beauty's galaxy mine eye surveys,
  Yet, of all fair forms, fasteneth on thine;
Therefore do I, to cheer my weary days,
Make thee, sweet stranger, goddess of my lays,
  And choose thee out to be my Valentine.

The second is a rhapsody, the occasion of which is told as follows:

Miss Trifle had told me — as all young ladies, I believe, tell all young gentlemen who indulge in protestations of eternal love and eternal — what is the word? constancy — that if I were to return to Higginsport, or elsewhere absent myself for a fortnight, I should forget that there was such a being as she on two — two feet — in all the world. Whereupon I gallantly responded:

"Forget thee!" Bid the earth forget
Its viewless track around the sun;
Forget thee! on the dial let
The shadow cease its course to run.

"Forget thee!" Bid the restless sea
Forget to beat upon the shore;
Or bid the honey-seeking bee
Gather the sweets he loves, no more.

"Forget thee!" Bid the needle cease
Its silent homage to the pole;
Or waters, in their glad release,
From ice-clad mountain-tops to roll.

Bid the young bud forget to spread
Its petals in the sunny hour;
Or summer eves forget to shed
Their dews upon the tender flower.

Bid yon bright stars, that have their birth
Far in immensity of blue,
That nightly smile on sleeping earth
And light up diamonds in the dew —

Yea! bid them all — in darkness set —
Cease evermore the world to bless;
Yet tell not *me* I may forget;
I hate that word — forgetfulness.

No trifle ever grieved me more than the wasteful expenditure of these stanzas. However, it served me right; for there was not a word of truth in the whole.

The "Ode to a Jack-knife" occurs in a story, the hero of which had discovered that clumsy piece of cutlery in his lady's work-box, and begged her to tell him to what use such fingers as hers could apply such an instrument.

"'I will answer this one question [she said] and then, Jerry, unless you can learn to cease meddling, I shall insist on your putting a wall between us, in fact. That knife is used to crimp ruffles. Be content with that, and sit farther away at once.'

"In my haste, I neglected to replace the jack-knife in the work-box, but presently after, in a fit of absence, consigned it to my own pocket.

"That night I seized my pen, and then and there, 'accoutred as I was,' I sat me down and gave vent to my 'thick-coming fancies' in an effusion which I long after regarded as my *chef d'œuvre*. I mingled in it no strain of earthly love — it was all grandeur and sublimity — the outpouring of my lofty conceptions of the glorious destiny which had befallen that humble, unpretending jack-knife. The reader shall have an opportunity of judging of the merits of my performance. Indeed, I think it important to insert the whole production in this place, inasmuch as it was made the subject of one of the most atrocious attacks upon my literary character, in that pestilent journal the *Doolittle Hollow Orb of Day*, it has ever been my lot to undergo.

"Considering the grandeur of effect it was my purpose to produce, I adopted a stanza only employed by the great poets in treating subjects of a certain elevation; and I aimed, I trust not unsuccessfully, at combining majesty of movement with majesty of thought in the following

ODE TO A JACK-KNIFE.

"Time was when thou wast sleeping in the ore,
And when the massive haft that decks thee now,
In the proud antler, on his prouder brow,
Some noble tenant of the forest bore.

"Man came and digged thee out — then fashion'd thee
Into a jack-knife, such as boors employ
Virginian weed to cut, or truant boy
Th' inglorious birch to sever from the tree.

"Yet thou escapest such ignoble fate,
No vulgar pocket doth thy prison make,
But fingers whiter than the snowy flake
Confine thee, as the cambric's folds they plait.

"Yet, favor'd jack-knife, all unconscious still
And senseless to thy happy lot art thou;
Nor ever know'st — like him who on thee now
Is sadly gazing — either joy or ill.

"No heart is throbbing in that iron breast,
No soul, with ceaseless strugglings to be free
And robe itself in immortality —
Its heavenly birthright — robs thee of thy rest.

"Suns rise and set, and seasons come and go,
And mighty empires totter to their fall,
And blood-stained despots triumph — yet of all
Thou'rt heedless; would I were a jack-knife, too!"

These editorial and literary labors were merely pastimes to Professor Barnard, or, at most, exercises preparatory to the more important work to which he seems always to have looked forward, and valuable because of the facility and dexterity in the use of his powers to which they contributed. In the same spirit of half playful and half serious self-discipline he availed himself of such opportunities as occurred to him for exercise in public speaking. The first occasion on which he appeared as an orator was the Feast of St. John the Baptist, 1841, when he delivered an address to the Masonic Lodge of Tuskaloosa on "The Claims of Masonry to the Respect and Veneration of Mankind." This address is noteworthy for its intrinsic merit, and not only on account of its place in his career. Considered simply as a composition, it is singularly chaste; perhaps, indeed, it is the most strictly classical production of his pen; as an apology for the Masonic Order it is admirable; and, from first to last, it exhibits a mastery of the art of lucid statement, a felicity and

copiousness of illustration, and a rich vein of humorous irony which would have made him both admired and dreaded either in the senate or in the forum. In the opening of this address, he declines to consider the malicious and frivolous objections alleged against the Masonic Order, and proceeds at once to demand for it the homage of respect and veneration on the ground of "its high antiquity, of the pure and exalted nature of its designs, and of the blameless characters, the lofty attainments and the widespread celebrity of many of its officers and members in every age."

As to its antiquity, he said that the innumerable efforts to discredit Masonic tradition, by ascribing the origin of the order to the Eleusinian Mysteries, the Egyptian Priesthoods, the British Druids, the Dionysian Architects, the Pythagorean Fraternities, the Hebrew Essenes, and the Roman Workmen's Colleges, at least conceded the antiquity of the Masonic institutions, and at the same time relieved the advocates of Masonry of the necessity of refuting them, since they were reciprocally destructive. He drily suggested that since the irreconcilable differences of its opponents prove that it is somewhat difficult for the uninitiated to learn the truth of the matter, it may be barely possible that the traditions of the order are more trustworthy than the speculations of outsiders. Tradition, he argued, is a necessary and inseparable adjunct of every ancient institution, and he asked whether it may not be "just possible that truth will descend as readily as fable?" In Masonic tradition it is reasonable to suppose that truth, and not fable, has been handed down from age to age, for otherwise it is impossible to explain the acknowledged fact that the institutions of the order, as they have been preserved in widely separated regions and in the most various civilizations, remain to this day everywhere sub-

stantially the same. He did not assert that the antiquity of an institution is a conclusive proof of its merit; but he justified the general judgment of mankind that institutions which are unquestionably ancient are likewise venerable.

> The *probabilities* [he said] are in favor of whatever has stood the test of time. If in the multitude of counsellors there is safety, it may be presumed that in the unvarying accord of numberless judgments there is ground for anticipating the truth. What has been received by generation after generation without question or dispute, is supported by a vast weight of authority and is corroborated by the results of experience. Talk to an Englishman of the evils of monarchy, and he will meet you with the inquiry, "Has not ours worked well?" Predict anarchy to an American, from the vast power vested in the people of the republic, and he will ask, "Does not our past history prove your apprehension to be groundless?" It is thus that whatever has stood the test of time commands, and, in general, justly, the confidence of mankind.

But if mere antiquity thus creates a presumption in favor of an institution, the presumption is immensely strengthened if an unquestionably ancient institution has been subjected to many and bitter persecutions. Nothing that is not intrinsically excellent can withstand every sort of opposition. Error may make head for a time; it may be proof against one or another weapon of its adversaries; but there is no error which may not be successfully assailed in some point. Masonry has been assailed at all points; by irresponsible power, inspired with jealousy, hate, anger, caprice, and unrestrained by any sentiment of right, humanity, or decency; by gloomy superstition, which paralyzes the reason and converts the highest endowment of the race into an instrument of delusion and terror; by popular prejudice; by political passions; by

ridicule, "a weapon which, assailing man in his weakest point, often shames him into abandoning that from which the dread of death could not have driven him." By all of these the institution of Masonry has been attacked. It has by no means escaped unscathed; and yet, "like Christianity, though often fearfully wounded, it has not been wounded to the death. Thus it has proved itself to be possessed of an indestructible principle of vitality which demonstrates its inherent excellence and vindicates its claim to the respect and veneration of mankind."

The secret of the indestructible permanence of Masonry, Professor Barnard continued, is to be found in the objects for which it was instituted, which were and are the cultivation of science, the observance of a pure morality, and the practice of brotherly love and fraternal charity. It is incredible that so widespread an institution should have been able to maintain itself age after age in the face of relentless persecution, if it had not in some good degree accomplished the objects of its erection. The pretence that it has had other and more sinister objects is without foundation. "If it has ever been the enemy of social or political order, point to the nation it has revolutionized — name the monarch it has dethroned! If it has ever been the insidious foe of religion or of the Church, instance the sacrilege it has perpetrated, tell us the temples it has made desolate!" The members of the order themselves best know how its aspirations are fostered and how largely its sacred objects are pursued. It is too true that not all Masons are virtuous; but if that fact were sufficient to condemn the order, then the Christian Church must be condemned because it fails to make all its members sober, righteous, and godly men. It is true, too, that the duties which Masonry cultivates and enforces are natural duties; but the Masonic Society is not therefore to be set down as

useless. Rather the reverse, since it brings to the enforcement of natural obligations the vast power of organization and the subtle influences of intimate association. The trustful reliance of brother upon brother unites men's hearts, strengthens their resolves, soothes them in times of trouble, and adds joy to happiness itself. Moreover, the unsectarian catholicity of Masonry must tend to enlarge men's sympathies and broaden their charities. It knows no distinctions of politics or of religion. Men who meet elsewhere as strangers or antagonists, in the lodge meet only as friends and brothers; and into whatsoever region any Mason goes, whatever be the dominant religion or the constituted form of government, he may hope to find men who will know him as a brother, and as a brother only. In short, however devout he may be, or rather, the more devout he is, the more deeply must a true Mason be convinced that his first duty as a man and as a Mason is to be humane!

That the Masonic Order has not failed in the attainment of its objects Professor Barnard held to be proved by the character of the men whom it has honored with the chief control of its affairs, and whose lives are the best vindication of its principles. Its loyalty to constituted government has been proved in its English branch by the fact that eleven kings of England, one Prince of Wales, two royal dukes, and many noblemen have held the exalted station of Grand Master. That it has had the confidence of the Church is shown by the fact that the greatest of English cardinals, the sagacious Wolsey, two archbishops of Canterbury, one archbishop of York, seven bishops, and three mitred abbots have held the same dignity. Its respect for learning has been shown by electing to the same office the celebrated architects Inigo Jones and Christopher Wren and the equally celebrated philosopher Desaguliers. In

this country the names of such Masons as Washington, Warren, Hamilton, Clinton, Lafayette, Jackson, and many others are sufficient to justify the assertion that an order to which they allied themselves could not have been unworthy of them.

Replying to the popular objection to the secrecy of Masonry, he ironically suggested that it should be abolished.

> Eschew [he said] this formidable secrecy. Unveil the mysteries of your craft. Like the peripatetic philosophers, pursue your studies and pronounce your lectures in the public groves. In your charities, reverse the precept of the Saviour. When thou doest thine alms, *do* as the hypocrites do! Sound a trumpet before you in the streets and synagogues, that you *may* be seen of men; and then, like the Pharisee, thank God with a loud voice that you are not as other men are. Emulate the moralist, who desired to live in a house of glass that all the world might see the most secret acts of his life. Peradventure you may thus succeed in winning over the good will of those whose delicate scruples and tender consciences force them to withhold from you the light of their countenances.

Continuing in a graver mood, he showed that such objects as those of Masonry ought not, in modesty or decency, to be pursued with ostentation, and that to make the order effective for those purposes the confidence of private fraternal association is indispensable. He reminded his hearers that the Christian Church, at certain critical periods of its history, had assumed the character of a secret association. He instanced the fact that the Senate of the United States, and the Senates of the several States, in their capacity as executive advisers, are secret associations, created and established as such by the written constitutions of the land, sitting with closed doors, their transactions veiled in secrecy, and their members bound by solemn

oaths not to lift the veil from their proceedings. From these instances he concluded that the secret transaction of business cannot be necessarily or universally wrong. That secret associations may be formed for evil purposes is true; but so may open associations. That secrecy makes bad societies more dangerous is admitted; but then either the evil purpose precedes the organization, or else an original good purpose is radically changed, and in either case its members do not only cast a veil of secrecy around their proceedings; they hide, if possible, the very fact of their association. They hate the light because their deeds are evil. In no such sense is Masonry a secret institution. Its existence is avowed. Its purposes are openly proclaimed. The times of its assembly are published. Many of its ceremonies are performed before the world. It keeps nothing secret but its own peculiar business, which there are sufficient reasons for keeping to itself.

Referring to the political persecution of the Masonic Order, which had then happily passed away, Professor Barnard closed his address with warm congratulations to his brethren on the favorable auspices under which their communications were now held. He encouraged them to expect a future of great prosperity for their order. He urged them to justify their privileges by obedience to its principles, and to remember that "the Great Light of Masonry is the Word of God."

It is not only as his first public discourse in Alabama that this address is remarkable; from the day of its publication it had the effect of making him a marked man in that State. In their love and admiration of eloquence the people of the South are thorough Greeks, and this address represented an order of eloquence which is rarely heard in the pulpit, in the forum, or at the hustings. The cogency of its reasoning, the lightness of its humor, its

earnestness of moral purpose, its broad catholicity of sentiment, and the chaste felicity of its diction commended the advocate of Masonry to the respect of thousands who were not interested in his cause. The Masonic fraternity was proud of its champion; the University was proud of its representative; men of all conditions in the State were proud of their fellow-citizen. The attention thus attracted to him led, of course, to a recognition of his more peculiar merits as a man of science. Nothing but time was needed to afford some opportunity of public distinction; and the time required was not long. In 1846 he was called to serve the State on an occasion of high importance.

In that year the States of Alabama and Florida appointed a joint commission to ascertain and permanently settle the boundary between them. While Florida was still a Spanish possession, the boundary line between it and the territory of the United States was established by treaty at the 31st parallel of north latitude, and when Florida and Alabama had both become States of the Union, the same parallel remained the boundary between them. Unfortunately, however, it then appeared that in 1796 two boundary lines had been surveyed and distinctively marked in accordance with the Spanish treaty, and that these two did not coincide. At the Chattahoochee River they were distant from each other by more than a mile; towards the west the distance diminished until, at the Perdido, the western boundary of Florida, it was only a few hundred feet. The strip of land between the two lines was virtually a no-man's-land, and became the natural resort of criminals and desperadoes from both States, since, within that strip, they could defy the officers of the law. Alabama claimed the more southern line as the boundary; Florida claimed the more northern, and while the question of jurisdiction remained unsettled, neither

State could exercise effectual jurisdiction in the disputed territory. The joint commission appointed by the two States to put an end to this anomaly included commissioners and an astronomer on the part of each State. Professor Barnard was appointed astronomer for Alabama, and an officer of the United States Engineer Corps was appointed astronomer on the part of Florida. The commission was instructed to begin its work at the intersection of the disputed lines with the Chattahoochee River. On arriving at the place of meeting, Professor Barnard found the commissioners for Alabama already in camp; the commissioners for Florida reported themselves soon afterwards; but the astronomer for Florida did not make his appearance, and by joint consent Barnard was requested to act in behalf of that State also.

On investigation, it appeared that the more southern of the two boundary lines was marked by circular mounds of earth, about a mile apart, each surrounded by a ditch from which the earth had been thrown up to form the mound. The other line was marked by "blazes" of the trees, every tree on the line being blazed both on the north and on the south side; and all other trees within about one hundred feet north and south of the line were blazed on the side nearest the line. Thus the blazed line was easily followed, as the whole country was covered with a dense forest of pines. Barnard's first proceeding was to make observations to determine the latitude; and, as it was impossible to use fixed instruments, he was obliged to depend upon a reflecting circle with an artificial horizon. He presently satisfied himself that the southern line, marked by mounds, was the true line, and his conviction was speedily verified. In running due west, they invariably went directly from mound to mound, while the blazed line was found to be crooked. The

conclusion was that the blazed line was what surveyors call a "random line." At the time of the treaty with Spain, the whole Gulf Coast belonged to that power; and the government surveyors in 1796 began to run the treaty line due east from the Mississippi. It seemed that they must have run their first line by compass, blazing their way as they went; and that, after reaching the Chattahoochee, they had made observations to correct their errors, and so had established the mound line by offsets. Having come to this conclusion and laid it before the commissioners, Barnard was requested to continue the further investigation of the line westward by himself alone. This he accordingly did, not, however, by following the lines continuously, but by examining them at different points. At no point did he fail to find both lines, though the distance between them varied greatly, and at the Tensaw (the western branch of the Alabama) they were so near together that an arrow might have been shot from the one to the other. Between the two branches of the Perdido River he came upon traces of the camp of the original surveyors of 1796 in a beautiful grove of beech trees, on the bark of which were inscriptions of names, dates, and fanciful figures. A countryman whom he had employed as a guide had served in his boyhood as a chain-carrier in the original survey, and recognized the names inscribed on the beech trees as the names of men who had accompanied that expedition. On his return to Alabama, Professor Barnard made his report to the governors of Alabama and Florida. It was accepted and approved by both; and, shortly afterwards, the Legislatures of the two States concurred in establishing the mound line as the boundary between them.

Soon after his return from the Florida boundary Professor Barnard married Miss Margaret McMurray, a young

lady of English parentage who had gone from her home in Ohio to pay a long visit to relatives in Alabama. This union was in every way fortunate. It was emphatically a love match on both sides, and it remained a marriage of love on both sides for more than forty years. It was certainly not a prudent marriage, as the world counts prudence, for neither Barnard nor his bride was rich ; in fact, they were both poor, and what was worse, Barnard was in debt. His income had never been large, and he was no economist. While he had money, he spent it freely on his scientific experiments, in the purchase of books and instruments, in the pleasures of the day, or in the service of his friends ; when his purse was empty, as it generally was, he had unlimited credit which he was only too ready to use. Mrs. Barnard soon brought order into his confused affairs. His debts must be paid, of course, and to pay them out of his small income meant nothing less than systematic and long-continued self-denial in the homeliest affairs of life. For years she kept their expenditures at the lowest limit, stinting even their table in the use of meats and drinks which are commonly regarded as necessaries. Yet these were happy years to both of them. Mrs. Barnard's only pride was in her husband, and Barnard himself was one of those strong men whose very strength is strengthened and ennobled by a woman's influence. In their abundance of happiness they did not feel their self-imposed privations, and as their burden of debt grew gradually lighter, they were gladdened by the prospect of release and ease.

Shortly after their marriage he began again to entertain the thought of renewing his candidature for holy orders, and entered into correspondence on that subject with the saintly Dr. Cobbs, Bishop of Alabama. As Mrs. Barnard was an enthusiast in the cause of temperance, it was

probably under her influence that he became, about the same time, a devoted advocate of temperance reform; and the zeal and courage with which he threw himself into that movement in a community in which the daily use of alcoholic liquors was almost universal attracted to him the interested attention of the people of the whole State, made him the recognized leader of the temperance reformers, and commanded the respect even of those who were most opposed to his views.

His first appearance in 1849 as an advocate of total abstinence was made in a powerful defence of the new order of the "Sons of Temperance," in which he maintained that "civilization discloses a remedy for the evils it engenders"; and contended that the remedy for the evil of intemperance is to be found in voluntary associations like the Sons of Temperance. The paper barriers of legislation, he said, had been raised in vain against the progress of the drink habit.

> When a favorite vice has fairly made its citadel within the public heart, it is idle to bombard it with legislative ordnance, or to strive by mere brute force to expel it from its stronghold. It can be effectually assailed only by the mighty engine of public opinion; and in no way can public opinion be brought to bear so energetically as through its visible embodiment in great associations of individuals.

He repelled the objection that such organizations must be content to appeal to the moral and social instincts, and not directly to the sanctions of religion.

> If we may not without sin strive to suppress a ruinous vice by human means, neither may we without sin presume to punish crime by laying upon the criminal the heavy hand of the law. Governments should build no prisons, erect no scaffolds, train no police. If it be said that God has commanded us to respect the governments under which we live,

that is simply to say that He has given His express sanction to the principle we maintain; that is, the principle of the rightfulness of employing human means to put down human vice. On this point I speak boldly. I declare my deeply seated and unalterable conviction that to set up religion in opposition to the great temperance reform is to do evil to the cause of religion. What *is* that religion which will not allow men to be made better than they are, because they are not in a moment transformed into saints? What *is* that religion which will not permit us to restore the half-crazed inebriate to his senses, that we may bring him as a sane man into the sanctuary of God and set him before the altar, clothed and in his right mind?

To the large class of persons who approve of temperance reform, but who decline to join the ranks of the pledged reformers, on the ground that they have no need of pledges to save or restrain themselves, he made an eloquent appeal.

No! You have no need of us! But we have need of you! Suffering humanity has need of you. The weeping wife has need of you. The victim of starvation has need of you. The shelterless infant, clinging to a mother's breast that is even colder than itself, has need of you. In those loathsome hovels which dot the face of our beloved country like so many plague-spots, and in those more loathsome dens of vice and crime, reeking with abomination in the purlieus of our great cities, there are children with immortal souls fresh from the hand of God, but destined, as it seems, to live a life of crime, and to die, perhaps, a felon's death. Those children have need of you! How can you think of these things and then have hearts to bid us God speed in a work in which you will not join us but which we cannot do without you? Whatever we may accomplish, we never can exterminate this vice, so long as there shall be a class of neutrals in the land. Neutrals! There can be no neutrals. Intemperance has no rampart of defence so nearly impregnable as that which is thrown up before it by the army of neutrals. If you would not fight for

the perpetuation of drunkenness, you must fight against it! Think of this alternative from which there is no escape, and then — choose ye for yourselves.

During the political excitements which followed the Mexican War, a deep-rooted determination to destroy the Federal Union of the States was openly proclaimed by not a few politicians in the South, and particularly in South Carolina. Passionate efforts were made to inflame the minds of the people with a resentment of wrongs which were partly imaginary and partly due to other than political causes. To deny the existence of such wrongs, or to attribute them to any fault of the people of the South, was bitterly denounced as evidence of disloyalty to that section. The friends of the Union were discouraged. The people of the town and county of Tuskaloosa, who had always been resolute and devoted Unionists, lost heart. It was during this condition of public sentiment that the anniversary of American independence was celebrated in 1851. In the rejoicings of that day all parties were equally enthusiastic and equally sincere, and Professor Barnard, whose eloquence was universally admired, was invited to deliver the usual oration. He consented to perform that duty only on condition that he should be at liberty to speak his whole mind on the alleged grievances of the South and their supposed cause in the Constitution of the Federal Union; and that condition having been frankly accepted, he prepared to make the Fourth of July, 1851, the occasion of an enthusiastic demonstration of loyalty to the Constitution and the Union. That nothing might be lacking to rouse and express the sentiment of the day, he wrote a patriotic hymn to be sung at the close of his oration, to the tune of "Bruce's Address"; and with some natural nervousness, but with an unfaltering purpose to be guided by his sense

of public duty, he discussed the burning questions of the time with a tact which disarmed antagonism, a candor which conciliated attention, a boldness which commanded respect, and a sincerity and depth of feeling which compelled the sympathy of his auditors.

After rapidly sketching the growth, the greatness and the marvellous prospects of the American Republic, he dwelt upon the fact that its institutions were the hope as well as the model of all men everywhere who dreamed of universal liberty for mankind, and intimated that to destroy such hopes by wilfully wrecking the magnificent experiment of the Union would be a crime against human freedom. Proceeding directly to the main point of his discourse, he showed that the alleged grievances of the South were partly misconceptions and partly fictions; and that, in their gravest aspect, they were the results of a misdirection of industry at the South, not of Northern aggression or of political inequality under the Constitution of the Union. He showed that a diversity of industries is the indispensable condition of national wealth, which the people of the South had utterly neglected, while the people of the North had fulfilled it to the utmost. By presenting the elements of the question in the form of an ingenious hypothetical illustration, he showed that under any form of government this single difference between the industries of the two sections must inevitably have caused the economic inequalities of which the South most bitterly complained. He insisted that the remedy would be found, not in an abrogation of the Constitution, nor in a disruption of the Union, but in an intelligent and systematic effort to diversify the industries of the Southern States by the introduction of manufactures for the supply, at least, of their own wants. He proved beyond dispute the vast profits which might be made by

the manufacture of cotton goods in Alabama. By a simple statement of figures, he showed that they were paying double prices for innumerable articles which they might make at home. He described the New South which might appear, — that New South which has at last begun to appear, — if large-minded intelligence were applied to the direction of Southern labor. He warned them that the single industry of the South was a precarious dependence, since some new invention might at any time make some other textile fabric available for manufactures, as the cotton-gin had first made cotton itself available. Addressing himself to the advocates of disunion, he urged that until the South should have within itself the elements of industrial independence, separation from the Northern States would have no other effect than to make them equally dependent on some other power, and that if separation must ever come, it could not be maintained unless industrial independence had been first secured. He ridiculed the notion that the South would be sustained by foreign alliances, and particularly by that of England. Its borders, which were now protected by the laws of the Union, would be everywhere infested by the enemies of its domestic institution. England, since she must have cotton, would get it most easily and cheaply by an alliance with the North, and while she grasped their cotton with one hand, she would gladly use the other in the liberation of their slaves. Such would be the consequences of a disruption of the Union, for which no sufficient cause had yet arisen — a pandemonium of anarchy as the result of ruining the hopes of liberty throughout the world!

The effect of this address, which is given in a somewhat condensed form in the following chapter, was magical. The Union hymn which Barnard had composed was sung with fervor, while tears and smiles testified the emotion

of the whole assembly. The friends of the Union were encouraged. The more thoughtful advocates of disunion sentiments were touched; and when the oration had been published and circulated, its influence in overcoming the spirit of disaffection was confessed on all hands to be both extensive and profound.

CHAPTER VI

Oration delivered before the citizens of Tuskaloosa, Alabama, July 4, 1851.

FELLOW-CITIZENS:

We are assembled to celebrate the seventy-fifth return of the birthday of American liberty. Three quarters of a century ago, this day, the thirteen united colonies of Great Britain on this continent declared themselves absolved from all further allegiance to the British crown. Seven years later, at the close of an exhausting war, they found themselves reduced to the lowest extremity of national distress. Private enterprise was paralyzed, and a frightful depreciation had fallen upon all the evidences of the public debt. The new States, still in the feebleness of their infancy and miserably debilitated by years of wasting warfare, lay scattered along a thousand miles of coast and half enveloped in the original forest. Intercommunication was slow and difficult. There is not one of them which is not virtually nearer to the European continent at this day than it was then to its nearest neighbors. Though nominally united by a compact for the common defence, they found themselves unable to arrange any common scheme for repairing their ruined credit or for stimulating into new life their prostrate industries. A few years of disheartening experience produced a universal conviction that something must be done to harmonize their distracted counsels and give unity to their efforts for the common weal. Out of this conviction sprang the measures which resulted in the adoption of the present Federal Constitution.

It is no part of my purpose, to-day, to indulge in eulogy of that noble instrument. We see what it has done for a people whom it found at the lowest ebb of national depression, and whom it has raised to the highest pitch of national grandeur. The world never before witnessed a progress so stupendous. Other nations have risen on the ruins of their rivals. Their wealth has been steeped in the tears of the plundered, and their glories have been stained by the blood of the slain. Far different has been the march of the American Republic. She, too, has made her conquests, but it has been forests which have bowed, mountain barriers which have been laid low, and rocky fastnesses which have surrendered at her resistless approach. She has imposed her chains upon the elements, and constrained the powers of nature to pay her tribute. Her eagle sweeps uninterrupted from ocean to ocean, and dips a wing in either wave. Admitted but yesterday into the family of nations, she disputes with Britain the sovereignty of the seas, and divides with empires of a thousand years the dominion of the land. These are no words of idle boasting. I quote the following from the London *Athenæum:*

The American census is not yet complete; but the returns already received point to conclusions far beyond hope or expectation. Look at New York, for instance. In 1820 it had a population of 123,000; in 1830, 203,000; in 1840, 312,000. This rate of increase was unparalleled in the history of statistics. But the population is now said to have risen to the astonishing number of 750,000! This includes the suburb of Brooklyn, etc. There are but two larger cities in Europe; in ten years more, at the same rate of progress, it will be larger than Paris. In thirty years from this date New York will, on the same terms, be larger than London.

And it must be considered that the commercial capital of America is not fed, like our Manchester and Liverpool, at the

expense of the country; its advance is the type of that of an entire continent. In 1810 the population of St. Louis was 1600; in 1830, 6600; in 1840, 16,400; in 1850, it numbered 90,000! So far as the general nature of the returns can be inferred from the data at hand, the population of the Union will be about 25,000,000. From the year 1800, when the number was a little more than 5,000,000, to 1840, when it had advanced to 17,000,000, the decimal rate of increase was about 33 per cent. This rate would have given for 1850 a population of 22,000,000 only.

Material power has been developed equally with population. Great Britain alone excepted, no state in Europe could now maintain equal armaments in the field for any length of time. This marvellous growth is deranging all the old tradition of "balances of power." America is not only a first-class state — in a few years, if no internal disorder shall occur, she will be the greatest of all. Should the 1840–50 rate of increase be maintained for fifty years, the population will then amount to more than 100,000,000! *German wars and French revolutions sink into complete insignificance by the side of considerations like these.*

With such a comment, how well we may understand the "roars of laughter" with which the American Senate recently received the menaces of Austria! When the United States shook off the yoke of England, their people numbered no more than 3,000,000; when they were last measured against a European power they were not more than 8,000,000. Ten years hence they will be equal to France or Austria. There hardly seems to be a limit to their growth. The valley of the Mississippi would alone support the whole population of Europe. In its vast basin, nations are now growing up as if at the bidding of enchantment.

These are the words of an intelligent European. One sentence of the passage deserves to be deeply pondered by every friend of civil and political liberty. "America," says the writer, "is not only a first-class state — in a few years, *if no internal disorder occurs*, she will be the greatest of all." Is not this a thing to be desired?

America stands before the world to-day, the sole champion of those principles of popular government on the prevalence of which depends the redemption of a world from political bondage. To her welcoming arms are now fleeing, year after year, thousands and tens of thousands of the down-trodden victims of European tyranny. The bruised spirits who remain yield for the time to a despotism from which there is no immediate deliverance; and when they bend the knee to heaven, their prayers ascend to God for blessings on the starry banner of the West, at the rustling of whose folds their masters tremble in their palaces.

The smothered fire which now burns beneath the surface of society in Europe has been kindled at the torch of American liberty. The hopes of those who feed it are kept alive by the example of American success. Let the hallowed light expire, and these cherished hopes will be swallowed up in the blackness of despair.

But this is not all. When America shall have become the leading power of the earth, when her sons shall number one hundred millions of freemen and the population of her Mississippi valley alone shall outnumber half a dozen European monarchies, she will be not merely the example and the encouragement, but the powerful protector of the wretched and oppressed. She will no longer permit herself to be a passive spectator of events that affect the happiness of the human race. She will not patiently see a new-born republic stifled in its infancy, as recently in Rome, because it is an eyesore to kings; nor a gallant people ground into the dust, as recently in Hungary, because they dare to vindicate their immemorial rights. She may not undertake a Quixotic crusade of political propagandism; but surely, surely, she will no more suffer venerable age to be brutally massacred, nor defenceless beauty to be stripped and lashed by the Haynaus of another cen-

tury. She will permit no monarchical reactions to be enforced at the point of the bayonet; she will not permit tyrants, at Warsaw, or at Dresden, or at Olmutz, to combine to hold a continent in chains. Every foot of territory, fairly redeemed from despotism by the bravery of its inhabitants, shall, in the shadow of her powerful protection, be sacred to liberty forever.

Yet there are not wanting among us men who would arrest this majestic Republic in the fulfilment of its sublime mission; who would shatter it into fragments, and give it over to anarchy, confusion, and ruin. There are not wanting men so false to humanity and to heaven that they would draw down upon this smiling land the horrors of civil war, and fight, in effect, the battles of tyranny upon a soil consecrated to freedom. At both extremities of the Union we hear the Constitution, under whose benignant influences a nation has been born in a day, made a continual subject of reviling. On the one hand it is denounced as a compact with hell; on the other it is stigmatized as an engine of tyranny, unworthy to be the charter of a free people. So accustomed have we become to language like this, that it has ceased to attract our attention. It is deliberately proposed that we should tear down the temple of liberty which shelters us and bury ourselves beneath its ruins, and the public listens with composure. It is even possible for an American citizen publicly to urge a desecration of this very Sabbath of liberty, to entrap little children into a public and solemn league of sworn traitors to the Government which protects their infancy. From the Charleston *Mercury* of June 11th I quote the following suggestion of a correspondent: "That the coming anniversary of the Declaration of Independence should be made use of by our young friends (boys from the age of nine years and upwards)

to form Southern Rights Associations; and to swear upon the altar of their country (I mean the South only) their devoted, eternal, and never-dying hatred to our infamously aggressive, oppressive, and fanatical Government." A more fiendish proposition never emanated from the bottomless pit.

And now, to what is all this deep-seated bitterness owing? I need not be told what is the immediate cause of its present manifestations. I have no need to hear again the story of the repeated and frequent intermeddling with affairs of strictly domestic interest, in which the North has been the assailant and the South the sufferer. That hostility and even rancor should have sprung up among us toward the people of the North, on this account, is not surprising. But these aggressions and threats of aggression have proceeded mainly from private individuals, or voluntary associations, actuated by a spirit of fanaticism; they are clothed with no political character whatever. The efforts made to introduce this species of agitation into politics have been rewarded by no substantial success. On the other hand, in a fair trial of strength, during the last Congress, political abolitionism has been substantially defeated, and State after State has withdrawn the legislation which has justly given offence to the South. At this very moment the entire energies of the Federal Government are put in action to secure the faithful execution of the law which has been regarded as a test of its sincerity of purpose, and the local authorities, wherever called upon, as recently in Boston, have earnestly coöperated to the same end. Whatever bitterness of feeling individual or associated agitation or resistance at the North may have been calculated to awaken in the South, there is nothing to justify denunciations of the organic law of the land. If we have

been injured, it has not been the Federal Constitution which has injured us; if we have suffered wrong, the wrong has not come from the Federal Government. There are causes much deeper than this for the war which has been waged against the Union — causes which are so misunderstood in their origin, that the remedy proposed for their removal would only perpetuate their effects.

The soreness of feeling produced in the Southern mind by the infringement of undeniable rights and the interference with strictly private affairs has been seized upon by agitators as the most available means of accomplishing their designs. It has been affirmed and reaffirmed that organized associations for preying upon Southern property have annually stolen thousands of your most efficient laborers. The enormous sums thus yearly subtracted from Southern wealth have been paraded in staring capitals. One hundred thousand fugitives in the free States at this moment is the smallest estimate of the experimenters on your credulity — and these have been assumed to represent a total of $50,000,000. Now what says the census of 1850? There are not *two* hundred thousand free negroes in all the free States put together, and for twenty years this population has been nearly stationary. Since 1840 its increase, with all the imaginary fugitives added, has been only about eight per cent, while the natural increase of the colored race held as your property has been more than twenty-two per cent. These simple statistics show how absolute a piece of manufacture the statements of agitators have been; and to all efforts to produce alarm in the South, may be opposed the dispassionate judgment of the sagacious and prudent statesman who has represented your sovereignty in the national councils ever since Alabama became a State, that "there

is less danger of encroachments upon Southern rights (now) than at any time for the last twenty years."

What then is the true secret of this revolutionary madness? Public men in a not very distant State have not scrupled to avow that they have been laboring for twenty-five years past for the dissolution of the Union. Yet, according to those very men, the encroachments upon your rights which they indignantly denounce and adjure you to resist date back no farther than the year 1835. Twenty years ago, then, the war on your institutions had not yet opened; but something *had* happened twenty years ago which you would do well to remember.

The tariff act of 1828 had hardly gone into operation before an agitation on the subject was begun, in South Carolina and elsewhere, and was carried on by the aid of all the machinery which politicians so well know how to employ. In September, 1830, a State Rights Convention was assembled in Columbia, and ended, as usual, with an inflammatory address to the people. These local evidences of dissatisfaction produced but slight impression on the country, and none whatever upon its general policy; for, on the 14th day of July, 1832, President Jackson affixed his signature to a new tariff act, retaining every stringent and offensive feature of the former, which had been known, in the vocabulary of nullification, as the bill of abominations.

On the 25th of October, in the same year, the Legislature of South Carolina called a convention of the people, to assemble at Columbia in the following month, for the purpose of taking into consideration the obnoxious laws of the Federal Government, and of devising means of redress. On the 19th of November this convention proceeded to pass an ordinance, declaring the acts of 1828 and 1832 to be null and void within the State of South

Carolina and naming the first of February, 1833, as the day on which the ordinance should take effect. On the 10th of December General Jackson issued his famous proclamation, declaring his intention to execute the laws of Congress at every hazard, and solemnly warning the people of South Carolina of the inevitable consequences of resistance. On the first of March the great pacificator, Henry Clay, had the satisfaction of seeing his tariff compromise become the law of the land; and on the same day the bill to provide for the more effectual execution of the revenue laws, commonly called the force-bill, passed the House of Representatives. On the 11th of the same month the State convention of South Carolina reassembled. Though the law of Mr. Clay provided for a very slow and gradual removal of the burdens complained of, and held out the certain prospect of nine years more of endurance, yet this body, finding itself uncheered by a whisper of aid or comfort from without, was constrained to repeal the ordinance of nullification. As a salvo to the wounded pride of the State, it, at the same time, solemnly nullified the force-bill; a proceeding which, considering that obstruction to the execution of the laws was no longer contemplated, was trivial and nugatory.

In this unfortunate and fruitless struggle between a self-willed State and the Government of the Union first originated that fixed and settled purpose to overthrow the Constitution, which has been so long secretly cherished, and is now openly avowed. The original cause of disaffection has been almost forgotten in hatred of a Government whose fundamental principle is that a minority shall not rule. And now what was this cause? It is to be sought, not in any dissatisfaction with the generally beneficial results which the Constitution has wrought out for the Union as a whole, but rather in a conviction that

its benefits have been unequally distributed. Such a conviction is at this moment entertained by many who do not regard disunion as a remedy. Indeed, the impression seems extensively to exist, that, by the operation of the Federal Constitution, and through Federal legislation, the South has been made, in some sort, tributary to the North. This feeling cannot be better expressed than in the following extract from an article which appeared in an Alabama newspaper about two years ago:

At present, the North fattens and grows rich upon the South. We depend upon it for our entire supplies. We purchase all our luxuries and necessaries from the North. . . .

With us, every branch and pursuit in life, every trade, profession, and occupation, is dependent upon the North; for instance, the Northerners abuse and denounce slavery and slaveholders, yet our slaves are clothed with Northern manufactured goods, have Northern hats and shoes, work with Northern hoes, ploughs, and other implements, are chastised with a Northern-made instrument, are working for Northern more than Southern profit. The slaveholder dresses in Northern goods, rides a Northern saddle with all the other accoutrements, sports his Northern carriage, patronizes Northern newspapers, drinks Northern liquors, reads Northern books, spends his money at Northern watering-places, crowds Northern fashionable resorts; in short, his person, his slaves, his farm, his necessaries, his luxuries — as he walks, rides, sleeps, loafs, lounges, or works he is surrounded with articles of Northern origin. The aggressive acts upon his rights and his property arouse his resentment — and on Northern-made paper, with a Northern pen, with Northern ink, he resolves and re-resolves in regard to his rights! In Northern vessels his products are carried to market, his cotton is ginned with Northern gins, his sugar is crushed and preserved by Northern machinery; his rivers are navigated by Northern steamboats, his mails are carried in Northern stages, his negroes are fed with Northern bacon, beef, flour, and corn; his land is cleared with a Northern axe, and a Yankee clock sits upon his mantel-piece;

his floor is swept by a Northern broom and is covered with a Northern carpet, and his wife dresses herself before a Northern looking-glass; his child cries for a Northern toy, crows over a Northern shoe, and is perfectly happy in having a Northern knife; his son is educated at a Northern college, his daughter receives the finishing polish at a Northern seminary; his doctor graduates at a Northern medical college, his schools are supplied with Northern teachers, and he is furnished with Northern inventions and notions.

Might it not just possibly occur to thinking minds that all these complaints may be well founded, and yet that their causes may not in the slightest degree be attributable to the American Constitution? Might it not also occur to them that if the evils complained of have not their origin in the Constitution, a disruption of the Union would bring no remedy? Is it not worth while to consider whether the elements of human happiness are not as fully within our own reach as that of our Northern brethren, and that, if we do not use them within the Union, there is just as little reason for believing that we should do so out of it?

Let us inquire what there is in our circumstances to prevent the South from becoming as great, as good, and in all respects as happy a people as the world ever saw.

Numerous elements contribute to the sum of human happiness. Highest among these we should properly place intelligence, intellectual cultivation, virtuous principle, practical morality, religious freedom, and personal and political liberty. No one will complain that the Constitution affects us unequally in regard to any of these things. But happiness further presumes immunity from want, and the possession of such comforts and luxuries of life as secure freedom from physical suffering and a reasonable amount of positive physical enjoyment; and

the aggregate of such possessions in the hands of the people constitutes national wealth. If, then, the Constitution of the Union affects us unfavorably in any point essential to national happiness, it must be in our pecuniary interests; and indeed the burden of all complaints is precisely this — that by our union with the North we are impoverished while she is enriched. That these propositions are true in one sense is undeniable. What I propose to prove is, that the connection between the North and the South which has brought about this result is not the political union; that the downfall of the Constitution could bring no remedy for the evils of which we complain; and that the causes of our comparatively deficient prosperity are wholly unconnected with legislation, are within our own control, and are removable at our own pleasure.

To a certain extent, the possession of wealth is essential to the security of other and higher elements of national happiness. It is essential to progress in civilization, in refinement, in knowledge, in scientific discovery, in every useful and ornamental art. It is essential to the exclusive devotion of the labor of some at least in a community to other pursuits beyond that of procuring the means of sustaining life. And in proportion as the labor of a larger number becomes available for such pursuits, in the same proportion will the arts receive their development, and the comforts and elegances of social life be multiplied.

It is not, therefore, without reason that nations strive for the increase of the general wealth. That which in an individual would be covetousness or avarice, in communities is a laudable ambition to secure the means of promoting the highest interests of man as a rational and a moral being.

But wealth is not of spontaneous growth. It is the offspring of never-ceasing industry. Wealth, when produced, has no principle of permanence. Our possessions waste before our eyes. Ten years hence we may be richer than to-day; but our wealth of to-day will in great part have perished to give place to other possessions as ephemeral as these. The permanence or fluctuation of a nation's wealth is, therefore, but a visible index of the degree of steadiness in its industry, and of the skill and judgment with which its labor is applied.

This last suggestion brings me to the point which I have been preparing to approach. In order to be wealthy, it is not enough that a people should be industrious — it is necessary that judgment should select the channels into which its labor is turned, and that skill should preside over its immediate application.

The wants of civilized man are spread over a very wide field. The channels of labor have been multiplied almost to infinity. Some of these demand chiefly an exercise of strength; others require less strength, but proportionately greater skill; and there are others still, in which skill alone is necessary, but skill of the highest order. Considered as means of producing wealth, these various kinds of labor are very unequally valuable. As a general rule, those which require the greatest exertion of physical strength are the least productive; and those in which the element of skill predominates are the most so. The visible wealth of a people will, therefore, depend as much on the direction given to its industry, as on the amount of labor employed; and in every community an enlightened economy will seek to introduce and encourage those branches of industry which secure the highest rewards.

For the lowest and the least productive sorts of labor

there will always be a demand, and usually an abundant supply; but the capacities of individuals are various, and it is a perversion of the gifts of nature to waste capacities of a superior order on tasks to which all are alike equal. The mere drudgery which society requires may be supplied by a moderate proportion of its members. Beyond this, there is room for immense improvement in wealth by the judicious direction of the disposable labor which remains. To misdirect it is to waste a valuable means of wealth; to leave it wholly unemployed, as is, to a lamentable extent, the case with us, is to convert producers into mere consumers of wealth.

Imagine two nations, equally favored by nature, equal in numbers, and equal in extent of territory. Suppose free communication to exist between them; but let both be cut off from commerce with other peoples. Suppose the arts in both to be in their infancy; and both to be occupied at first mainly with the pursuits necessary to supply the physical wants of their people. The industry of both will, for the most part, be expended upon the cultivation of the earth. Their earliest garments, dwellings, and implements of husbandry will be rude. Now in one of these communities let the spirit of invention be awakened. Let superior tools and new devices be contrived for the promotion of human comfort — in short, let the arts spring into birth. Their neighbors, still slumbering in intellectual torpor, will soon be roused by observing their improved condition. They will desire the same advantages, and two methods for the attainment of that end will suggest themselves. The first and simplest is to purchase the products of the newly developed industry; the second, to transplant to their own soil the arts by which they were produced. Suppose them, from indolence or any other cause, to prefer the

former; then, in order to purchase, they must offer an equivalent; and their own products being wholly agricultural, they have nothing else to offer in exchange. These they may raise in greater quantity than their own necessities require; and they may exchange their surplus for the better tools, fabrics, and articles of comfort or luxury manufactured by their more progressive neighbors.

What will be the effect upon these last? The opening of a market for their productions will call into activity a larger amount of labor of the higher order, and will stimulate them to advance to higher degrees of skill. With every step of progress new additions will be made to the means of human happiness. It will presently appear that the labor of one artisan is twice or thrice as valuable as that of an agriculturist; and, consequently, that the wealth of the progressive people has become double or triple of what it was at first. On the other hand, with the multiplication of objects of use and ornament, the people who have hitherto remained exclusively agricultural will find their wants increasing, while their means remain stationary. Nor will they even enjoy a monopoly in producing the only articles which they can employ in their exchanges. For the manufacturing nation has still its soil, and still an adequate supply of that humbler kind of labor which, under intelligent direction, suffices to cause the earth to yield her increase. Indeed, the existence of any demand for agricultural products from abroad, which the native soil is capable of yielding, will arise in great measure from the fact that, with increasing prosperity, a community becomes proportionally lavish in the consumption of the good things of this life.

For the non-manufacturing people to attempt to rival the prosperity of its manufacturing neighbor by increas-

ing its agricultural production, would evidently be useless; for increased production would depress prices without removing the cause of inequality. Here, then, we should see, between two nations commencing under circumstances equally favorable, and unaffected by legislation of any kind whatever, the widest contrast in point of prosperity. One of them would be in the easy enjoyment of every thing which art has invented for the promotion of human happiness, and rapidly multiplying new comforts and new luxuries. Intellectual development would be advancing hand in hand with physical improvement, and the measure of the progress of both would be seen in the rapid increase of national wealth. The other community would have remained stationary; or rather, its wants having outgrown its means, it would have become virtually poorer by merely standing still.

These consequences, I cannot too often repeat, are so wholly independent of constitutions and laws, of forms of government and their administration, that they would occur if we were to suppose our two communities, instead of being nations distinctly separated, to be two villages side by side. I am far from denying that legislation may interfere with the natural and free course of trade — I am simply asserting that, in the absence of legislation, or under legislation precisely similar, the chief element of prosperity in all communities is the intelligent direction of labor; and that element the people of every community have mainly in their own hands.

There is one condition which may exempt an exclusively agricultural community from the ruinous operation of this general law. It is, that it possess a climate and soil capable of yielding, on a large scale, some product which is indispensable to its manufacturing neighbors, but which they can neither produce themselves nor obtain

in sufficient abundance elsewhere. With such a climate and such a soil, a strictly agricultural people may be rich, though they should so heedlessly disregard the economy of labor as to purchase a thousand miles from home the simplest instruments with which they stir the ground, and in spite of their careless neglect of the more exhaustless resources which God has given them in their own strong but idle right arms, and their naturally acute but slumbering ingenuity.

But the peculiar product of the soil, in the case supposed, would have no value were it not capable in the hands of labor of assuming a higher value still. This value the producer sees imparted to it by men in a distant land, who have no other occupation, and who, therefore, seem to him to be living in dependence on him. He compares the wealth which the raw material has left in his hands, with that which has been wrung from it in the process of manufacture, and he almost feels as if he had suffered wrong. But that is not all; he perceives that in the processes of transportation and exchange, the merest contact with his product enriches, and that no small portion of wealth clings to hands that simply handle it. In view of all this, when he is obliged to apply to the men to whose prosperity he has already supplied the life's blood, for every article of necessity or use or luxury which he might have provided for himself, but did not, and finds the accumulations of one year melting away in provision for another, and all this to the profit of those who have done nothing but profit by him from beginning to end — it is not surprising that he should be annoyed at a state of things in which all the advantages appear to him to be on one side, and that side not his own.

In the imaginary picture which I have thus drawn, it seems to me that I have truly described the situation of

the cotton-producing States of the Union at this moment. But if the principles which I have laid down be correct, it is utterly visionary to seek a remedy for the evil in an interruption of the relations of business between the North and the South. By such an interruption the North might be seriously injured, but the South would have nothing to gain. If she still pursues her policy of producing cotton only and of leaving others to manufacture it, of indulging freely in the luxuries of life and leaving others to prepare them — nay, more, of holding out only discouragement to the intelligent labor of white men upon her own soil, while she purchases her pins and needles, her screws and gimlets, her knives and hammers, her broomsticks and hoe-handles, her lucifer matches and her baby-jumpers from abroad — I see not, for my part, what it can matter to her whether all these "notions," which she ought to be ashamed to buy at all, are manufactured for her use in the land of the Yankees or in the workshops of John Bull. One point of difference only is perceptible, and that is in favor of the existing arrangement — we obtain them at present free of duty.

This habit, in which the South has so long lived, of resorting to workshops at a distance for almost every conceivable article of manufacture, has made us, with all our wealth, a dependent people. To a sensitive mind nothing is more annoying than a feeling of dependence; and to this fact I feel that I am justified in ascribing no small portion of the dissatisfaction which has grown out of the state of our relations with the North. The offensiveness of those protective enactments of which I have spoken consisted not so much in their directly oppressive effect on the South, as in the stimulus they were calculated to give to Northern prosperity. It was felt or feared that they would increase a dependence on

our part already too grievous to be borne. From this condition of things our people have become impatient to be free. It is this, more than any other existing evil, which has caused the word disunion to be of late so often and so lightly spoken among us, and the thought of what it signifies to be contemplated with so little horror.

But unless I am entirely wrong in all my premises, disunion would bring with it but a transfer of our dependence. The wealth with which we now enrich our Northern brethren would be poured into the coffers of a foreign people. Other ships would carry our cotton, other brokers would speculate upon it, other merchants would send back to us the manufactured fabric for our consumption. Northern hammers, Northern axes, Northern kettles, and Northern broomsticks would only give place to similar articles from foreign sources, which would be liable to duty. Disunion, fellow-citizens, may bring with it many advantages which I am unable to discover; but disunion, believe me, is not the road to independence. The pictures of prosperity and greatness with which its instigators amuse you are baseless as the wildest visions shaped by a delirious imagination in a fevered brain.

By what means, then, shall we be independent? By adopting the only course that could have made us so — by ceasing to buy of others every article essential to human comfort, and by learning at last to make something for ourselves.

I am aware that there are great difficulties in the way of so radical a change. We have at our disposal an immense amount of involuntary labor. Could that, or any considerable part of it, be turned with facility from agriculture to manufactures, the problem would admit of an easy solution. We have also a considerable amount

of white labor, engaged also in the cultivation of the ground; but it is destitute of capital, deficient in intelligence, bound down in a struggle for a difficult subsistence to an unvarying routine, entirely undirected, and incapable of self-direction.

If there is to be a change in the economical distribution of labor among us, the initiative must be taken by citizens who are able to be employers. Such citizens have hitherto held themselves personally above labor — at least the labor of the hands. Whether this feeling has not been carried too far, admits of more than a question. Whether the true dignity of labor has not been undervalued, is worthy of our serious consideration. Our domestic institutions have powerfully contributed to keep the feeling alive. Wherever involuntary labor exists on a large scale, idleness is too apt to be confounded with respectability; and by the admission and recognition of a false social standard, persons who engage in the most productive descriptions of industry — the most productive because demanding the highest exercise of skill — are socially ostracized in deference to a class of men who, while idle themselves, complain that they are not prosperous.

There is nothing to prevent the successful introduction among us of every useful art. There are many things in our situation which give us great natural advantages over those to whom we are now accustomed to look for our supplies. The British prints and muslins in the shops of Tuskaloosa have, in one form or another, made a journey equal to a third part of the circumference of the globe. They have paid the expense of freights, commissions, insurances, and custom-house duties, and have come to us burdened with all these additions to their intrinsic value. Had the cotton grown in England, they

would have been taxed in but one direction. Had the British cotton-mill been built in Alabama, the whole chain of impositions would have no existence.

Now I do not wish to make any comment upon what any cotton-mill in Alabama has yet done; but I do wish to call your attention to what a British mill transplanted here would be capable of doing; and in any statements which I may introduce, I wish you to understand that I put forth no vague and uncertain conjectures hazarded by myself. I give you the results of the experience of men who have been for many years engaged in forwarding your cotton to market and in bringing to your doors the products of Northern and foreign industry. Let, then, such a mill, constructed on the bold and liberal scale which distinguishes the British factories, be set down on the banks of the Warrior, and furnished with the raw material at its own doors. In the first place, it could purchase its cotton at a cost permanently four cents per pound cheaper than at present, and it would be able to turn out its fabrics at a corresponding reduction below the contemporaneous prices in Manchester. Secondly, these fabrics would be here, instead of being four thousand miles away, and we should receive them free of any charge for freights, insurance, custom-house duties, or importers' profits. All these things, freight excepted, impose a burden, under our present revenue tariff, upon imported cottons laid down in the city of New York, of no less than 45 per cent upon the prime cost. Our indirect mode of trading forces us to add to this the New York importer's profit of $12\frac{1}{2}$ per cent, and the further expense of sending them out here, 10 per cent more — amounting in all to hardly less than 80 per cent upon the New York imported cottons now on the shelves of your merchants in Tuskaloosa. Supposing the direct

trade substituted, however, there would still be no escape from a permanent tax of nearly 50 per cent upon all your importations of manufactured cottons — a tax to be superadded to that which arises from the increased expense of the raw material. If the cost of running the mill would be greater here, the difference would not be sufficient materially to affect the general result, as is proved by the successful competition of the coarser New England muslins with those of Manchester in the London market, while the current expenses of manufacturing would be no greater here than in New England.

The amount of British cottons, therefore, which our merchants now receive for every hundred dollars expended through New York, could be furnished by a British mill, under British direction, on the banks of the Warrior, for fifty-five dollars; while the mill-owner would pocket a handsome profit by the operation.

Let us look into the effect of our policy upon some other of our important interests:

Our importations of woollens, if made direct, are taxed to the extent of 55 per cent; if introduced through the North, to no less than 92 per cent. Our Sheffield cutlery pays 55 per cent, as directly imported; and indirectly — that is, as usually at present — 92. Our hardware from Birmingham pays 75 per cent up to New York, and 117 here. Our crockery hollow ware is subject to the enormous burden of 130 per cent in New York, and 200 to 300 in Tuskaloosa. The superior article called granite is taxed 100 per cent to the Northern importer, and 150 or upward to our own merchants. Common plates, and common cups and saucers, pay 125 per cent in New York, and more than 200 here. Such are a few of the burdens to which the whole South placidly and contentedly submits, under a tariff constructed strictly with a view to

revenue. Who would believe that a people which sits down calm as a summer's morning under a system of taxation so utterly ruinous and so absolutely self-imposed, could be roused to fury by the addition of 10 or 20 per cent duty to the revenue standard, when that very addition is designed to break up this most pernicious system of national improvidence, by which our wealth is swallowed up as fast as it is made?

But to return to our hypothetical cotton-mill. If British enterprise could produce the results which I have stated, why may not we go and do likewise? I anticipate the answer. We have not the experience, nor the skill, nor the tact to adapt our fabrics to the condition of the market. I reply that the answer is a good one so far as it goes, and would be decisive but for a single oversight. We have not *at present* the necessary experience and skill; that is admitted. What then? We must not only erect the mills and purchase the machinery, but we must bring the men who are to manage them. This is the absolute and only condition of success. Our splendid rivers are navigated by hundreds of steamers, but it was not always so; and when steam navigation was introduced no man dreamed of putting engines of such enormous power into the hands of men who were unacquainted with their construction and unpractised in their management. The necessity of importing, along with the new power, heads and hands which should be competent to govern it, was palpable to all. The application is obvious. If we would build up any art among us, we must bring here not merely the necessary machines, but also the practised skill which can turn them to account.

I do not mean that our master workmen and superintendents must always be aliens to our soil. By no means. When any industry shall have obtained a sure footing

among us, hundreds of native artisans will spring up to carry it on. Our first establishments will be normal schools of industry; but we shall need no foreign guidance when we have learned to go alone. It is no discredit to us that we are deficient in knowledge; but if we refuse to learn, we shall be highly censurable. Let us act upon this principle, — let us endeavor to diversify the applications of our industry, — and we shall soon attain a real and substantial independence, which nothing in Federal legislation can undermine.

Other incidental but important advantages would flow from the adoption of this policy. Where there is now a sparsely scattered population, we should presently see thriving towns and villages multiplying everywhere the blessings of social life. Better schools and more of them would be near the door of almost every family. Feeble churches would grow strong. The courtesies of life would be more generally regarded, manners would be softened, and tastes would be cultivated to a higher degree. Associations for intellectual improvement would become possible. Libraries, reading-rooms, forensic clubs, lecture halls, and all the various means by which a busy population is able to mingle instruction with entertainment, would come into existence in a thousand places. Our people would thus be not only richer, but more polished, more enlightened, and better, at the same time.

Moreover, our population would go on increasing in numbers in a higher ratio than heretofore. The tide of immigration from abroad has hitherto flowed almost exclusively over the States of the North, and the cotton-growing States have had no inducements to attract it. Southern agriculture is ill adapted to European hands — and what occupation but agriculture has the South had to offer? Let the arts lift up their heads among us, and all

this will be changed. We shall attract at least our share of that great influx from abroad; and we shall assimilate to ourselves, and convert into defenders, thousands and tens of thousands of those who would else fall naturally into the ranks of our assailants.

I cannot close without suggesting one additional consideration. The South is rich, because the single product of her industry is in increasing demand. But her riches have no firmer basis than the permanence of the demand which creates them. Let cotton give place, even partially, to other materials of textile fabrics, and a death-blow will be given to the cotton-growing industry of America. This suggestion is neither absurd nor impossible — perhaps not even improbable. A century ago cotton had no commercial importance in the markets of the world. Why may not something else supersede cotton? Because nothing else can possibly compete with it in cheapness? But cotton is not always cheap. It was known and used in Europe for a century or more before it could compete with wool or flax. How, then, did it acquire this new quality of cheapness? Simply by the application of a little ingenuity to the improvement of the methods of separating it from the seed. Why may not similar ingenuity be applied to other materials, with similar success? I do not undertake to say that this danger is immediately upon us. But the fact that such inventions are possible, warns us significantly of the folly of embarking all our fortunes in a single bottom. By diversifying our industries, and by cultivating all those useful arts by which wealth is retained at home and accumulated where it is retained, we can attain substantial independence, and we shall be prepared for any reverse which may affect only a single interest. Poverty or riches, want or abundance, will no longer depend upon the turning of a

die. Strong in the multitude of our resources, we shall always be prepared for what the morrow may bring forth. We shall no longer seem to ourselves to be accumulating food for cormorants, or lavishing upon others the aliment which should nourish ourselves.

Perhaps, when we shall have familiarized ourselves with the same pursuits which have made our Northern brethren prosperous, and when all parts of our common country shall be more nearly assimilated, we shall find fewer causes of contention in the national legislature. Perhaps we shall become more truly what our fathers were before us, and what we too still are in name — a united people.

But if this may not be, if the lamentable schisms which divide us are fated to grow wider and wider, if we are doomed to see the glorious flag of our republic rent in twain, and the fair temple of liberty in which we have so long worshipped crumble into ruin, then at least may we of the South feel, in that day of darkness when we decree our separation from our Northern brethren, that we have within ourselves every element of an empire, and are truly independent of all the world.

Decree our separation! On this unwelcome theme permit me for one moment to dwell. Permit me to add one word of warning, one word of entreaty, one word of deep, earnest, and most certainly patriotic, conviction. For *what* should we decree our separation? That the broad barrier of the Constitution, our impregnable rampart against the rabid abolitionism of England, may be broken down, and leave us exposed to formidable assaults and vexatious annoyances in our intercourse with the world? That the combined fanaticism of Christendom may plot without restraint against our peace, may harass our borders with marauding incursions, and instigate servile war in the very heart of our quiet land? That the obligation to

respect and restore our property, which now shields our widely exposed Northern frontier — an obligation not cheerfully fulfilled, if you please, but still an obligation, and — mark that — still fulfilled nevertheless, — may give place to a ceaseless border war expanding at frequent intervals into general hostilities? Is it for these things that we are to decree our separation? If not, then for what?

What did I hear? A foreign alliance? Did some one say that Britain, in terror of her operatives and dependent on the cotton-growing States for security against convulsion, would receive us under the shadow of her wing? That this all-powerful mistress of the waves would fight our battles against the North, and that a British line-of-battle ship would blow the revenue-cutters of the Union — aye, and the frigates too — like fishing smacks, out of the water? If I did not hear that language here, I have heard it elsewhere. And shall we yield ourselves up to so fatal a delusion as this? Great Britain needs your cotton, you say, and therefore she will help you. Deceive not yourselves, fellow-citizens. Great Britain never gives where she has the power to take. She needs your cotton — granted. You need her manufactures — she knows it. If she must buy or perish, you must sell or starve. In a contest of that kind, which do you think has the power to hold out the longest? Certainly not you. You tell us that her very existence is at stake if you stop her mills. I tell you that you cannot stop them. You say she fears the rabble of her unemployed operatives. What is to prevent her turning that rabble loose upon you? Do you say that you will never be wanting to the vindication of your independence and the defence of your fireside? I hope not; yet my heart sickens when I meet, at every turn, still the same trumpet-cry of conflict, still the same menace of blood!

But you answer, triumphantly, England will sooner make terms than fight. England cannot come to terms with you without fighting an enemy more formidable than you will be — the confederated States from which you will have torn yourselves away. Unfortunately, the army, the navy, all the stores and munitions of war, the custom-houses of the great seaports, and, more than all, the immense superiority of numbers, will remain on the side of that confederacy. You propose that England shall become your ally. What is to prevent her becoming the ally of the North? Certainly that would be her cheapest, her surest, her most direct route to the object of her wishes; nor will it be any objection to it in her eyes that, while with one hand she grasps your cotton, with the other she might liberate your slaves.

These remarks may not be acceptable, but are they not true? And if they are, is it not necessary that such truths should be plainly spoken and deeply pondered? Decree our separation! If it is for this, or anything like this, that we are to be delivered from our present grievances, better, far better,

> Bear those ills we have,
> Than fly to others that we know not of.

And are we to consider ourselves alone? Is nothing due to that sublime mission which has been confided to us, the propagation and diffusion of free principles throughout the world? Shall we forget the prayers of fettered thousands in other and less happy lands who, with outstretched hands, implore us not to quench the fires upon the only altars of liberty beneath the arch of heaven? Is this peaceful asylum of the oppressed and persecuted of all countries to become a pandemonium of anarchy and carnage?

Decree our separation! For any cause that has yet arisen, be the thought cast out with loathing and horror! Decree our separation! God in His infinite mercy forbid!

INDEPENDENCE ODE.

Written for the celebration at Tuskaloosa, Alabama, July 4th, 1851.

BY PROF. F. A. P. BARNARD.

'Tis the day of freedom's birth;
Fling her starry banner forth;
Let it wave, from South to North,
In her own blue sky.
Floating wide, from sea to sea,
On the breath of liberty,
Let that glorious standard be
Ever borne on high.

Who its onward course would bar?
Who its lustrous folds would mar?
Who would blot away a star?
Let him come not near.
Who would bear it proudly on,
Till its world-wide course is run?
Of his sire, a worthy son,
Let him join us here.

By that sainted hero, sage,
Whose great deeds — our heritage —
Fill with brightness hist'ry's page,
By our Washington,
We will cling, till hope expires,
To the charter of our sires,
With a grasp that never tires,
Till our course is run.

CHAPTER VII

Barnard's theological studies — Disorders in the University of Alabama — A senseless attack repelled — Letters on college government begun — The Yale statute and the South Carolina Exculpation Law — Objections to both — Visitation of rooms by professors — Espionage — Defence of the Faculty — Government by moral influence — The ideal college officer described — Origin of the existing college system — English colleges of the olden time — The university and the college — Unobserved changes which had made discipline difficult or impossible — The college community — The old system of government impossible — The dormitory system condemned — Populous towns to be preferred to country places for college establishments.

THE closing years of Professor Barnard's service to the University of Alabama were years of much peaceful satisfaction. In his home he had the happiness of a congenial marriage; in his profession as a teacher he was eminently successful; he was a powerful advocate of social and industrial reforms; he was honored by his friends and respected by his opponents in the arena of the larger politics of the time. To his mathematical and scientific studies he had added some considerable researches in philosophy, and having again become a candidate for holy orders, he entered on the study of theology. Barnard never became a theologian. He had sufficiently convinced himself of the substantial truth of the Christian religion. The historical argument had satisfied him of the justice of the claims of the Episcopal Church as a validly organized and doctrinally trustworthy Church of Christ. He was content to accept its teachings in their plainest and most simple sense, and while he took pains to inform himself of the chief topics of controversy concerning which various schools and parties of Churchmen

have held different and contradictory opinions, he was little interested in such subjects, and perhaps regarded them with some disdain. He seems instinctively to have made a clear distinction between the Christian faith and the endless muddle of theological opinions by which it has been obscured. A brochure from his pen which was published about this time shows that, as a churchman, he believed in a loyal and straightforward obedience to the polity of the Church in any and all circumstances. In short, while his complete reaction from puritanism had made it impossible for him to be an "evangelical," his constitutional breadth of mind made it equally impossible for him to become a partisan "high churchman." With the apparently destructive tendencies of one section of the "broad church" school of a later time he had no sympathy, and the constructive but scholarlike and critical school which is represented by the distinguished head of Keble College, Oxford, had not then been thought of. In resolving to take orders Professor Barnard had no intention of engaging in parochial work. He had finally and completely devoted himself to the work of teaching; but he knew that in every age of the Church's history teaching had been held to be a proper function of the Christian ministry, and he desired that his life as a teacher should be sanctioned and consecrated by the ministerial character. In the studies which were necessary to prepare him for his ordination he spent some considerable part of his leisure during the closing years of his residence in Tuskaloosa. His last year there was occupied with educational controversies which would have been regrettable if they had not caused him to formulate and publish the views of college discipline and organization which he continued to maintain in all their main features throughout his life.

In the University of Alabama there had more than once been temporary disorders among the students which had been serious enough to cause embarrassment to the Faculty and to bring down upon them the animadversions of the press of the State. One result of these events was to induce Professor Barnard to publish, chiefly in *The Mobile Register*, a series of "Letters on College Government" which will be mentioned below. Another result was an effort to reconstruct the whole plan of the University, on the model of the University of Virginia, which seemed to him to be, at least, premature. Its most prominent advocate was the Hon. Henry W. Collier, a former governor of Alabama, who had been, as governor, president *ex officio* of the Board of Trustees of the University. Governor Collier and his son-in-law, Professor Benagh, who held a chair in the University, strenuously advocated their scheme in the Democratic paper of Tuskaloosa; Barnard, with the assistance of Professor Stafford, who held the chair of Latin, opposed it with equal vigor in the Whig organ. For a time the controversy was kept up week by week with some warmth, but without invidious personalities. At length, however, Governor Collier had the indiscretion to refer to his opponents as a Yankee who had no sympathies with the South and a narrow-minded South Carolinian who could see no merit in any educational institution but the University of South Carolina.

This article [says Barnard] was brought to my notice one day as I was sitting at the editorial table of the *Tuskaloosa Monitor*, which was my own organ, and it had its natural effect. I seized a pen and dashed off on the spot a paragraph beginning with the words, "I avow myself the author of the articles which have appeared in the editorial columns of this paper on the proposed reorganization of the Univer-

sity." After this introduction, I proceeded to state that I had carefully observed the amenities of literary discussion and had not written a word which could be considered personally offensive to any individual, but that since my opponent had displayed a different spirit and was apparently disposed to take advantage of a presumed eminence of position to crush an adversary whom he could not overpower in argument, I would disregard conventionalities as thoroughly as he, and would give him to understand that it was not in the power of a broken-down politician to browbeat men of sense. The ink was hardly dry on the paper when my colleague, Professor Stafford, came in. The manuscript was submitted to him and with his approval it went immediately to press. On the appearance of the paper there was no small stir in Tuskaloosa. Governor Collier appeared before the Board with a manuscript which it took him nearly an hour to read. He professed to give a history of the controversy, and accused me of libelling him by describing him as "a broken-down politician," a designation which he maintained to be untrue, but which was certainly true, since, after his term as Governor, he had failed of promotion to the dignity of Senator of the United States and had been quietly retired to private life. In conclusion he demanded my removal from office as a punishment for my offence. When he had finished, I inquired of the President if I might be permitted to speak. Governor Collier had been heard as a matter of courtesy due to a former member of the Board, and I had not the same claim to a personal hearing; consequently, I was informed that the Board would consider any written defence I might wish to submit, and for that purpose the clerk was instructed to hand me Governor Collier's manuscript. I retired to an adjacent room and drew up a brief but resolute reply. I declared that the offence with which I was charged was one of which the Board had no jurisdiction; that I was charged with no offence against my superiors; and that, if I had libelled the Governor, as he alleged, he had his remedy in an appeal to the civil courts, where his complaint could be tried by a jury before a tribunal of competent jurisdiction. On these grounds I said it was unnecessary for me to discuss the merits of the charge before the Board of Trustees.

My communication was immediately sent to the Board, and in half an hour one of the trustees came to tell me that the cause had been dismissed.

After this unpleasant incident, *The Mobile Register*, in which Professor Barnard's "Letters on College Government" had been appearing, declined to continue to publish them, and the remainder of the series was published in a Montgomery newspaper. Fragmentary as they necessarily were in consequence of their form, they attracted considerable attention at the North as well as at the South, and in deference to many urgent requests, they were republished by the Messrs. Appleton in the following year. It is not easy to condense the contents of these twelve letters; but it is certainly necessary to give a general view of their scope and purport.

At the very opening of his first letter Professor Barnard prepared the way for the avowedly radical conclusion which he intended to reach. He frankly admitted that the strictures of the press on the conduct of the Faculty of the Alabama University indicated the existence of some defect in the American college system to which it was desirable that the attention of the community should be directed; and he urged that the defect, whatever it might be, must be inherent in the system, since virtually the same system existed in all American colleges, and was everywhere attended with the same difficulties of administration and with similar complaints of mismanagement. The criticisms to which the authorities of the Alabama University had been subjected were directed against the laws by which they were governed and against certain disciplinary customs which were prevalent in all colleges; but those laws and customs were alike parts of a system to the integrity of which they were essential, so that, if reform was necessary, it was the system itself, and not

merely the subordinate incidents of the system, which ought to be reformed.

In colleges, as in all other communities, some laws were necessary, and laws which provided no penalties to be inflicted on the lawless would be futile. On the other hand, if the lawful governing body of any community should be deprived of the necessary means of discovering the perpetrators of unlawful acts, it would be reduced to a condition of helpless inefficiency. No civil community could continue to exist under such conditions, and therefore the laws of every civil community make it the bounden duty of its citizens or subjects to aid the government by giving testimony, whenever required, concerning real or alleged breaches of public order and the persons by whom they have been committed. In the investigation of offences the civil laws pay no respect to personal scruples. When the citizen is called as a witness, he is required to tell what he knows of the case in hand, and the witness, so constrained, incurs no condemnation for complying with the necessary demands of the law. In other communities, into which persons enter voluntarily for their own advantage, and to the laws of which they consent to submit, it is equally necessary that they should be ready, when lawfully required, to aid the governing body in the detection and punishment of offenders against the laws of such communities.

It was on this principle that most of the older colleges of the country had framed their laws. The statute of Yale College was framed in the following language:

> Whenever a student shall be required by one of the Faculty to disclose his knowledge concerning any disorder, offence or offender, against a law of the College, and shall refuse to make such disclosure, he may be sent home or dismissed. No student shall be questioned for any testimony he may give in regard

to a violation of a law of this College; and in case any student shall so question his fellow-student to ascertain whether he hath testified, or with intent to bring into contempt any student because be hath testified, the student so acting shall be deemed to have committed an offence, and may be proceeded against by the Faculty according to the aggravation of the offence, even to dismission.

Notwithstanding the apparent reasonableness of this statute, its enforcement was always difficult because of an invincible repugnance on the part of students to appear in the character of informers against their fellow-students. While at Yale, Professor Barnard had learned in his own experience that the popular sentiment of the College had not been adverse to good discipline. It "favored the view that it is well that law shall have its course, that it is well that offenders shall be reached and dealt with, that it is well that good order and good morals shall be preserved, but that it is not well that a student shall become an informer upon his fellow-student." The power of popular sentiment among students is immense. The sense of the obligation of comradeship is so imperious as to compel young men of the highest character and conduct virtually to enter into a combination for the protection of others with whom they have no personal association, and whose irregularities they strongly disapprove. The best laws fail when they cannot be enforced, and in the most critical cases, that is in the most important cases, the Yale law could not be enforced because it was not sustained by the public sentiment of the community in which it was to be applied.

In Southern colleges it was impossible to enforce the Yale law, which was opposed to the general sentiment of the people as well as to the popular feeling of students. Still, it was indispensable that college authorities should

have some means of ascertaining the facts arising in cases of discipline, and therefore a different law was framed, under which the student should not be required to testify against a fellow-student, but might be required at least to declare whether he himself were innocent of the offence under investigation. This law, known as the "exculpation law," had been adopted by the University of Alabama from the code of the University of South Carolina, and was expressed as follows :

In ordinary cases, and for mere college misdemeanors, no student shall be called upon to give information against another; but when several persons are known to contain among them the guilty person or persons, that the innocent may not suffer equally with the guilty, they are all liable to be severally called up, and each to be put upon his own exculpation, unless the magnanimity of the guilty shall relieve the Faculty from the necessity of this expedient, by an ingenuous confession of his or their own fault. If any student, when thus permitted to declare his innocence, shall decline to exculpate himself, he shall be considered as taking the guilt of the offence upon himself and encountering all the consequences. If a student shall deny that he is guilty, that shall be taken as *prima facie* evidence of his innocence; but if it shall afterwards appear from satisfactory evidence that he was really guilty, he shall be considered unworthy to remain in the University.

It was under the exculpation law that recent difficulties had been encountered in the University of Alabama, and the public opinion of the State, as represented by the press, had sustained the students who had refused to obey that law. Professor Barnard did not defend the law, and indeed it was objectionable in more ways than one. It was utterly inconsistent with the maxim of the common law, that every person shall be presumed to be innocent until he is proved to be guilty. The common law assumes

that an accused person who declines to plead, pleads Not Guilty; but the exculpation law visited with the penalty of guilt a person who was actually not accused, unless he would asseverate his innocence. Moreover, its application might result in extreme injustice, since an offence against the exculpation law might involve no worse fault than obedience to a mistaken sense of honor, and yet it was to be construed and punished as the admission of an offence which might be of the utmost turpitude. To the mind of the student the exculpation law was deprived of the essential element of respectability because it aimed, by means of an ingenious indirection, to compel him to do what it confessed that he ought not to be required to do. It admitted the broad principle that one student ought not to be required to give information against another; and yet its purpose and effect were to compel students who were innocent to denounce the guilty by a mere process of elimination. In practice, too, there could be no assurance that the law would not be subversive of all justice, since an unscrupulous offender might go free by simply affirming his innocence, while an honorable and truthful, but too generous or too scrupulous man might incur the penalty of an offence which he was incapable of committing.

Professor Barnard did not defend the exculpation law.

> I can never believe [he said] that any law which meets the disapprobation of the public is a good law. The efficacy of law is not to be looked for in the pains and penalties it denounces, so much as in the support and approval of all good men. Whatever enactment fails to secure these, fails of the most essential element of moral power. It matters not whether it be intrinsically good or bad; it is enough to make it bad, whatever be its intrinsic excellence, that the community who witness its enforcement regard it as oppressive and wrong.

What more is necessary to undermine the efficacy of any law than to crown with applause those who resist its operations, and to canonize its victims as martyrs to a glorious cause?

Yet he did not admit that the exculpation law must necessarily be wrong in itself, merely because public opinion was adverse to it. The old maxim, *Vox populi vox Dei*, must be taken with large limitations. Thus "the law of Congress providing for the arrest and delivery of fugitive slaves is certainly a good law; yet, throughout the length and breadth of the States for which it is designed, there is no division of opinion at all as to its wrongfulness. Those who give it their support — politicians, editors, ministers of the Gospel, even judges on the bench — do so, avowedly, for no other reason than because it is a law, and not because they approve of its provisions." Under the existing system of college organization it was evident that some law requiring students to give evidence in cases of disorder of which students alone could generally be witnesses, was clearly necessary. The Yale law demanded their evidence in such cases on principles acknowledged and applied in all civil communities, and college authorities were no more bound than other lawful authorities to pay respect to the scruples of witnesses. If the Yale law had failed in its operation in certain instances because it was opposed by popular opinion among the students, it had at least been founded on a principle which the general public upheld. The Southern colleges, in adopting the exculpation law, had abandoned that principle. Until they did so, popular opinion, even among the students, had not universally and unanimously stigmatized the giving of testimony as an act of flagrant dishonor. Yet the adoption of the exculpation law had been a concession to public opinion; and if it did not work well, the only alternative was

to return to the Yale law, a course which no one had proposed. No third method of meeting the necessities of college discipline had been suggested.

It was not college faculties that had raised this dilemma. They themselves were confronted with it. Unless they were to renounce all discipline, they must adopt the one law or the other. In the University of Alabama they had the exculpation law, and they had chosen to call it into operation only on rare occasions and in cases of extraordinary difficulty. They had regarded and used it as a power to be held strictly in reserve; and, used in that way, it had been a real power. College life is an enjoyable life even to men who do not fully realize its educational advantages. It has its ambitions which the student does not willingly abandon. For the serious it has benefits which extend to their whole subsequent career. No student can contemplate an expulsion from college otherwise than as a grave misfortune. Martyrdom is seldom sought with eagerness, and students are no fonder of martyrdom than other people. Consequently, when the student knows that the faculty holds in reserve a power which may compel him to submit to martyrdom unless the ordinary means of discipline suffice, his interests and his inclinations must alike lead him to desire that the ordinary means shall be successful. Thus, to the very moment of conflict with the faculty under the exculpation law, the sympathy and influence of the student were enlisted on the side of the faculty, and were more than likely to obviate the necessity of using the reserved power which is conferred by the provisions of that law.

Having thus vindicated the action of the faculty of the University in applying, on extreme occasions, and on such occasions only, the power conferred upon them by a law which he conceded to be objectionable, and having shown

that the only substitute for that law was another objectionable law which had been deliberately rejected by the Southern colleges, he left it to be inferred that a college system for which no satisfactory law of discipline could be devised must be a defective system. He next proceeded to meet an objection which had been strongly made to the official visitation of students' rooms by members of the faculty.

The visitation of rooms by the professors had been censured mainly on two grounds: first, that it was an invasion of the natural right of the student to the privacy of his own room; and, second, that its object was to obtain by sly and stealthy methods a knowledge of offences against good discipline which could not be secured by fair and honorable means. The mere existence of such an impression among the students, Professor Barnard observed, must be fatal to good order, since it must effectually destroy their confidence in the good will and honorable conduct of their superiors. The very first requisite in a governor of youth is the power to win the confidence of those who are set under his authority; and the very best of men, if he should lack that indispensable faculty, might be, and probably would be, an exceedingly bad governor of a college. The power to win confidence depends in most cases rather on manner than on right purpose, since it is chiefly by manner that a right and kindly purpose is made known to those who are affected by it. But confidence, like love, is a sentiment which wins reciprocation; and no college officer can expect the confidence of students unless he reposes confidence in them.

A wise college officer will invariably treat the student as if he believed him to intend rightly. In nine cases out of ten he will be able to do so from conviction; and if, in the tenth case, circumstances arise to create a doubt, he will frankly state the

circumstances and afford an opportunity for an explanation of them. By adopting this course he will be met, in ninety-nine cases out of a hundred, in a spirit of equal frankness, and will remove the strongest of the temptations by which youths are led to engage in violations of the rules of order. To attempt to impose upon his confidence will be regarded as an act of treachery, which is the most odious of all crimes in the eyes of generous young men.

In endeavoring to learn how the time of students is employed when they are not under his immediate supervision, a wise teacher will resort to no means which are not open and straightforward. In certain natures there is an element of suspicion which makes it difficult to trust others, and such persons may find it impossible to resist the temptation to adopt devices of vigilance which amount to systematic espionage. No information so obtained is likely to be of real benefit to either party; and when the practice of espionage is suspected by the student, the moral power of the governor is broken forever. It would be an instructive inquiry, if it could be successfully prosecuted, whether many college difficulties have not had their origin in the irritation of students laboring under the impression that their footsteps are dogged, their private conduct watched, and their careless words noted down to be reported against them. Such a suspicion, however unfounded, is utterly mischievous, and whatever tends to produce it is mischievous. But college officers seldom give just occasion for suspicions of that sort. Most of them exhibit a real frankness and confidence towards their students which secures an unreserved reciprocation of the same sentiments. In the University of Alabama it was not charged that the professors had deserved, or that the students had entertained, a charge of unworthy methods of espionage. It was the system of

visitation in itself which was condemned; and as a part of the existing system of college discipline Professor Barnard maintained that the visitation system was not only defensible, but indispensable.

In principle it involved no wrong, and invaded no natural right of the student. The college received him as a student on the express condition that he should consent to yield up a portion of his time to be used under the direction of the faculty. Colleges may, and often do, require the attendance of the student in the class-room, not only during the hours of lecture or recitation, but also during the hours of preparation. When this requirement is waived, and the student is permitted to spend his hours of preparatory study in his own apartment, it is not intended nor implied that he is to be at liberty to spend those hours at his own discretion in something else than study; and the visitation of rooms during those hours is a practical and necessary assertion of the fact that those hours are not his own, but are to be used for educational purposes under the supervision of the college authorities. Beyond those hours the system of visitation of rooms did not extend. "Outside of those hours, so long as no disorder occurs to require interposition, the privacy of the dormitories is as much respected by the authorities as that of the Grand Turk's seraglio by all good Mussulmans."

Thus the visitation system, as practised in the University, was both right and reasonable; and it was not the Faculty, but the students, who had found it to be indispensable. For a year or two, while the number of students was small, the Faculty had practised no visitation of the rooms, even in study hours. When the number was increased, visitation was begun at the express request of the students themselves, because those who

were disposed to study found their time so encroached upon, and their quiet so disturbed, by others who were not studious, that they requested the Faculty to protect them by introducing the visitation of rooms. If the experiment were to be repeated, Professor Barnard expressed the conviction that it would end in the same way. Habits of lounging from room to room do not grow up in a day, and therefore the necessity of visitation might not be immediately apparent; but in a community consisting of a hundred or two of young men brought together at random and changing from year to year, lounging and waste of time in profitless trivialities would surely occur to an extent which would demand the protection of the studious from constant and aimless interruption by the idle. Hence the visitation of rooms, to which such strenuous objections had been adduced, was no system of espial, but rather a kindness to the students themselves. It was regrettable, perhaps, that its official character somewhat obscured its real intention. It was eminently desirable that the manner of the visiting officer should always be such as to indicate that he was there in the capacity, not of an official authority so much as in that of a kindly and helpful friend. It would be well, too, both for students and professors, if there were somewhat more intercourse between them at times when the artificial relations of instructor and pupil might be forgotten, or at least kept out of sight. The consequence would be the forming of personal ties and the growth of a mutual understanding which would contribute, more than anything else could, to the harmony and happiness of the college community.

On the part of officers it is often difficult, or even impossible, to do in this way as much as they would; both because of the pressure of burdens public and private and because of

the large number of the young men between whom their attention must be divided; but they might invite and encourage the visits of the students to themselves, so far as their arrangements will allow, and I have no hesitation in saying that they should reciprocate such visits whenever it may be in their power. It is my candid opinion that all the laws which were ever enacted for the good government of colleges are weak and nugatory compared with that boundless moral influence which it is possible for the individual officer to acquire by winning the affections, instead of operating on the fears, of those whom he instructs. Perhaps there is no single means so effectual towards the accomplishment of this desirable end than that he should manifest a prompt willingness to meet and reciprocate with them all the ordinary courtesies of life in a spirit, and with a manner, which shall show that they are something more than empty forms.

The existing system of college organization and government, Professor Barnard proceeded to maintain, demanded a combination of characteristics in college officers which, in the nature of things, must be exceedingly rare, and which might be wholly lacking in men of the very highest capacity as instructors. A mere enumeration of the peculiar endowments required to fit men for the difficult task of college government would show how rare they were, and, consequently, how insecure a system must be which depended for its success on conditions which could so rarely be realized. The passage in which the ideal college officer is described is here given without abridgment.

The first trait of character which I regard as essential to the success of a college officer, under our present system of government, is one in which few are found to fail; but which rather, from its occasional predominance over the milder traits, gives sometimes something like a tone of harshness to the manner, which it were better to veil; and that is *firmness*. No government can succeed which fails to command respect, and no respect can be felt for a vacillating, timorous, or irreso-

lute superior. The hand must be at once strong and steady which holds the rein over the giddy impulses of heedless or undisciplined youth; nor will any one be found more ready to admit this necessity than those, or at least the majority of them — for most young men are ingenuous — who themselves need the restraint. But upon this point it is unnecessary to multiply words, since the absence of the quality under consideration is rarely one of the faults of an American college officer.

It may be occasionally otherwise in regard to the quality of which I am next to speak, and of which the importance is always most felt in connection with the last. I mean a *mildness of manner*, which divests the firmest government of every appearance of sternness, and clothes the severest decrees of justice with the exterior of kindness. The popular appreciation of the value of such a union of qualities is manifested in the frequent application of the maxim which, with aphoristic brevity, associates them, as the "*suaviter in modo, fortiter in re.*" Napoleon observed of the French, that they needed for their control "a hand of iron in a glove of velvet." One of his subjects, who probably knew by experience the feeling of the hand, remarked that the great monarch never failed of the iron grasp, but often forgot to put on the glove. The observation of the French emperor is not inapplicable to the impulsive youth of our American colleges; and while I yield to no one in my conviction of the indispensable necessity of firmness and decision in college government, I sincerely believe that an exterior of unvarying mildness on the part of those who administer such a government, is a means of preventing evil more efficacious than all the penalties of the law put together. If youthful passions, prompt to effervesce, are easily excited, so are they quite as easily soothed; and the fable of the sun and the wind, though it symbolizes a truth as universal as human nature, is nowhere more strikingly illustrated than within the walls of a college.

Much, also, of the success of college government depends upon the exercise of a *wise discretion* by the officer, in regard to the use he may make of his own powers. Because he may punish, it does not follow that he always should punish, whenever occasion arises. It does not even follow that he

should always betray his knowledge of the offence, farther than to the offender himself. By privately admonishing the individual of the impropriety of his conduct, and pointing out to him the danger to which he has exposed himself, much more good may often be accomplished, in the way of prevention and reformation, than by all the disgrace attendant on public rebuke and censure. When such a course is possible, it is obviously the wisest, as it is the kindest and most forbearing. But such a mode of proceeding may not always answer the purpose; and on this account it is, that no quality of mind is of higher value in the officer than a clear and discreet judgment. Censures, penalties, punishments of all kinds, are unavoidable necessities arising out of the imperfection of human nature; but as their main design, in human institutions, is the prevention of offences, so the less these are resorted to, consistently with the attainment of this end, the better.

It is not an unfrequent occurrence that a young man in college feels himself aggrieved by something which has occurred between him and his instructor. He may imagine that a fair hearing has not been given him in the recitation room; or he may interpret in an injurious sense words addressed to him in the hearing of his class; or he may believe that he has not been rated as high on the record as his performances merit; or some other cause of dissatisfaction may arise, to induce him to remonstrate or complain. Nor should the instructor turn from such representations contemptuously away. *Patience* should be one of his marked characteristics; and he will probably never find it more thoroughly tried than on occasions of this kind. For if he possess the qualities I have already enumerated, especially the last two named, he will have been steadily laboring against the very errors which he sees thus imputed to him, and he must feel that his intention is certainly wronged, whatever impression his words or acts may have conveyed. But this must not provoke him to listen any the less patiently, or to explain any the less circumstantially, the occurrences out of which the dissatisfaction has grown, nor, if he pursues such a course, will he usually fail to dispel the momentary chagrin and reëstablish the feeling of confidence and kindness which it had temporarily disturbed.

I need not say how important it is that the college officer, whether in dispensing censure or praise, should be actuated by no feeling of favor on the one hand, or of prejudice on the other. There exists no higher necessity in the civil courts, that justice should be meted out with severe *impartiality*, than that the same principle should preside over all the awards of college authorities. No more frequent charge is advanced against the officers of our literary institutions than that they are partial. The partiality alleged to exist is more commonly one of favor than the contrary; but we hear it sometimes asserted, nevertheless, that the prejudices of officers blind them to the merits of certain individuals, or lead them to exercise toward such an undue severity. As a general rule, it may be said that these imputations are unfounded. The disregard with which, often as they are made, they are treated by the public, shows that they are considered to be, as on the slightest estimate of probabilities they must appear, entirely baseless. They point out, nevertheless, a quality which it is absolutely indispensable that the college officer should possess; while they admonish us that it is not the possession alone, but the reputation of possessing — I refer to the reputation within the college itself — which the judicious officer will aim to secure.

It may be observed that the most cautious wisdom will not always preserve to the most judicious college officer the invariable and unfailing good will of those whom it is his duty to control. Certain ebullitions of temper on the part of excitable young men may prompt them to hasty words or acts, well suited to subvert the equanimity of any one however by nature imperturbable. Yet the *imperturbability* of a college officer should be superior to all such provocations. He should tranquilly suffer the moment of excitement to pass by; and allow the offender, under the influence of the self-rebuke usually consequent upon reflection, to make the reparation which the case demands. To allow himself to become excited, is but to widen the breach and render it irreparable; when but a single consequence can possibly follow. He who has set at defiance the authorities of the college, or treated its representative with gross disrespect, can no longer remain a member of the

institution. The necessity, therefore, of great power of self-command on the part of a college officer is obvious; for though the occasions which may severely try it can never be frequent, yet the want of it, whenever they occur, is a misfortune for which nothing can adequately compensate.

I have but one thing more to add. To a wise college governor, *the word* INEXORABLE *will be unknown.* The faults of youth are usually faults of impulse rather than of deliberate purpose. They evince not so much settled wickedness as thoughtless folly, or giddy recklessness of disposition. Few so immature in years as are the majority of college youth are already entirely abandoned; while it is a fact almost without exception, that those among almost every body of students who have passed the climacteric which separates them from boyhood, have ceased any longer to require the restraining influence of college governments. The culprits, then, who are brought to the bar of college justice, are almost invariably boys whom vice has not had time utterly to subjugate, and whose consciences are not yet callous to every appeal. From such, when they repent, a considerate governor will be slow to turn unfeelingly away; nor while there remains room for pardon will he hesitate to extend it to them. He will remember that on his decision perhaps hangs the entire destiny of the offender for this world, if not for another; and no considerations but such as involve the interests of the entire community over which he is placed as a guardian will prevent his accepting the evidence of sincere repentance as an expiation of the most serious fault.

But were all college officers gifted in the highest degree with the qualities which I have enumerated, I do not know that it would follow that troubles would be impossible. I only know that the non-existence of these endowments, to at least a pretty large extent, leaves open a wide door for their entrance. It is true, therefore, that the existing college system is dependent for its successful operation, in a very eminent degree, upon the kind of men to whom its administration is entrusted; and this fact, if it inheres in the system only in consequence of the existence in the same system of features which are inessential to the great purposes of education

and which admit of easy removal, is an evil the more to be deplored because it is unnecessary.

How had the existing college system come into existence? It had never been deliberately planned. It was the outcome of a series of successive educational growths and adjustments in another country. Its misfortune was that it had been adopted here in circumstances to which it was not suited, and that it attempted, with a defectively organized machinery, to accomplish the twofold work of instruction and government.

The universities of England, on the model of which American colleges are erroneously supposed to have been organized, assumed no responsibility for the conduct and morals of the students. The lecturers, as they were formerly called, — that is, the professors, as they are now called, — did nothing, and, to this day, they do nothing, but lecture. They never thought of hearing recitations, and they had no personal oversight of the students. Yet, for centuries after the foundation of those universities, the students attending them were never regarded as men, but merely as school-boys who required both moral control and personal drilling in their studies. To supply these necessary things, monastic families, called colleges and halls, were established, in which the students were boarded, lodged, and governed by a master. The master of a college was assisted by tutors, whose duty it was to see that the youths were diligent in their studies and in their attendance at the lectures, and to the utmost of their power "to render them conformable to the Church of England." It was a tutor's duty to "contain his pupils within statutory regulations in matters of external appearance, such as their clothes, boots, and hair." In case the urchins evaded his vigilance, he himself was liable to a

fine of six shillings and eight pence for the first, second, and third offence; a fourth forfeited his office. But the tutor had ample powers of discretionary discipline. If boys would be boys, they were chastised like other boys. Corporal punishment was inflicted in the English universities down to the time of Milton, and it was not unknown in the earlier years of Harvard and Yale in this country. Moreover, what would now be called a monitorial system was then universal in the rude form of fagging, the student, during his freshman year, being the drudge of students of higher grade, and the whole body of students being compelled to observances towards college officers which would now be regarded as degrading.

It is true that in English universities the colleges have gradually undertaken the duty of teaching in addition to that of government. The tutor has practically supplanted the professor, and in most things the college has superseded the university. But if they have undertaken much, they have retained the power to accomplish it. They have not, even yet, assumed that college students are "men"; and they have not abandoned the college cloisters to the almost exclusive control of their juvenile occupants. The idea of the monastic family is still dominant.

In those venerable institutions of Great Britain, every college is a quadrangle, securely walled in, with a janitor always at the door, and with a definite hour for shutting in the entire community with bar and bolt. Within the same architectural pile reside not only the governed, but all the members of the governing body, from the Master down to the numerous "fellows," one of whose duties is to aid the authorities in the preservation of order. The whole college body, moreover, not only resides under one roof, but dines at one table; so that, in all save the religious aspect, the distinguishing features of the monastic family are kept conspicuously prominent to this day.

Thus, something like monastic discipline is still possible in English colleges, because the means of discipline have been retained in the hands of those by whom it is to be exercised.

It is not a very great undertaking for a body of governors, so situated and possessed of such powers, to assume the responsibility of maintaining good order in a body of students trained from their earliest years to respect authority.

With us in America the case is widely different. Our college dormitories are erected in an isolated group, in the midst of an open area. No officers — or here and there only a tutor — occupy rooms in those buildings at night; in some instances none even by day. No president or professor meets the students at a common table; nor, in the majority of colleges, do commons continue to exist. No janitor marks, or can mark, who leaves the premises during the hours devoted to study; still less who steals away or returns at those unwarrantable hours of darkness, when nearly every one of the offences most ruinous to good conduct and most difficult to manage is usually perpetrated. Within itself the dormitory is a community shut out with more than Japanese seclusion from the surrounding social world, and subject to none of the restraining influences by which public opinion bears upon individuals in the society to which man is born and to which the student must at length return.

The majority of the members of this artificial and unnatural community are mere boys. In the University of Alabama they might be received at the age of fourteen, and very many entered before the age of sixteen. Most of the freshmen came directly from schools where their conduct had been subjected, as it was at home, to constant supervision, and were wholly untrained to habits of self-restraint. Recognized forthwith as "men," it was not surprising if they misused their newfound liberty, nor was it astonishing if they fell too readily under the influence of vicious companions. The

inequality in the age of students, Professor Barnard observed, was a great difficulty in the framing of general rules for their government when living under a cloister system. Rules which were necessary for the younger lads were needlessly stringent and often vexatious to the older students; so that, necessary as they might be for the former, they might fail, and often must fail, to have the moral support of the latter. In so secluded a community, the influence of public opinion is exceedingly great, and it constitutes a special danger to the young.

The votaries of vice are much more zealous in making proselytes than the devotees of virtue. The vile take a malignant pleasure in marking the gradual steps by which the pure in heart become wicked like themselves; and the unsuspicious, unreflecting nature of youth makes it specially prone to yield to those whose familiarity with what is called life, but is too often only the road to death, gives them a seeming superiority, and lends to their opinions and example a most mischievous fascination. College communities, like all other isolated communities, are apt to be governed by false principles. In the college code, the highest honor is not paid to what is good and right, nor is the sternest disapprobation directed against what is bad and wrong. To be gentlemanlike is better than to be moral; to be generous is more than to be just. It is much to be doubted whether a protracted residence in a community in which these false principles prevail can exert a healthful influence upon the character, and there can be no doubt of its influence upon the morals and manners of the young and susceptible.

Yet this is the community which college faculties are required to govern *ab extra*, and to govern well, without resorting to the most ordinary means of discovering offenders. Dr. Barnard denied it to be possible, and he asked whether there was a single reason why so impracticable a system should be perpetuated. He maintained it

to be unnatural to remove the young from the enjoyment and benefit of family sympathies and society at a time of life at which these are of the highest value, and to plunge them into an artificial community to be assailed with special allurements of temptation. To require a few professors, living outside of that community, to guard the morals and regulate the conduct of its members, while virtually deprived of all power of effectual discipline, he held to be absurd. He pronounced the system, so far as discipline was concerned, to have failed egregiously, and he asserted that it had tended to lower even the teaching standard of college instructors. The governing faculty and the teaching faculty are not always to be found in the same person. A good governor may not be an apt teacher; and the happiest of instructors may not be a good manager of men or of affairs. In the American college system, which required professors both to teach and to govern, it often happened that a man was chosen to teach, not so much because he was a good teacher as because he was supposed to be a good governor; and thus the best instruction was often sacrificed in a vain attempt to secure good government under a defective system.

Assuming the defectiveness of the existing system to have been proved, Professor Barnard next inquired whether there was any remedy for its defects. He insisted that there was. It would be one remedy, if only it were practicable, to return to the old university system of England by completely separating the teaching function from that of discipline; abolishing the dormitories, and committing the government of students to the masters and tutors of halls and colleges, while one and the same corps of professors should be the instructors of all. For various reasons he did not believe that this course would be practicable, and he asked, Is there no other remedy?

There is one [he answered] to which, little favor as it may find at present, especially with colleges which have invested large sums of money in costly buildings, I sincerely believe that the whole country will come at last. It is to abandon the whole cloister system entirely, and with it the attempt to do what is now done only in pretence; that is, the attempt to watch over the conduct and protect the morals of the student. I am aware that this is high ground to take. Deeply satisfied as I have been, from the day I became a freshman in college to the present hour, of the vast evil and the little good inherent in the present system of government in American colleges, I should not perhaps even yet have felt emboldened to speak out my convictions so publicly, had not one of the most eminent of our American educators long since condemned the system as publicly and decidedly as I, and upon precisely the same grounds. But Dr. Wayland hesitates to pronounce the existing evils sufficient to justify the abandonment of buildings already erected. He confines himself to deprecating the erection of any more. I am disposed to take one step further. I say that Dr. Wayland has proved the system to be so pernicious as to require that the axe should be laid at the root of it, no matter what the cost may be.

After showing how the dormitory system might be abolished at once in the University of Alabama by occupying the old State House which already belonged to it, and allowing the students to find lodgings in the homes of citizens of Tuskaloosa, he acknowledged that the buildings which had hitherto been occupied would ultimately be abandoned. He insisted that the abandonment would be no real loss, since the State House would afford far better accommodations for all purposes of instruction than the buildings then in use, and the dormitories had never been a source of revenue to the University.

In the possession of the State House he observed that the University of Alabama had a great advantage over other institutions similarly situated.

Many others [he said] situated precisely like ourselves, have no such advantage, and it is worth while to inquire how they and we came originally to be in such a situation. A large number of the colleges of our country are planted in retired portions of the interior, and instead of being placed in the midst of any community, even that of a small village, they are situated at a distance of perhaps half an hour's walk from such a community. The common design in all this has clearly been to avoid the dangerous temptations which beset youth wherever human beings are gathered in society. These temptations are greatest in large towns; therefore large towns are, first of all, sedulously avoided. They are not absent even from small towns and villages; therefore small towns and villages are, in like manner, tabooed. Since neither students nor professors can live entirely apart from their fellow-creatures, the neighborhood of some small town is tolerated; but only at such convenient distance that if it possess any dangerous allurements, the young men can easily discover them, and then enjoy them with that satisfaction which comes from the knowledge that their instructors are quietly housed a mile and a half off!

He contended that the whole policy of isolating colleges from human society is a mistaken policy, since the temptations of the city, though different in character, are no more corrupting in their consequences than the temptations of the country; and he proclaimed his conviction that whatever advantage there may be in the retirement of a country place is dearly purchased by an educational institution at the cost of sacrificing the conveniences, the intellectual stimulus, the opportunities of observation, and the many other advantages which students, not less than other men, enjoy in great cities. For these reasons, he said, "It is my well-settled belief that, in the selection of a site for a college, the most populous town should be preferred to any location in the country, however apparently tempting, and that no consideration should disturb this preference except that of healthfulness only."

CHAPTER VIII

The system of college study — The University of Virginia and its elective plan — Defence of the university — Objections to the Virginia system — The "open system" condemned — The significance of degrees — The object of college education to train the mind — Objection to its unpractical character considered — The overloading of the college course in compliance with popular demands — An elective group of studies proposed — Barnard's election to the chair of Mathematics and Natural Philosophy at the University of Oxford, Mississippi — His ordination and removal to Oxford.

Professor Barnard's "Report on a Proposition to Modify the Plan of Instruction in the University of Alabama" was written under considerable disadvantages, and bears unmistakable evidences of the haste with which it was prepared. Its arrangement of topics is faulty; it is marked throughout by extreme diffuseness of style; it does not in the least suggest the complete scheme of collegiate, technical, and professional schools which might be included in a thoroughly equipped university. Yet all the elements of argument which might, and eventually did, lead up to that larger idea were present to his mind in the writing of this report. It is possible, indeed, that he may have purposely abstained from the suggestion of a scheme for which he did not consider the time to be yet sufficiently ripe, and that he may have deliberately chosen to confine himself for the present to a defence of the college as one indispensable branch of the grander institution which might in time be developed; but if it was so, his design is nowhere betrayed in the document itself. Certain it is that no one could read this report without being

led to entertain many reflections beyond those which it presented, and that its publication brought Professor Barnard prominently forward not only as an able defender of the old college curriculum, but also, and much more, as a progressive student of the whole subject of education.

The occasion of the report was the presentation to the Faculty of the following action of the Board of Trustees:

> The President of the Board and the Trustees now present are unanimously in favor of modifying the present system of instruction in the University of Alabama, and respectfully request the Faculty of the University to report to an adjourned meeting of the Board, on Monday, the 25th of September next, the plan and details for the initiation and continuance of a system conforming, as near as our circumstances will allow, to the arrangements of the University of Virginia.
>
> JOHN A. WINSTON.
> WM. H. FORNEY.
> JOHN N. MALONE.
> ED. BAPTIST.
> H. W. COLLIER.
>
> UNIVERSITY OF ALABAMA, JULY 12, 1854.

In this request of the Trustees to the Faculty there was a practical culmination of the agitation which had been promoted by Governor Collier. In its original motive it was not unreasonable. It represented a demand which grew naturally out of the condition of things existing in the State. In all new countries education will be valued for its immediate practical utility, rather than for its more remote advantages. Not to speak of the more elementary branches of education, chemistry and applied mathematics will be appreciated, while astronomy and pure mathematics will be slightly valued; and the study of "dead languages" will be considered useless, while instruction in some modern language may be eagerly sought. In all

communities, old and new, the number of persons who can expect to pass through a complete college curriculum is small in comparison with the number for whom something more than the elementary education of the common school is desirable; and in Alabama, where schools of intermediate grade between the common schools and the college were few and ill equipped, it was neither unnatural nor unreasonable that the public should demand such an adjustment of the college regulations as to make some part of its curriculum available for the instruction of the many for whom no other provision had been made. It was thought that this end might be reached without detriment to the special work of the college, if students who did not desire to pass through the whole curriculum were permitted to take such classes as might be helpful in preparing them for the business or profession to which they intended to devote their lives. It was generally supposed that the University of Virginia permitted and encouraged such a use of its classes, and hence there arose a demand that the University of Alabama should model its arrangements on the pattern of that institution.

If the demand had been limited to this extent, there might have been much to say in its favor, especially in a new State which had not yet organized a satisfactorily complete system of public education. But the popular understanding of the proposal included a far more sweeping change, nothing less, in fact, than "that the University should give instruction to all who chose to demand it, and should give them whatever instruction they chose to demand, so that the students should study what they chose, all that they chose, and nothing but what they chose." The function of the Faculty would then be simply to learn what students for the time being wished, and, from time to time, to modify all the arrangements of the

college in accordance with the wishes or requirements of their pupils. Under such a system, which was emphatically not the system of the University of Virginia, the college curriculum would be practically abolished, an educational chaos would be brought into existence, and a small number of instructors would be required to meet a varied and capricious demand for the instruction of an indefinite number of classes.

The agitation in favor of this revolution had been animated, and even acrimonious. The scheme was well adapted to enlist popular support. The leaders of the movement were practical politicians, and the arts of the politician were plied in promoting their designs. Two members of the Faculty, — Barnard and Stafford, — who had been zealous in opposing the proposed measure, were held up to odium, the one as an imported Yankee and the other as a supercilious and impracticable South Carolinian. The large number of students at Charlottesville under the [supposed] Virginia system was invidiously contrasted with the comparatively small number at Tuskaloosa, and it was triumphantly asserted that an adoption of the measure advocated by the agitators would have the instant effect of crowding the University of Alabama with students whom the present system excluded. To the personal attack Barnard made the personal reply which has been mentioned in the previous chapter. To the proposed scheme, as formulated in general terms by the Board of Trustees, he set forth his objections in the report before us.

The communication from the Board was referred to a committee of the Faculty consisting of Professors Barnard, Pratt, and Benagh. In the report upon it which was drawn up by Professor Barnard, Professor Pratt concurred; Professor Benagh, the son-in-law of

Governor Collier, dissented. Accordingly, two reports were laid before the Faculty. The report of the majority was ordered by the Faculty to be communicated to the Board of Trustees, and thus became, in effect, the reply of the Faculty to the communication of the Trustees.

At the very outset, Barnard had adroitly chosen to assume that the request of the Trustees, positive as its language appeared to be, could not have been intended as an order from the Trustees to the Faculty, but must rather be regarded as the expression of an opinion, founded on *prima facie* evidence, and submitted to the Faculty for its consideration. He took it for granted that the Trustees must desire to hear whatever further evidence or argument the Faculty might have to lay before them, and that they would feel themselves bound to reconsider the whole subject, as thus more fully presented, in a judicially impartial spirit. He admitted that if general dissatisfaction with the methods of the University existed, those methods must be changed. He did not deny that some changes might be necessary. The members of the Faculty themselves had long felt that one change was necessary; not, however, in the proposed direction, but because, in their desire to comply with all possible demands, the curriculum of the University had been extended until, in common with the faculties of other colleges, they had found themselves face to face with two evils, the overtasking of the students on the one hand, and superficial teaching on the other. But they were not prepared to recommend, and they did not believe that the community in general desired, a complete subversion of the whole system pursued at the University, or the substitution, instead of it, of so loose a system as had lately been proposed. If there was any such general desire, the members of the Faculty,

in mingling with their fellow-citizens, had not encountered it. They had not had it mentioned to them in a somewhat extensive correspondence with representative men of the State. If the sentiment of the people might be inferred from the comments of the press, then the general sentiment must be entirely one of satisfaction, since not one journal in the State had expressed any other sentiment on this subject during the past twelve months. In short, while they had heard complaints of various kinds from time to time, and particularly of the overloading of the college course, which they themselves felt to be an evil, they had never received from any source the slightest suggestion of the propriety of any sweeping change, nor, certainly, of the adoption of the supposed system of the University of Virginia, until the subject had been referred to them in the communication of the Board of Trustees. They were, therefore, constrained to believe that no general demand existed for the change which was now proposed.

Replying to the argument that the public must be dissatisfied with the system of the University since the number of students committed to its training was comparatively small, it was said that in the circumstances of the State and the University, the number could not reasonably be expected to be large. The State was new. Its citizens were engaged in subduing nature to the use of man, and the higher education did not yet engage their interest or attention as it would after a generation or two should have passed away. The more enlightened citizens, who had themselves enjoyed superior educational advantages, had old associations with institutions in other States. They were therefore naturally inclined to send their sons to those institutions in preference to the University of their own State, while no such

influences could yet be expected to draw students from other States. Besides, there had sprung up in different parts of the State a number of denominational colleges which claimed and received the support of different religious bodies on religious grounds, thus withdrawing from the non-sectarian University of the State many youths who would otherwise have been enrolled among its alumni. On the other hand, while the University, as a recent institution, had its traditional attachments yet to create, while it could not yet hope to attract students from beyond the State, and while it was crippled by the rivalry of sectarian institutions, it had deliberately and advisedly adopted a standard of scholarship which repelled many who might have been attracted to it by easier conditions of entrance and graduation. The Faculty had been charged with greater severity in this respect than was practised in any other college in the Southwestern States; but however that might be, they had secured to their own institution at least the respect of the community and of other institutions of learning throughout the country. That their policy had cost them much in the matter of numbers was undoubtedly true; but they had not felt that larger numbers could be wisely gained at the cost of lowering their standard of sound scholarship.

Notwithstanding all these drawbacks, if the Trustees would remember that so new an institution must expect to draw its students almost exclusively from within the limits of the State, and if they would compare it fairly in point of numbers with other State institutions of learning, they would find the comparison to be reassuring. Virginia, for example, with a population of 894,800 in 1850, had sent only 163 of her own sons to the Department of Arts in the University at Charlottesville,

while Alabama, with a population of 426,514, had sent 98 youths from within her borders to the University at Tuskaloosa. Thus, in proportion to population, the University of Alabama equalled the University of Virginia in the number of its native students, and had 21 to spare; or, in other words, the University of Virginia lacked 46 of being equal to the University of Alabama in that respect! Still further, if compared with the general average of colleges throughout the country, the University of Alabama, young as it was, held a fairly high rank even in point of numbers. Of 121 colleges reported in the American Almanac for 1850, 78 had a smaller number of students, and only 38 had more; and in a document presented to the Board of Education in the City of New York, 1851, it appeared that of 53 colleges, including the oldest and best endowed institutions of the country, only 26 had more, while 26 had fewer students than the University of Alabama. Having thus disposed of the allegation that the disapprobation of the community had been silently but practically expressed by withholding their sons from the University, the Report contended that "numbers alone constitute, in general, the most trifling and shadowy and insignificant evidence of excellence in a school that can be adduced"; and that "if a seminary is young, and is situated in a new country, and only nominally exacts some slight intellectual training as a condition of membership, great numbers, suddenly collected, will furnish an ominous indication of the fidelity of its administration."

The Report next proceeded to show that two entirely different schemes were proposed under the demand for an adoption of the system of the University of Virginia. Not one in twenty of the people understood what that

system really was. Some supposed it to mean nothing more than the admission of students to particular classes or courses in the college curriculum, without subjecting them to the necessity of pursuing the entire curriculum; others, while they did not object to that curriculum for students who desired it, supposed that under the Virginia system all students would have an equal right to select, and that the Faculty would be bound to provide, any curriculum of studies they might think proper to devise. On the former understanding, the Virginia system would seriously embarrass the existing college arrangements and would not be practically satisfactory to those who asked it; on the latter, it would be absolutely impracticable with the means at the disposal of the Faculty.

If students were to be admitted to single classes or courses, the disadvantage to the college would lie chiefly in the aggravation of one of its greatest difficulties, which was the insufficient preparation of students at their entry. It was not only that nearly all students in American colleges are inadequately prepared for the particular studies they are to pursue, but that their previous mental training has usually been either superficial or positively vicious. In students entering for particular classes this difficulty would be exaggerated, since they would not generally have had the benefit even of such mental training as is enjoyed by those who have made any serious preparation for the regular college course. Hence such students would find themselves heavily handicapped in the classes or courses they might choose to enter; their incapacity would retard the progress of the classes; and they would be hindered, rather than helped, in their special studies by the necessity of conforming to the class arrangements of the University.

They would be compelled, willingly or unwillingly, to a routine which had not been prescribed with a view to their peculiar requirements, and those who desired to pursue only one or two branches of study would be obliged, so far as the system of the University went, to waste one-half or two-thirds of their time for the sake of such instruction as they might receive in those branches. An experiment in this direction had already been made by the University in 1831 by the provision of what was called a partial course system. If the statute, as it was printed by the Board in 1837, were revived, it would require very slight modification to make it conform precisely to the plan of the University of Virginia. Its language was as follows: "The University shall be open to persons who do not desire to take the full course and to be graduated as Bachelors of Arts, but who desire to take a partial course and be graduated in particular departments only; provided they are found qualified for the studies of that department which they wish to join; and provided they take not less than the usual number of departments." This experiment had not been crowned with success. It differed hardly at all from the plan of the University of Virginia, except in withholding the degrees of Bachelor and Master of Arts from students of the voluntary courses; but its effect had been immediately and disastrously apparent. The preparation of the partial course students for their several departments was meagre; the general standard of attainment was lowered; habits of idleness and vice were formed, and at length a spirit of uncontrollable insubordination appeared among the students. The disasters which befell the institution in those earlier years had been attributable in part to the mismanagement of its officers, but there could be no

doubt that they were also and largely due to the system which the officers had been required to carry out. If the same system were now to be revived and extended by the opening of single classes as well as departments to partial course students, a repetition of the same disorder might safely be predicted.

Much more might confusion be anticipated if every student were to be allowed to study "what he chose, all that he chose, and nothing that he did not choose." The sure result of such a system would be the annihilation of all system, and with it of all genuine study. A single institution like the college could not fulfil its own peculiar functions and at the same time provide professional, scientific, and technical instruction. The Faculty did not deny that such instruction might be needed. They were by no means opposed to the establishment of institutions for imparting it. If such institutions were required, by all means let them be created. If the demand for the instruction which such institutions could alone supply was really general and sincere, the means for establishing and maintaining them would surely be forthcoming; private enterprise would not fail to provide them; "for schools, to which hundreds are waiting to resort so soon as their doors shall be opened, can never fail to be eminently lucrative, merely as pecuniary investments. If, then, the demand be real, there exists not the slightest necessity for the University to supply it." The Faculty maintained that it was not possible, even in a physical sense, for the University to supply it, unless there should be an increase of the teaching staff commensurate with the proposed increase of labor; but they observed that with the same expense which would be involved in so great an increase of the number of teachers, it would be possible to organize pro-

fessional and technical schools, and so to supply all that was desired, without disorganizing the college.

It was often said that German universities offered opportunities of instruction in all departments of knowledge, and that was true. But German universities were very expensive establishments, with large corps of professors; and, in a country where scholars are numbered by tens of thousands, professors had sometimes classes of two or three students, and sometimes no classes at all. The German universities did not correspond with the American colleges; they were professional schools. In Halle, for example, out of eleven hundred students, all but sixty were engaged in the study of theology, law, and medicine. The German institution which really corresponded with the American college was the Gymnasium, in which the classical, mathematical, and scientific course is often fuller, and is in some respects more thorough, than the course pursued in American colleges.

No argument, therefore [said the Report], can be drawn from the educational institutions of Germany to ours, or, if such a one should be attempted, it ought to be for the creation of a new and higher description of schools, to which none but those who have completed the usual course of college study should be admitted, rather than for the conversion of our existing colleges into what in Germany would be mere nondescripts, having the form of the University and the grade of the Gymnasium.

In the opinion of the Faculty, the demand for an "open" system of instruction in colleges did not "proceed from a genuine desire for special or partial instruction, but simply and solely from the ambition to obtain the college stamp of scholarship, without submitting to that severe and systematic intellectual training which

alone can make the scholar." Moreover, they believed it to have been practically proved that "in the mass of the community there is, after all, too much good sense, and too true a discrimination between pretence and reality, to accept the dispensation when it is offered." Thus, the University of Virginia itself, prosperous as it seemed on a first glance at its catalogue, enjoyed a very moderate prosperity in its Department of Arts. If it were as highly esteemed by the citizens of Virginia as the College of South Carolina (under the regular system) was esteemed by the citizens of that State, the number of young Virginians studying under the Faculty of Arts would be 632, and not 163, as it now was. Two other institutions in Virginia had made the attempt to rival or surpass the State institution in the attraction of "open" courses. In making that attempt, Washington College, possessing, as it did, an ample endowment, had no object but to increase the number of its students, and so to render itself more useful to the citizens of the State. It endeavored, in all good faith, to accommodate its instructions to the various demands of learners, freely permitting each of them "to study what he chose, all that he chose, and nothing that he did not choose." The result, as told by Dr. Manly, was instructive. The College

soon found that, on the new plan, its accustomed work had swelled into an intolerable burden. With the same number of officers as before, *and with no great increase of students,* the voluntary plan had so multiplied sections and subdivisions of students as to impose on some of the officers the necessity of hearing recitations incessantly, from morning till night. These small squads, having no definite amount of labor to perform in a given time, and wanting the stimulus of numbers, — a serious want, — dragged heavily through their work.

After a trial of three or four years, the experiment was abandoned, and everything "was restored to its original organization." In a similar experiment, Randolph Macon College had had no better fortune. The plan had a popular aspect; the officers, who were men of experience, entered on its administration with an honest purpose and with the zeal belonging to a new denominational enterprise; but before the end of two years, their affairs had run into great confusion. The influence of degrees in attracting students to colleges permitting "open" courses had been shown by other significant experiments. In the University of Georgia, where the "open" course was permitted, but *no degree* was conferred on a student who adopted it, the average number of students who availed themselves of the privilege was only four or five out of a total number of about 140. In the University of Rochester, in 1853–4, under a similar arrangement, and with a similar restriction as to degrees, there were only eleven out of a total of 118, and of the eleven only four advanced beyond a single year. In Union College, however, where substantially the same system existed as at Rochester, with the sole exception that it provided for the granting of degrees to open-course students, there were 57 students of that class out of a total number of 241 undergraduates.

If, the Report continued, the frequent demand for special or optional courses of study were sincere, it would exhibit itself in an effort to provide institutions of the kind professedly desired, and not in an effort to procure a modification of the college system. What was really desired was to obtain from colleges and universities the honor of degrees which those institutions were alone empowered to confer, and to obtain them on easy terms. For that reason the Faculty felt bound to resist an encroachment which would tend only to the degradation of colleges by

cheapening their degrees so as to make them worthless. The granting of degrees is the peculiar function of a university. In the discharge of that function it does all that is indispensable to its office. The University of London, for example, employed salaried examiners, who had no other duty than that of examining candidates for degrees, and at the present time the University did nothing else than grant degrees on the report of its examiners.

The early history of all the old universities of England and of the Continent of Europe shows that, while they certainly furnished instruction, and their instructors were exceedingly numerous, the only recognized point of contact between the university, as a body, and the individual student was that in which the latter presented himself as a candidate for graduation. The value of the degree conferred consisted, of course, as it does still, in the fact that it stamped the graduate as a scholar — a man well versed in what were called the Liberal Arts, and in Philosophy. Where or how he might have attained the mastery of these subjects, mattered not; if the candidate, on the application of certain severe tests of his scholarship and knowledge, was found to be worthy of the degree, it was awarded to him as a matter of right. These tests were examinations, extended and thorough, oral and written.

In the older universities it used to be held that education is not complete until the student has been disciplined not only in receiving but imparting knowledge. Every Bachelor of Arts was required to teach certain books or subjects in order that he might become a Master; and, as Sir William Hamilton has said, "every Master or Doctor was compelled by statute, and frequently on oath, to teach for a certain period, which was commonly two years, immediately subsequent to graduation." In consequence of this requirement, the necessary instruction preparatory to an application for graduation, though it might be acquired in any school whatever, was usually obtained with most convenience in the University towns,

where colleges were endowed for the support and residence of poor students, while boarding-houses, called halls, were established for those who were able to pay for their maintenance. Each of these colleges and halls was subject to the government of a resident Master, assisted by one or more tutors. At first the proper business of the tutors was mainly to look after the conduct of the pupils; but in the progress of time they have become almost exclusively the teachers of the undergraduates in all the studies required to fit them for the University examinations.

Since graduation in the English universities depends strictly upon the results of examination, and not upon a prescribed routine of daily studies, it might appear that the student should be subject to no control in regard to the order in which he may pursue his studies. But it is a manifest necessity that there should be some established standard by which the attainments of candidates for degrees may be tested; and such a standard can be intelligible and definite only when presented in the form of a prescribed series of books of which the contents are to be perfectly mastered. This reduces the business of University instruction to the inculcation, for purposes of education, of the substance of certain special treatises of science or philosophy, and certain particular works of ancient and modern literature. Thus is established what is called the college curriculum of study.

As the original design for which the academic honor of graduation was instituted was to distinguish those who had submitted to a thorough course of intellectual training, the curriculum of study embraced matters which were designed to exercise all the faculties of the human mind, in due and symmetrical proportion. The Seven Liberal Arts, as they were called, received this name because they were believed to be suitable to furnish this training. They were distinguished from the arts of handicraft — the Mechanic Arts — on the one hand, and from the arts of embellishment — the Fine Arts — on the other. They are fitted in their several ways to induce those intellectual habits without which nothing valuable can ever be accomplished in the world of mind, and to furnish that exercise which is as necessary to the development of mental as

of physical vigor. The pursuit of *Mathematics* forms habits of close and concentrated attention and develops the power of following out a continuous and extended train of thought. The study of *Language* invigorates the memory, imparts a facility in delicate discriminations, multiplies ideas, improves the power of expression, and gives increased command of the instrument by which mind mainly influences mind. The systematic exercise of the reason is brought into play in the study of *Dialectics*, in which the learner is taught to apply the touch-stone of logic to argument, to distinguish sound reasoning from sophistry, to arrange the materials of a discussion and to present truths of inference in the most impressive form. *Rhetoric* stimulates the invention by demanding what considerations may be alleged in support of specific propositions; it disciplines the judgment by calling upon it to decide nice questions of the propriety of language; it cultivates the imagination by exercising it in the embellishments of figurative expression; and it trains the taste to control the exuberance of a fancy which might be too apt, if unrestrained, to run into riotous extravagance. *Natural Philosophy*, in its various branches furnishes numerous examples of reasoning from induction, or inferring truth from probable evidence. *Moral Philosophy* is a continuous and improving application of the principles of logic to questions which concern the conscience; and its cultivation is calculated not only to quicken and improve the judgment in matters of abstract truth, but also to establish principles in place of feeling as the guide of action. *The Philosophy of Mind*, the science of self-knowledge, opens up a world vast as that of matter and impalpable as the thinking essence itself. "Philosophy," says Sir William Hamilton, "the thinking of thought, the recoil of mind upon itself, is one of the most improving of mental exercises, conducing, above all others, to evolve the highest and rarest of the intellectual powers. By this the mind is not only trained to philosophy proper, but prepared in general for powerful, easy, and successful energy in whatever department of knowledge it may more peculiarly apply itself." Thus, every study throughout the entire range of the liberal arts and the philosophies has its peculiar use and value in drawing into activity and cherishing

into vigor the various powers and faculties of the human mind. When all are combined in due proportion in a system of intellectual training, the pupil emerges from the discipline with a mind well balanced, and fitted to grapple with whatever difficulty. Should he now direct his energies, as men usually do, into some one particular channel, a one-sided development will not make him a giant within the domain of his chosen profession and a pigmy without. In his special pursuit he may attain eminence with much or with little labor, but it will not be at the expense of disqualifying himself for intelligent intercourse with men of every other class. Men possessed of these advantages, that is, men of thorough education, will always be comparatively few. The majority either can not or will not submit to the long, steady, and even painful discipline it demands. To denounce the colleges because they can only educate their tens, while hundreds can not, or will not, submit to their intellectual regimen, is clearly unjust; and to lower the conditions on which their degrees are granted, in order that certificates of accomplished scholarship may be conferred on persons who are not scholars, must certainly impair the usefulness of colleges and bring academic degrees into contempt, but cannot make an uneducated graduate worthy of the degree he wears.

The Report replied at some length and with some acerbity to the frequently reiterated assertion that a college education does not furnish a fit preparation for practical life, since the knowledge which it imparts to the student is not practically available in the affairs of life. The Faculty contended that there could be no better preparation for the business of life than an education which trains every power of the mind for the uses to which it is afterwards to be applied, and that man who enjoys the complete use of every intellectual power with which he is endowed must have an immense advantage over another man whose powers have not been trained to be obedient to his command. They did not admit that the knowledge

acquired in an academic education, even if considered only as knowledge, is of no value in practical affairs. They maintained the contrary with energy; but they insisted that the object of such an education is not the acquisition of knowledge which may be turned to account in the common affairs of life, but rather a complete training and exercise of the powers which are to be used through life. On this point they took the very highest ground. They maintained with Sir William Hamilton that when man is considered as he ought to be considered, that is, as an end to himself,

> knowledge is only valuable as it exercises, develops, and invigorates the mind; so that a university, in its liberal faculty, should especially prefer those objects of study which call forth the strongest and most unexclusive energy of thought, and so teach them, too, that this energy shall be most fully elicited in the student. For speculative knowledge, of whatever kind, is only profitable to the student in his liberal cultivation, inasmuch as it supplies him with the object and occasion of exerting his faculties; since powers are only developed in proportion as they are exercised, that is, put forth into energy. The mere possession of scientific truths is, for its own sake, valueless; and education is only education inasmuch as it at once determines and enables the student to educate himself.

Hence the Faculty concurred in the conviction of President Thornwell of South Carolina that in laying out the curriculum of a sound college course "the selection of studies must be made, not with reference to the comparative importance of their matter or the practical value of the knowledge, but with reference to their influence in unfolding and strengthening the powers of the mind." This conviction they agreed with Dr. Thornwell in pushing to its extreme conclusion that

the introduction of studies on the ground of their practical utility is, *pro tanto*, subversive of the college. It is not the office of the college to make planters, mechanics, lawyers, physicians, or divines. It has nothing directly to do with the uses of knowledge. Its business is with minds, and it employs science only as an instrument for the improvement and perfection of mind. With it, the habit of sound thinking is more than a thousand thoughts. When, therefore, the question is asked, as it is often asked, What is the use of certain parts of the college curriculum? the answer should turn, not upon the benefits which, in after life, may be reaped from those pursuits, but upon their immediate subjective influence upon the cultivation of the human faculties.

On these grounds they agreed with Dr. Thornwell's judgment that the admission of "partial-course students" to college classes would be inconsistent with the fundamental aim of a college.

These students, he said, are not seeking knowledge for the sake of discipline, but with reference to ulterior uses. They come, not to be trained to think, but to learn to act in certain definite departments of exertion. It is professional, not liberal, education that they want. The want, I acknowledge, should be gratified; it is a demand which should be supplied. But the college is not the place to do it. That was founded for other purposes, and it is simply preposterous to abrogate its constitution out of concession to a necessity, because the necessity happens to be real. What, therefore, ought to be done is, not to change the nature of the college, but, leaving that untouched to do its own work, to organize schools with special reference to this class of wants.

It was a neglect of these principles, which the Faculty enforced by numerous quotations from distinguished educators, that had led to an incessant overloading of the college course. It had been almost impossible to avoid the innovation.

With the present century [as Dr. Wayland had put it], a new era dawned upon the world. A host of new sciences arose, all holding important relations to the progress of civilization. Here was a whole people in an entirely novel position. Almost the whole nation was able to read. Mind had been quickened to intense energy by the events of the Revolution. The spirit of self-reliance had gained strength by the result of that contest. A country rich in every form of capability had just come into their possession. Its wealth was inexhaustible, and its adaptation to the production of most of the great staples of commerce was unsurpassed. All that was needed to develop its resources was well-directed labor. But labor can be skilfully directed only by science; and the sciences now coming into notice were precisely those which the condition of the country rendered indispensable to success. That such a people could be satisfied with the teaching of Greek, Latin, and the elements of the mathematics, was plainly impossible.

Unfortunately, however, instead of founding schools of technical education to supply the technical and scientific instruction which the circumstances of the country required, the public demanded that the colleges, without encroaching on their former curriculum of studies, and without extending the period of instruction, should add science after science to the college course as fast as the pressure from without seemed to require it. By their general compliance with this demand, the colleges themselves had done much to withdraw public attention from the true and fundamental object of collegiate education; and the overloading of the course had made more than a superficial study of the sciences merely impossible. Dr. Wayland had calculated that the average length of time which could be devoted to each several subject of study in American colleges, apart from Latin and Greek, was but a fraction over six weeks! Hence a new cause of dissatisfaction had arisen, and the colleges had found

that in their attempt to subordinate their own proper function to the supplying of "practical" (that is, scientific, technical, and professional) instruction, they had justly subjected themselves to general distrust, since it was clearly impossible for them, in the time at their disposal, thoroughly to teach the many subjects which they professed to teach.

In view of all that had been said, the Faculty recommended that, if any reorganization of the plan of instruction were to be made, it should include the following particulars:

1. To prescribe a definite curriculum of *study*, designed as a mental discipline and extending over four years, to which all regular candidates for graduation should be obliged to conform. This curriculum to include only those branches of study, or certainly very few besides those, which, by the consent of the learned in all ages, are entitled to be regarded as the best instruments for evolving and exercising the powers of the mind; and no study to be introduced into the first two years which should not be obligatory on all the students.

2. The Faculty, at the proper time, to select from the remaining, or elective, group of studies, such as should seem to them best fitted to the intellectual wants of each student, as ascertained by observation of his mental habits and attainments during the first two years; and to provide for his instruction in these, without requiring him to take the rest of that group.

3. To refer to the elective group of studies,

a. Such as deal principally with facts of observation; including all the branches of natural history, and also geology, mineralogy, physiology, meteorology, and possibly a second course of chemistry.

b. Such as require a peculiar aptitude for their suc-

cessful prosecution; including all the branches of the mathematics which rest upon the algebraic or symbolic method (elementary algebra excepted), and embracing in the existing course algebra applied to geometry, analytical geometry, and the calculus, differential and integral; to which might be added spherical trigonometry.

c. The study of the languages, ancient or modern, beyond the limit prescribed in the obligatory course.

The Faculty entered into no argument concerning the distinction they had thus made between the subjects with which the regular curriculum had been overloaded, further than to say that the obligatory studies would still be such as are universally regarded as furnishing the best discipline for the mind, and such as are indispensable to a man of liberal education. As to the elective studies they remarked that it was admitted to be impossible for a student, devoting only the short space of a few weeks to each of them, to become really proficient in all, or perhaps in any; so that in the plan proposed there would simply be an elimination of studies in which he could not be proficient, so as to leave time for a successful prosecution of the rest. The Report closed with an earnest recommendation, enforced by considerable argument, that the grade of scholarship in the University "should depend, to a degree almost exclusive of every other test, upon periodical and final examinations, and very little, if at all, upon the record of daily recitations."

As might have been expected, the action of the Board of Trustees was a compromise between the two extreme propositions which were now before them. On the one hand, students were not allowed to "study what they pleased, all that they pleased, and nothing that they did not please," nor were the Faculty required to perform impossibilities. Partial course students were admitted,

but on conditions which subjected their studies to the control of the Faculty, and prevented the opportunity of idleness. Certificates of graduation in particular departments of study were provided for, but the degree of Bachelor was stringently confined to those who should complete the entire collegiate course. On the other hand, the proposal of the Faculty to eliminate certain studies from the regular course, by classing them as elective studies, which might, or might not, be pursued by particular students at the discretion of the Faculty, was not approved. In short, the existing curriculum of the University of Alabama remained unchanged, and the concession made to Governor Collier's party was merely formal. It is probable that this result was satisfactory to the Faculty, who had really desired no change, and who had deprecated the adoption of the much misunderstood system of the University of Virginia because an adoption of that system, as it was popularly understood, would, in their opinion, be destructive of the existing system. They had probably not expected their own alternative proposal to be seriously entertained, but thought it well to put it forward to illustrate a view of the existing college curriculum which would serve to emphasize the great danger of the movement they felt bound to oppose. It served its purpose in that way, and it also made it easier for the Board of Trustees to deny by far the greater part of what had been demanded by Governor Collier's party, since it enabled the Trustees to say that they had, at the same time, rejected a proposal of the Faculty. In other words, while the proposal of the Faculty was intrinsically worthy of grave consideration, its practical use in the controversy was to serve as a tub to the popular whale.

It has been said that the Report above considered was prepared under somewhat serious disadvantages. The

action of the Board of Trustees to which it was a response had been taken on the 12th day of July, and had been immediately referred by the Faculty to the Committee of which Barnard was chairman, with instructions to submit the draft of a report on the 18th of September following. These instructions were obeyed; but in the meantime Barnard had been absent from the State, and had been engaged in conferences and negotiations which resulted in his removal to a new field of labor.

The two chairs of Physics and Chemistry had become vacant in the recently established University of Mississippi. Barnard had been urged by a member of the Faculty of that institution to become a candidate for one of them, but had positively declined. The rector of the Episcopal Church in Tuskaloosa, however, being involved in an unpleasant controversy with his vestry, and desiring to return to the work of teaching in which he had formerly been engaged, resolved to be a candidate for the chair of Chemistry, and thought it judicious to visit Oxford, the seat of the Mississippi University, at the time appointed for the election. He invited Barnard, who had been his devoted friend and champion in his church troubles, to accompany him on his excursion, and Barnard complied. Between Oxford and Tuskaloosa there was no direct communication either by rail or by water. The trip was therefore made by carriage. Two short stops were made at Columbus on the Tombigbee and at Waverley, a neighboring landing on the same river. At the former place they met Colonel S M. Meek, an alumnus of the University at Tuskaloosa; at Waverley they were guests of Colonel George Young, a leading trustee of the University at Oxford. Both of these gentlemen strongly recommended that Barnard should become a candidate for one of the vacant chairs at Oxford, but he continued

resolute in his determination to remain in Alabama. On their arrival at Oxford they found the Board in session. The President of the Board was Colonel Jacob Thompson, afterwards Secretary of the Interior under President Buchanan; the President of the University was the Hon. A. B. Longstreet, an uncle of the famous Confederate General Longstreet. Barnard's reputation appeared to be well known to the Trustees, and several of them asked him to permit them to present his name as a candidate. As he had held the chair of Chemistry at Tuskaloosa for six years, they naturally desired to elect him to the same chair in their institution; but he absolutely refused to be a competitor against his friend, the Rev. Mr. Johnson. Under much pressure, he was induced to say that he would accept the chair of Mathematics and Physics, and he then learned for the first time that Professor Hill, a distinguished native of Mississippi and afterwards one of the two Confederate generals of that name, was a candidate for that chair. The Board spent several days in conference before proceeding to an election. Barnard was elected to the chair of Chemistry, which he had declined in advance. On receiving an official notification of the action of the Board, he promptly replied, expressing his thanks to the Board, but positively refusing the appointment. In truth, he felt much relieved at the issue of a negotiation which he had in no way invited, and had not desired. His interests and affections were still with the University of Alabama, and he had no desire to leave it. There, his position was already assured by a continuous service of many years; in Mississippi he would have to form new associations and participate in the difficult work of establishing a university system in an untried field. He had been overpersuaded to consent to accept any position at Oxford, and he congratu-

lated himself that the action of the Board had released him from his pledge. His satisfaction was of short duration. In less than half an hour after he had returned his answer to the Board, the clerk of that body returned with the announcement that he had been elected to the chair of Mathematics and Natural Philosophy, a position which he had pledged himself to accept. He accepted it accordingly; and without delay, but with a heavy heart, he set out with his friend Johnson on their homeward journey. Johnson, too, was disappointed, but he bore his disappointment better than Barnard bore his new honors. The University election was a subject of interest all along the road, and when they had sat down to their evening meal at their first stopping-place, Barnard, after vainly trying to eat, rose and left the table. The kindly landlady of the hostelry said to Johnson, "Your friend seems to be unwell. I fear he has been unsuccessful at Oxford." "No, madam," said Johnson, "he is sick because he has succeeded." When they reached Tuskaloosa, Barnard found it no easy task to tell Mrs. Barnard of the change which must now be made. She was much distressed, for she had been very happy in Tuskaloosa, and she had a strong aversion to Mississippi as a "repudiating State"; but when he explained what had occurred, and told her that his honor was so pledged that he could not now retreat from his engagement, she desisted from her remonstrances. "I will do the best I can," she said, "but if I had children to bring up, I would never take them to a repudiating State." Thenceforward she expressed no aversion to the change and no regret after it had been made.

These events had occurred about the beginning of September, and as the next session of the University at Oxford was to begin early in October, Barnard had little time in

which to wind up his affairs in Tuskaloosa and remove to his new home. In this short space, however, it seemed desirable that his ordination as a deacon should take place. A somewhat amusing incident was connected with that service, of which Barnard himself has given the following account:

Bishop Cobbs resided in Montgomery, and I desired to be ordained by him before leaving his diocese. He made an appointment to meet me at Selma, fifty miles below Montgomery on the Alabama River, and about ninety miles from Tuskaloosa. I reached Selma by appointment, but in advance of the Bishop. Next day he arrived, accompanied by a presbyter to assist in the examination; but here we encountered a singular difficulty. The yellow fever had recently appeared at Mobile and also at Montgomery. Selma had been spared, and the municipal authorities had adopted an ordinance providing that any person arriving from an infected place should be compelled to depart forthwith. The Bishop and his companion were immediately served with a notice to leave. Our whole party prepared to drive to the neighboring town of Cahaba; but before our carriages could be got ready, the absurdity of the thing seemed to strike the people of the place, and they declared that the Bishop of the diocese should not be driven out of the town. On the next Sunday I received my first orders and preached my first sermon. Returning to Tuskaloosa, I preached twice, but, oddly enough, I was not permitted to preach in the parish church. The Vestry, who had arbitrarily dismissed the rector, Mr. Johnson, against the public protest of a large majority of the congregation and without consulting any diocesan authority, had now locked him out of the church. He therefore continued to hold services in the large hall of a building which had been used as a boarding school, and in that hall I preached on the second Sunday after my ordination. There were many difficulties attending our removal to Oxford. We had to drive there, of course; and on the very evening before we were to start, a valuable horse that I had had for several years took suddenly ill and died. My books and furniture had to be sent by a very roundabout way, first down the river four hundred

miles to Mobile, thence by sea two hundred miles to New Orleans, thence up the Mississippi five hundred miles to Memphis, and then sixty miles by wagon to Oxford. We made our trip without accident; but at the places where we stopped it was not encouraging to me to hear the professor whose place I was to fill constantly mentioned as a man whose loss to the University was simply irreparable. I entered on my new position with a feeling of sincere discouragement, but, as time passed, I began to have reason to think that my success consoled the authorities of the University for the loss of my predecessor.

CHAPTER IX

The University domain at Oxford — Barnard accepts pastoral charge of the church at Oxford — Confusion in the financial affairs of the University — History of its endowment — Barnard's investigations — Barnard elected to succeed President Longstreet — Discipline improved — Powers of Faculty enlarged — True university organization projected — Open letter to the Board of Trustees — Plan for the rearrangement of the college curriculum — Post-graduate schools — Recitations and lectures — A noble appeal for the higher education — Astronomy — Its practical utility — An appeal to State pride — In what the greatness of a State consists.

THE University of Mississippi was situated at a distance of about a mile from the village of Oxford, in the middle of a section of public land, one mile square. The University domain, with the exception of the ground on which its buildings stood, was still covered by the primeval forest, through which a broad avenue had been cut to the village. The buildings consisted of a great hall, a chapel, several dormitories, and the dwellings of the professors, all of which were arranged in a circle of about two hundred yards in diameter. On Barnard's arrival he found none of the professors' dwellings vacant, and for the first year he was obliged to take lodgings at an hotel in the village. Both while living there and afterwards when he had a house on the University grounds, he sadly missed and regretted the happy associations he had left behind him at Tuskaloosa, and, in part perhaps for that reason, he plunged into an amount of work which must have overwhelmed a less vigorous constitution. The professor of chemistry who had been elected by the Board of Trustees failed to appear for duty, and did not trouble

himself even to explain his neglect to comply with the conditions of his appointment. The Executive Committee of the Board requested Barnard to fill the gap; and accordingly, during his first year at Oxford, he gave a full course of lectures in experimental chemistry while teaching at the same time the higher mathematics, physics, astronomy and the elements of civil engineering. Besides these sufficiently onerous duties, he felt it to be his duty to take charge of the Episcopal church in Oxford. He had hardly settled himself there when he received a letter from a clergyman who had held fortnightly services for the Episcopalians of the village, expressing his satisfaction that Oxford had now a resident clergyman, and requesting Barnard to relieve him of the charge. The proposal was entirely unexpected, but it could hardly be declined. In the end it proved to be advantageous in many ways. He was obliged, of course, to proceed to priest's orders, and so took full rank as a clergyman; the congregation prospered; through his church relations he was brought into intimate conference and association with many of the most notable people of the State; his position and reputation as a clergyman strengthened his influence as an educator; and so he was enabled to lay broad foundations for the great work which he seems to have contemplated from the beginning of his service in Mississippi.

In two respects the condition of the University was gravely unsatisfactory. Its discipline was inefficient, and its finances were in great confusion. Barnard's loyalty to his superior, President Longstreet, forbade his interfering with discipline beyond the limits of his own department, and it was by special request of the President himself that he entered into a laborious investigation of the endowment. In the Act of Congress by which Mis-

sissippi had been admitted to the Union, certain public lands were set apart for the endowment of "a seminary of learning" to be established within the State. By the terms of the act the Legislature of the State was constituted sole trustee of that endowment, under the condition, however, that the principal acquired by disposing of those lands should be kept intact by the State, and should never be diminished. This trust and the condition annexed to it were embodied in the constitution of the State, but nearly twenty years elapsed before any steps were taken for the establishment of a seminary of learning. In the meantime the Legislature endeavored to raise the necessary endowment by disposing of the seminary lands. Certain portions of them were leased, but the method of leasing proved to be unsatisfactory, and other portions were sold in fee. Under the provisions of several various successive acts of the Legislature the price of the lands sold was paid by the purchaser either in full at the time of purchase or in a series of annual instalments. All monies received on account of the Seminary Fund were deposited in certain banks to the credit of that fund; but in the financial crisis which occurred during General Jackson's second term as President of the United States, the banks of Mississippi were involved in the general ruin, and their creditors, including the State itself, lost nearly all the funds deposited with them. Thus "the Seminary Fund" was heavily reduced, and in 1854, when Barnard first went to the University, all that was supposed to remain of it was only about $180,000.

On learning what was then known of this history, Barnard made further inquiry and came to the conclusion that the State, in accepting the Seminary trust and giving a constitutional guarantee that the Seminary Fund should not be diminished, had made itself both legally and mor-

ally liable for the losses which the Fund had sustained. He explained his view of the matter to Mr. Jacob Thompson, President of the Board of Trustees, who at once became greatly interested, and in the month of January, 1855, proceeded to make a careful examination of the laws relating to the Seminary Fund. The result of his investigation was the discovery of evidence that the accounts of the Fund had not been kept in the manner prescribed by law, and that the whole business of the Seminary Fund was in great confusion. Mr. Thompson saw that a still more careful examination of former legislative acts was necessary and that extensive computations would be required to discover the amounts due to the Seminary Fund under the various laws which had been in force at different times. He therefore begged President Longstreet to proceed to Jackson to assist in the investigation and join in such measures as might appear to be advisable in view of its results. President Longstreet was unable to leave the University at that time, and sent Barnard as his substitute. With much labor Barnard scrutinized all acts of the Legislature relating to the Seminary Fund, ascertained the amounts due to the Fund under the operation of each act severally, and drew up a report, which was adopted by Mr. Thompson, including these particulars. This report was presented to the Governor, the Hon. John J. McRae, who made it the subject of a special message to the Legislature. The facts communicated to the Legislature were startling enough, since they positively proved that the Seminary Fund, that is, the University Fund, the integrity of which had been guaranteed by the State, amounted to something over $1,100,000; that only about $200,000 of that capital had been expended for buildings, and consequently that the State was indebted to the University Fund in the sum of

about $900,000. The Governor recommended that the debt should be immediately acknowledged and its payment secured by the issue of bonds of the State to the required amount. The subject was new to the members of the Legislature and the sum called for was large; yet the Senate concurred in the Governor's recommendations. The House of Representatives hesitated. Meanwhile, a carefully prepared memorial, written by Barnard, had been presented to the Legislature by the Trustees of the University, setting forth the inadequacy of the provision made for the equipment of the University with many appliances which were indispensable to its efficiency, and praying for a direct appropriation from the State treasury. Barnard asked and received permission to address the Legislature in behalf of the memorial. A joint session of the two houses was held for that purpose, and he then showed the meagreness of the provision of books and apparatus which had been made for the University, urging his audience, if they wished their State institution to take rank with other similar institutions, not to withhold from it the necessary means to do so. It was objected, naturally enough, that the representations made to the Legislature on the whole subject of the Seminary Fund were merely *ex parte* statements, and that it was due to the State, before complying with demands of such importance, that a thoroughly impartial investigation should be made by a commission appointed for that purpose. A commissioner was appointed accordingly; and to meet the pressing present necessities of the University, as they had been exhibited in the memorial of the Trustees, an annual appropriation of $25,000 was voted, to be continued for five years and to be devoted exclusively to the improvement of the library, the scientific collections and the apparatus in use. Unfortunately it turned out that the

commissioner, though his appointment was in every way acceptable to the friends of the University, was so overwhelmed with other business as to be unable to discharge his function. At the end of five years he had made no report. At the session of the Legislature in 1860 the annual appropriation of $25,000 was extended for a further period, but long before that period had expired the sessions of the University had been suspended by the war between the States. Thus the well-meant effort of Barnard and Thompson had not all the success which seemed at one time to be within their reach, and yet the special appropriation for books and apparatus which was made at the session of 1855 enabled the Board of Trustees to add much to the efficiency of the University.

In the month of June of the following year President Longstreet, without any previous notice of his intention, handed in his resignation to the Board of Trustees. By common consent, at least among the Faculty, it had been assumed that the Rev. Dr. Waddell, Professor of Greek, would succeed to the presidency in case of President Longstreet's retirement. In this assumption Barnard had concurred, and he was somewhat surprised to learn that he himself was mentioned as a competitor for the vacant position. He made no canvass for the appointment, but started immediately for the North to be present at the inauguration of the Dudley Observatory at Albany, which had been arranged to take place during the annual meeting of the American Association for the Advancement of Science. While at Albany, on the day of the inauguration, he received a telegram informing him that he had been elected to the presidency of the University, and after an exceedingly short vacation he returned to Oxford to prepare for the new and responsible duties to which he had been called.

His first work after the reopening of the University was to put its discipline into a state of efficiency, and by a happy union of energy and mildness he succeeded in repressing disorder and subduing the spirit of insubordination. Dr. Waddell, displeased and mortified at his disappointment, had resigned his chair and accepted the presidency of a new Presbyterian College at Lagrange, Tennessee, fifty miles north of Oxford, which was expected to be a formidable rival of the University of Mississippi. In the public announcements of the opening of the new college, great stress was laid on its religious character as an assurance of the best moral influences in the training of the students; and State Universities, on account of their non-denominational character, were denounced as "godless colleges." A year or two later, when Barnard's administration had made the institution under his charge a model of good discipline, these advertisements were somewhat ludicrously recalled by a sad experience of the President of Lagrange. A regular meeting of the Synod being in session in the town, Dr. Waddell invited that body to attend divine service in the College chapel on Sunday morning, and the invitation was accepted. The President informed the students of the expected visit and begged them to be on their good behavior. Unluckily, the lads thought it an opportunity for a "lark" of the first order, and during the night preceding the appointed service they drove into the chapel all the horses, pigs, and cattle they could find running at large, as the custom was, in the "range" or open forest in the neighborhood of the town. The state of the chapel which was presented to the wondering eyes of the visitors on Sunday morning was not beautiful; and Dr. Barnard, who tells the story in his manuscript reminiscences, does not conceal his satisfaction at the

thought that, if the University of Mississippi had less "godliness" than the College of Lagrange, it had at least much better discipline, and consequently much more decency and good behavior.

The good order of the University having been happily secured, the next effort of President Barnard was to obtain a proper recognition of the Faculty as the responsible teaching body. The statutes had been so framed as to commit the regulation of the most minute details of administration, including even such matters as the ringing of the college bell and the arrangement of the hours of recitation, to the Board of Trustees; and he proposed the adoption of an entirely new code under which all arrangements directly connected with the instruction of students should be left to the exclusive discretion of the Faculty. When the proposed code was submitted to the Board of Trustees, the President, though not a member of that body, was invited to be present. His proposals were strenuously resisted by the framer of the existing statutes, who was a judge of the Supreme Court of the State. In the course of the discussion Barnard suggested that it might be well to call the other members of the Faculty before the Board and hear their views of a subject concerning which they could give an opinion founded, not on theory, but on the results of practical experience. The members of the Faculty were summoned, and unanimously supported the opinion of their chief. Still, the issue of the debate was doubtful, until Barnard, with some dexterity and not a little humor, plied the *argumentum ad hominem*. At that time most of the Trustees were engaged in the construction of the Central Railroad of Mississippi which was then in progress, and he borrowed an apt illustration from that enterprise.

Gentlemen [he said], you have undertaken the construction of a railway to connect the town of Jackson, Mississippi, with the town of Jackson, Tennessee. You have employed a corps of engineers. You have fixed the termini of your road and the general line of its course; but do you attempt to prescribe the details of the work of construction? You do not undertake to tell the engineers how they shall cross this river, or build that embankment, or cut that hill; that is the engineers' business. You employ engineers because they understand that business better than you. If you let them alone, they will do it judiciously. If you were to follow them mile by mile and compel them to make bridges and embankments and tunnels according to your ideas, the work would probably be spoiled. Just so in the University. You have asked us to educate the young men of Mississippi; you have appointed us because we are professional teachers and you believe we understand our business; you have prescribed the broad outlines of our work, and we have undertaken to do the work on those lines. Now, if you are to direct the details of the work at every step, you will succeed no better than you would succeed if you were to direct the engineers of the Mississippi Central in the same way. Our professional knowledge and experience will be set aside and rendered useless, and our whole work will probably be badly botched.

This argument put an end to the discussion; the new code of statutes was adopted, and the whole arrangement of the practical details of instruction in the University was surrendered by the Trustees and intrusted to the Faculty. One incidental feature of the new code was that the presiding officer of the University should thenceforward have the style of Chancellor and not of President.

The way was now fairly clear for the far grander effort to reconstruct the whole scheme of the University course, so that in process of time the institution might become a University in the largest sense of the word, and be thoroughly equipped for all the functions of such an institution in modern times. Dr. Barnard has recorded

that, when visiting the Hon. Giles M. Hillyer at Natchez during the winter of 1855, he observed a phenomenon of which he had often read, but which he had never before seen. The weather was extremely cold, and the water in his pitcher became chilled to such a degree that, although it continued to be fluid while it was left undisturbed, a sudden jar instantaneously converted it into a mass of ice. Something of the same sort seems to have occurred in his views of the higher education after his election to the presidency of the University. In his Report to the Trustees of the University of Alabama, which was written in 1854, he had had all the elements of that problem clearly before his mind, but he gave no indication that he had realized their far-reaching significance. He had insisted on the special value of the curriculum of arts as a mental discipline, without regard to the utility, in other respects, of the knowledge acquired in connection with it. He had therefore protested against a measure which, in his opinion, must tend to mar the efficiency of that curriculum without efficiently supplying technical or professional instruction to students who desired it. He had complained that, in deference to a mistaken demand, the curriculum of arts had been heavily overloaded with extraneous studies which were not intended for mental discipline, and which could not be satisfactorily pursued within the four years allowed for a college course. He had shown that colleges had been attempting to fulfil a function which did not properly belong to them, and which it was impossible for them to perform. He had traced some part of the popular misapprehension of the subject to a misunderstanding of the word "university," which, in its original sense, had meant simply the whole society or community of persons united in the University organization. A univer-

sity, he said, was a *Universitas Doctorum et Scholarium*, a Society or Community of Teachers and Scholars, not a *Universitas Scientiarum*, or a School of all Branches of Knowledge. He showed that the American college, though it is often called a university, does not at all correspond with the German university, which is really an institution for professional instruction, but rather with the German gymnasium, which teaches much the same branches as the American college, though it confers no degrees. The American college had been modelled after the colleges in English universities, and its proper function was to teach the curriculum of arts only, though it had been endowed with the additional power of conferring degrees, which, in other countries, is reserved to the university. He did not deny that professional schools such as exist in Europe under the auspices of the university might be necessary, but he did not in the least imply that they might form a part of the organization of an American university system; and it did not seem to have occurred to him that an institution which accepted the power to confer degrees in all faculties, had thereby implicitly accepted the functions, and ought to do the duty, of all faculties. He did not deny that, in the social and economic conditions of the present century, technical schools were necessary; he admitted that such schools ought to be established; but so far from seeming to think that they might be included in a university system, he plainly said that, if they were as indispensable as the advocates of technical education believed, they would offer a proper and lucrative field for private enterprise and investment. In short, throughout the whole Report, he seemed to regard the college, including the curriculum of arts only, and enjoying the peculiar privilege of conferring degrees, to be the ideal organization of an Amer-

ican university. If other schools were necessary, as they doubtless were, by all means let them be established, but they need not be established in connection with the university.

No sooner did he find himself the responsible head of a university than his views of the function of such an institution became greatly enlarged. He did not in the least change his belief that the curriculum of arts, as it had been long established, furnished the best possible training for the mental faculties of the student, to whatever pursuit he might afterwards bend his energies; but he saw that the time devoted to the curriculum of arts might perhaps be advantageously abridged. He began to recognize that knowledge of a practical kind has an intrinsic value which must not be overlooked in a rational system of modern education. He clearly saw that the influence of the higher education must have an incalculable influence on all other education, professional, technical, and elementary. Hence he reasoned that a university thoroughly adapted to the necessities of the age could not be a mere *Universitas Doctorum et Scholarium* of one particular curriculum, but must rather be a *Universitas Scientiarum*, supplying all the instruction needed in a great State for the practical uses, as well as for the highest intellectual culture, of its citizens. To the realization of this large and lofty ideal of the functions of a State university, Chancellor Barnard now began to direct all his powers. He did not hope to succeed immediately. For the working out of plans so extensive he well knew that time as well as labor would be indispensable; yet he thought it well to give some public intimation of the plans he had in view, while proposing for the present only such part of them as he might at first expect to be successful in accomplishing.

Before proceeding in so great an enterprise, a weaker man would have sought to win the support of the Trustees severally; but in this matter Barnard felt that boldness would be prudence. No such scheme could be carried out in a State institution unless it had popular support. The Trustees were appointees of the Legislature; the Legislature represented the people; it was necessary that the people who elected the Legislature should approve his scheme, or the Board of Trustees, however its members might sympathize with his views, would be powerless to make them operative. He therefore resolved to make his appeal at once to the Trustees and the people of the State by addressing an Open Letter to the Board, and circulating it extensively throughout the State before it was formally presented at a session of the Board. Thus public opinion was brought to bear on the Trustees before they were called to act, and Trustees on whose support he had reason to count were fortified by the previously ascertained sentiment of their fellow-citizens. A few of the members of the Board were at first disposed to resent the publication of Barnard's letter as an attempt to coerce them to submit to his dictation, and for a time he had some cause to apprehend that he had overshot his mark. In the end, however, the majority of the Board sustained him; all opposition was withdrawn; the leader of the dissentients had a son in the University who was ardently devoted to Barnard, and he presently became one of Barnard's most faithful supporters. The policy of boldness turned out to have been really a policy of prudence, and from that time until his withdrawal from the University at the opening of the war the utmost harmony of sentiment continued to exist between the Chancellor and the Board of Trustees.

Part of the contents of this important publication had

already been substantially set forth in his Alabama Report, and may be mentioned very briefly. He frankly admitted the charge that American colleges had not succeeded in keeping up with the educational demand of the times, and he urged that in attempting to satisfy all demands they had impaired their efficiency in their proper work, without satisfying popular expectation. The proper work of a college was to train the minds of its students by means of a curriculum of studies selected with an exclusive view to that end. The public had demanded the addition of many studies to the college course without regard to their utility as means of intellectual training, and without adding to the time within which a college course must be concluded. Thus the curriculum of arts had been overloaded with studies which were not specially adapted to the culture of the mental faculties, and which could not be satisfactorily mastered within the time devoted to them. A mere examination of the schedule of the studies in any college would show how impossible a task had been attempted. So absurd was it that it could only have been framed by almost imperceptible degrees, because no rational person would have failed to see its sheer impossibility if it had ever been proposed in its integrity as an original scheme.

The necessity of some reform had been keenly felt by enlightened educators, and measures of reform had been introduced in several important colleges by the introduction of parallel courses of study which were open to the selection of the student. At the University of Virginia all departments of learning had been left open to the choice of students, but that plan, whether successful or not in that institution, had been followed with great inconvenience, and even by disaster, elsewhere. Some colleges had been more successful in establishing extra-

collegiate departments, devoted mainly to theoretical and practical science, and to the applications of chemistry and natural philosophy to the arts. Finally, the same general sense of the necessity of some change in the present overloaded college curriculum had "manifested itself in the establishment, in a college which had previously presented but a single course of study terminating in the degree of Bachelor of Arts, of a second course, intended to commence where the first ends, and leading to the higher degree of Master of Arts." This last course Barnard himself preferred. It had been distinctly approved by Dr. Thornwell of the College of South Carolina; at Brown University, in accordance with the earnest recommendation of Dr. Wayland, it had been already introduced; even the University of Virginia, which permitted its students to select their own departments of study, nevertheless made definite exactions of all candidates for the degree of Bachelor of Arts, and much higher exactions of candidates for the degree of Master; "and during the past year, Columbia College in the City of New York, one of the wealthiest institutions in the country, and also one of the earliest established, after a long period of deliberate inquiry and extensive correspondence with the most experienced friends of education throughout the United States, had instituted exactly the system which was now recommended."

If these views should be approved, the first measure of reform would be a reduction of the undergraduate course by "excluding from the curriculum of study all those branches of science which are confessedly modern additions, and along with these the modern languages." The course, as thus reconstructed, would then include the English, Latin, and Greek languages, the elementary branches of the pure mathematics, the mechanical branches

of natural philosophy, logic, rhetoric, the principles of criticism, moral and mental philosophy, composition, and elocution. In the closing year it might be proper to introduce elementary courses in chemistry, and some topics of natural philosophy which are not strictly mechanical; but the object of introducing these courses should be simply to give the student some foretaste of these subjects which might stimulate him to a further study of them in the higher department. In no case ought they to be matters of examination for the Bachelor's degree.

At first the arrangements of the post-graduate department must be provisional.

To the post-graduate department may be turned over those branches of science and letters which are excluded from the former, and which, at present, are imperfectly taught. Their number may from time to time be increased by adding new ones as the wants of the public and the growing resources of the University may demand and justify. Thus, it may immediately include astronomy, geology, mineralogy, chemistry, natural philosophy, meteorology, civil engineering, the higher branches of the pure mathematics, Greek and Roman letters, the modern languages and their literature, political economy, international law and the history of philosophy; but it will include at first only such of this list as are most practical in their nature. In creating this department the design should be to build up ultimately a university in the largest acceptation of that term, and it is to be expected that, in the progress of years, schools of agriculture, of natural history, of medical science, of civil and political history, of oriental learning, and others, will be established as they shall appear to be needed, and that the existing School of Law will be strengthened by the addition of new professorships.

Admission to the post-graduate schools ought to be open only to Bachelors of Arts and to persons whose preliminary

training should be proved by a thorough examination to have fully qualified them to enter on their special studies, but the university should maintain no preparatory school except the regular college of arts. Students entering the post-graduate schools, however or wherever they might have received their preparatory training, must be educated men; they should be perfectly free to choose their own schools; and they should not be obliged to study in any school against their will. If it should be thought proper to confer the degree of Master of Arts, that honor should be conferred on those only who should have previously completed the undergraduate course, and who should then have passed successfully through a prescribed number and variety of post-graduate schools.

The instruction in post-graduate schools ought to be radically different in method from undergraduate instruction in the college. Undergraduates are boys whose immaturity of mind and character has to be constantly borne in mind. Many of them attend college merely in compliance with the wishes of their parents, and with no clear sense of the object of their being sent there. Many are playful, and care only to pass their time as pleasantly as possible. Some are idle. Consequently the discipline of the college must be so framed as to exact at least a minimum of mental effort from all, even the most reluctant, or mental discipline, which is the great purpose of a college education, will not be secured. Hence the college course is necessarily laid out in a succession of tasks which the student is required to perform, and his performance of the tasks prescribed is tested by daily recitations.

Recitation is indispensable, but its advantages have been greatly over-rated. It trains the student to express his ideas of a given subject with readiness. He may learn from the recitation of a fellow-student something that he

has overlooked or misunderstood. If he makes an error in reciting, he gives the teacher an opportunity of correcting him and of supplying some needed information. An acute instructor will avail himself of the recitation to draw out matters of interest which would otherwise escape the pupil altogether; but the more he does so, the more he will be passing out of mere recitation and into a far higher method of instruction. "For the purposes of *mere* recitation any man who is capable of understanding what the pupil says and of reading the books from which he has learned it, so as to compare the performance with the text, is as good and capable an examiner in a class-room as any other." The teacher who meets his classes merely to hear their recitations is not really a *teacher*, nor does he become so until he engrafts upon that exercise the higher expository function of the lecturer; and just in proportion as he rises to that higher function must he sacrifice the process of personal investigation which is the main object of the daily recitations. Class recitations, under ordinary circumstances, present this gravely disadvantageous dilemma, that very few out of a large number of students can be examined at any session, or else that so short a time must be devoted to each of them as to make the examination merely formal. Thus, unless the teacher strictly confines himself to the function of a mere *répétiteur*, the recitation, considered as a method of coercion, fails of its purpose. It too often happens that the teacher does confine himself to that function; his accumulated knowledge is not applied to the elucidation of the subject in hand, and he falls into a dull routine in which he ceases to be a living power and becomes merely a questioning machine.

In the post-graduate schools the method of formal recitations could have no place. It must be presumed that students entering those schools would be as anxious to

learn as the teachers to teach, and hence all thought of task-work must be banished. So far as questioning might be practised, its object would not be to test the previous work of the student, but rather to discover where the teacher's personal efforts might be applied to the best advantage. His proper work would be to lecture, in the sense of giving oral expositions of the subject in hand. Thus his whole knowledge would be available, whether it were or were not contained in text-books used by the student, and he would be constantly stimulated to impart his personal knowledge to the class before him. Books would by no means be discarded. It would be the duty of the teacher to refer his pupils to many books in which they might find fuller details of particular topics than time would permit him to give. But his work would be to discourse upon a subject, not to repeat the substance of a book, and so, from sheer necessity, he would be a true teacher of his class. On many occasions the method of recitation in the college course would be reversed; the student would ask questions, and the teacher would reply. In cases which admit of argument it would be of great advantage if the student were permitted to take issue with his teacher and to give his reasons for holding a different opinion, because nothing could afford the teacher a more admirable opportunity for expounding and illustrating the matter under consideration, and nothing would more surely encourage the student to apply his own faculties of research and judgment. In short, while the object of recitations in college is to compel immature boys to certain efforts which are necessary to their mental and intellectual training, the object of post-graduate instruction would be to assist the voluntary studies of serious and earnest men.

Of the time to be devoted to the undergraduate course

and to the schools of the post-graduate department, Chancellor Barnard spoke with some reserve; but he intimated that the former might be advantageously reduced. That subject, he thought, might perhaps be properly left to the independent consideration and decision of the Board of Trustees whom he was addressing. He said

> Columbia College, New York, under its new organization, proposes to confer the degree of Bachelor of Arts at the end of three years of study, and that of Master of Arts after two years additional. Brown University has fixed the course for the degree of Bachelor of Philosophy at three years, while that of Bachelor of Arts is still suffered to extend to four years. In the University of Virginia degrees are conferred only on proficiency, whatever be the time of study required to secure the necessary qualification; but in that institution it is believed that a faithful student can attain the Bachelor's degree in three years, and the Master's in four or five. Whatever be the lengths of time fixed upon as proper for the case of this University, it is clearly expedient that proficiency, and not a determinate period of residence, should be made the test of fitness for the honor of graduation, and that the proficiency of candidates should not be a matter of inference from the recorded results of their daily performances, — a criterion which is fallacious in the extreme, — but should be ascertained at the close of the course by rigid written examinations.

The important thing at present was to draw a line between the period devoted to the first great educational end of training the mind and the second period devoted to imparting special knowledge. There was no reason why this should not be done, and until it should be done the University of Mississippi would continue to be nothing more than a German gymnasium; it would not be a true university.

No matter what the original meaning of the word "university" might have been in former ages, it had come to

mean a *Universitas Scientiarum*, a School of all Learning, and to create such a university as the present age required would demand large expenditures, and therefore a large endowment. There were many colleges; for lack of endowments there could be few universities. A seminary of education belonging to a great State ought to be fully equipped and managed as a university of the first class. The University of Mississippi was not only a State institution; it was already possessed of an ample endowment, and although some time might elapse before it could reap all the benefit of that endowment, the appropriation made by the Legislature to its support was sufficient to enable it to make a beginning of the measures which were necessary to inaugurate its career as a true university. Nothing more important to the best interests of the State could be done than to foster the highest education; yet, while he advocated no rash or precipitate measures, he did plead for an intelligent beginning. He brushed aside the trivial objection that "the plan which he proposed was too large." If it should be realized to the full, it would not be too large for its purpose, nor for the use and honor of the State, nor would it be incommensurate with its endowment; but what he was proposing for the present was not all that might come in the future; it was only the small beginning, which there were ample means to make. He repelled the objection of the unintelligent that "the University, as it was, sufficed for the needs of the people" by retorting that the demands of the people had constrained the colleges throughout the country to attempt the impossible, and that what he proposed was simply to organize the University in such a way as to enable it to meet the just demands of the people. He replied to the objection of the ignorant that "the higher learning is useless because it is not practical" in a noble paragraph in which

he maintained the nobility of knowledge for its own sake, independently of practical utility, and then proceeded to show how largely the progress of mankind has been furthered by merely incidental, and for a time unnoticed, discoveries of science.

In every branch of human investigation truths may be brought to light which are merely incidental and without perceptible ulterior importance. The truth is, that speculations upon the value of any discovery, in the moment in which the discovery is made, are totally idle — are worse than idle — are foolish. The alchemists, in their indefatigable, though empirical and blind, researches in quest of the philosopher's stone, discovered many curious compounds which, since they availed nothing towards the production of gold, were held by them in low esteem; yet among these are some of those energetic reagents which, in the hands of modern chemistry and directed by modern intelligence, have heaped up gold in mountains, beyond even the alchemist's wildest dreams, in the heart of every civilized land.

To descend to later times, and to speak with more specific particularity, when Priestley, in 1774, turning the focus of his burning lens upon the substance known in the shops of the apothecaries under the name of red precipitate, detached bubbles of a gas identical with that which, in the atmosphere, supports life, who could presume that, in thus freeing one of the metals from its companion element, he had detected the composition of many of the most useful ores and furnished a hint which was yet to reduce all metallurgic art, from the smelting of iron to the reduction of aluminum, under the dominion of chemical science, and to the severe rule of an intelligent and a productive economy? When, in the same year, Scheele, by operating on the acid of sea-salt, made first visible to human eyes that beautifully colored gas whose suffocating odor is now so well known to all the world, who could foresee the astonishing revolution which a discovery then interesting only for its curious beauty was destined to introduce into the manufacture of paper, of linen textures, and of a vast multitude of other objects of daily and hourly use?

Or what imagination could have been extravagant enough or fantastic enough in the exercise of its inventive power, to anticipate that a substance, for the moment not merely useless but seemingly noxious, would in the nineteenth century accomplish what, without it, no instrumentality known to science or art could have accomplished, — find aliment for the rapacious maw of a letter-press whose insatiable demands, already grown vast beyond all conception, grow yet with each succeeding year? When the chemist of the last century observed the discoloration and degradation which certain metallic salts undergo in the sunlight, who could possibly read, in a circumstance so apparently trivial though occasionally troublesome, the intimation that the sun himself was about to place in the hands of Niepce, and Daguerre, and Talbot, a pencil whose magical powers of delineation should cause the highest achievements of human pictorial art to seem poor and rude in the comparison? When Malus, in 1810, watching the glare of the sun's rays reflected from the windows of the Luxembourg to his own, noticed for the first time the curious phenomena attendant on that peculiar condition of light which has since been known by the name of polarization, what prescience could have connected a fact so totally without any perceptible utility, with the manufacture of sugar in France; or have anticipated that an instrument founded in principle on this very property would, forty years later, effect an annual saving to the French people to the extent of hundreds of thousands of francs? When Œrsted, in 1819, observed the disturbance of the magnetic needle by the influence of a neighboring galvanic current, how wild and visionary would not that man have been pronounced to be, who should have professed to read in an indication so slight, the grand truth that science had that day stretched out the sceptre of her authority over a winged messenger, whose fleetness should make a laggard even of Oberon's familiar sprite, and render the velocity which could put a "girdle round the earth in forty minutes" tardy and unsatisfying?

Questions of this kind, suggested by the history of scientific progress, might be multiplied to fill a volume. Indeed, it has almost come to be a dogma in science, that there is no new

truth whatever, no matter how wide a space may seem in the hour of its discovery to divide it from any connection with the material interests of man, which carries not within it the latent seeds of a utility which further discovery in the same field will reveal and cause to germinate. And it has also almost come to be a rule, that new discoveries in regard to the properties of material things, or the laws that govern them, shall belong to the class of seemingly useless truths. A new truth, though in its bosom may lie buried the germ of a wealth to which all the gold of California would be but as the light dust of the balance, may yet for years occupy in men's estimations no higher a place than that of a fact of curious knowledge; even as the priceless diamond in the cottage of the fisherman of the Eastern tale was esteemed capable of being turned to no better account than to serve as a plaything for children. Not even useful truth is useful until it is known to be so, and until it is known how it is to be so. And no matter how numerous and multiform may be the facts which the armies of science may sweep together as their spoil, and no matter what infinity of benefit to man may be hidden among the rich booty — all this availeth nothing to the world which it so deeply concerns, until, by patient experiment, endlessly varied and feeling its way cautiously in the obscurity, it has been made manifest to what useful ends the result of the conquest may be applied. Thus, when Volta, by piling up bits of metal and moistened cardboard, one upon another, succeeded in producing a feeble disturbance of electrical equilibrium, he discovered, as early as the year 1800, a truth pregnant with consequences of incalculable moment to science, and destined to contribute more to human comfort and the wealth of nations, than the discovery of a dozen Californias. Yet several years elapsed before, in the hands of Davy, the wonderful fertility of this great germ-truth even began to be revealed; and still, at this very day, after the lapse of more than half a century, after a long series of illustrious investigators have added their labors to his, — after the inventive genius of a Hare, and a Wollaston, and a Daniell, and a Grove, and a Bunsen have been successively employed in exalting the energy of the combinations, and the intelligent sagacity of an Ampere, an Arago, a

Henry, a De la Rive, and a Faraday, has been opening out to view a brilliant array of resultant truths; when all things in earth and air and sea have yielded to this next to miraculous power the secret of their composition; when the obdurate puzzle of the earth's magnetism has melted away before it; when a network of electric wires has annihilated the breadth of continents, and the two mightiest nations of the earth are preparing to stretch out the line which links thought with thought, from shore to shore of the ocean itself, — even now, the progressive development of the great germ truth is still unchecked, and the world is full of laborers exploring, with unabated zeal, the field first opened to their research by the intelligent observation and appreciative genius of Volta.

If it is difficult, then, for philosophers themselves to judge, in the first moments of discovery, in what precise form, and through what precise practical application, any new truth may become palpably useful to man, how much more so must it be for the multitude who are not philosophers! And if it has happened in instances which defy enumeration that the insignificant truth of to-day has been exalted to a position of the highest dignity to-morrow, how shall we venture to say of any known fact of science, however it may surpass our present penetration to discover any connection, immediate or remote, between it and the increase of human wealth or comfort, that it is a useless fact, or that the labor which may have been expended in bringing it to light has been thrown away?

This eloquent vindication of the utility of scientific research was not written without a practical purpose, nor merely for the purpose it seemed to have in view. Barnard had set his heart on securing for the University at the earliest possible moment a modest astronomical observatory, to be paid for out of the appropriation which had been made by the Legislature, and so to make a beginning of that higher scientific research for which he hoped that the University might yet be famous. He had already sufficient apparatus for all the other departments which he could hope to establish for years to come, and the

objection of immediate inutility was precisely the objection which could be most easily maintained against advanced astronomical studies. His vindication of scientific studies in general was therefore meant chiefly as an introduction to a similar vindication of astronomical studies in particular, by which he might anticipate objections to the establishment of an observatory.

The science of astronomy is that which seems to the view of most men at the present day to occupy itself, more than any other, with laborious trifling. Not that the uses of astronomy in general are altogether denied. Most persons know that astronomy has something to do, in some way or other, with navigation; and nobody need be told that navigation has something to do with commerce, or commerce with human wealth. But the idea seems to be generally prevalent, that all the service which astronomy can render to navigation has been rendered long ago, and that observers are now idly gazing up into the skies for the gratification of a transcendentally refined curiosity. It is true, notwithstanding, that astronomy is still too far short of the point of perfection to assign the place of a ship on the ocean within a narrower limit of error than three or four miles.

As early as 1598, Philip III., of Spain, offered a reward of one thousand crowns to the person who should solve the problem. The Dutch States shortly after followed with an offer of ten thousand florins. In 1714, the British Parliament proposed the magnificent prize of twenty thousand pounds to any one who should furnish a method by which longitude on the ocean could be ascertained within thirty geographical miles. The same body offered also the lesser reward of fifteen thousand pounds for a method which should be correct within forty miles; and ten thousand for one true only within sixty. In 1716, France, under the regency of the Duke of Orleans, offered, to the same end, a prize of one hundred thousand livres. But no really important results were ever arrived at until after the establishment of regular astronomical observatories. When, in 1674, St. Pierre, a French competitor for the prize offered by Parliament, presented to the court of Charles

II. an astronomical method for the determination of the longitude, no better tables of the heavenly bodies existed than those of Tycho Brahe. The commissioners appointed to examine St. Pierre's claim applied for advice to Flamsteed, then the most eminent of British astronomers. He replied that the method was valueless, on account of the errors of the tables; and that every astronomical method must be equally so, unless the places of the heavenly bodies should be observed anew. It is said that Charles, on reading this letter, exclaimed impulsively, "But I must have them observed!" and these words from the lips of royalty laid the foundation of the Observatory at Greenwich. That single institution has done more for the increase of the world's wealth than would have sufficed to support at their ease all the astronomers and physicists that ever lived since the days of Hipparchus; to build and furnish all the observatories the world ever saw; to establish and endow all the universities, colleges, and schools, of every grade from highest to lowest, throughout the globe; to erect and provide for all the hospitals, almshouses, and eleemosynary institutions of every kind, in all civilized lands; and to build all the churches and parsonages, as well as defray all other expenses attendant on the support of religion, in every Christian country, from the advent of our blessed Saviour down to the present hour. We need not hesitate to assert that the observatories of Europe, beginning with those of Greenwich and Paris in the seventeenth century, have done more in widening the scope of the world's commercial operations, and quickening the energy which has pervaded and filled them everywhere with activity, than all other influences put together — than the temptation to human cupidity offered from all antiquity in the fabled wealth of India, Cathay, and the Islands of Spices — than the intoxication with which the world of the sixteenth century ran mad over the metallic treasures of the two Americas — than all the stimulus applied by interested governments, in the form of favoring legislation, grants of monopolies and the investment of trading companies with exclusive rights and privileges — than all the improvements of naval architecture, increasing the strength, the stability, the capacity, and the speed of sea-going vessels — than

all the discoveries in marine geography, disclosing the hidden dangers of the ocean's bed and the insidious currents of its surface — than all the progress made in studying the laws which govern the winds, their direction, their violence and their fluctuations — than the upspringing and growth to greatness of colonies upon wild and untenanted shores — than the simultaneous enlargement of the material by the discovery of new articles adapted to the uses of man, or the application of articles of ancient knowledge to new uses — than the enlargement of human wants through the facility with which the simpler wants of the earlier centuries are supplied in the later — than the enlargement of human wealth itself, which tends ever through commercial enterprise to enlarge itself still more — than, finally, the great improvement of the nineteenth century, the invocation of the powerful arm of steam to the propulsion of the mercantile marine, securing a rapidity and a definite duration of transit on the longest voyages which are next in value to wealth, itself.

This great benefit conferred by astronomy upon commerce, and through commerce upon the world's wealth, has resulted from the operation of a very simple principle. In whatever human enterprises wealth is set at hazard, the ventures will be greater in proportion as the hazard is less. It is conceivable that the dangers of the ocean might be so great as to arrest transmarine commerce altogether. It is also conceivable that they might be totally annihilated. Between the extremes, commerce would assume every intermediate aspect of vitality and freedom, from vigorous life down to absolute torpidity. Now, among the Athenians, according to Say, marine insurance bore the extravagant rate of sixty per cent per annum, or thirty per cent per voyage on the total value insured. Say supposes this extraordinary fact to be in part attributable to the barbarous habits of the people with whom the Athenians traded — a supposition apparently quite gratuitous, since no producing people is hostile to commerce, and no non-producing people is worth trading with. But he attributes it also, with greater justice, to the dangers of navigation, and adds this significant remark: "There was more danger [to the Athenian merchant-sailors] in a voyage from the Piræus to Trapezus,

though but three hundred leagues distant, than there is now [1826] in one from L'Orient to China, which is a distance of seven thousand." This statement alone is sufficient to show that the reduction of marine dangers in modern times — a reduction mainly due to astronomy — has been sufficient, ten times over, to stimulate into vigor a struggling trade; and hence that that rich Oriental commerce which lived and flourished, and in the hands of the Venetians, and the Portuguese, and the Dutch, poured wealth into Europe, in spite of the indefinite perils and perpetual losses of the tedious voyage by the Cape, during which the capital lay a dead investment — that commerce which enriched its possessors, must, under the almost boundless development given to it by the favoring circumstances of modern times, have contributed to the world's wealth to an extent which no figures can compute.

The condition of the astronomical tables at the founding of the Royal Observatory was such that they could not by any possibility be made the basis of a method of practical navigation, since the place of a ship as determined by them, might possibly be in error to the enormous extent of nine hundred miles; nor was it in the power of any correction practicable without new and laborious observation, to reduce this limit of error to less than one-fourth of its amount, or nearly two hundred miles. On the establishment of observatories, the first and largest steps toward improvement were comparatively rapid and easy; the more recent have, on the contrary, been slow and difficult. In the lifetime of the first public astronomers the outline of a satisfactory method of navigation by the stars still failed to appear. The moon, "the inconstant moon," had still to be watched through many a weary revolution. Not till near the close of that long period, had astronomy presented to the world a method of ocean longitude, within the outside limits specified by the parliamentary act of 1714. If, then, to make but a modest approach toward theoretic perfection, when practical astronomy was yet on every side open to easy improvement by the first comers, was a labor arduous and slow, what must have since been, what must yet continue to be, the toilsomeness of the task of working out its still higher improvement, and carrying it onward toward that standard of

ideal perfection which science will continue to approximate while the world stands, but, after all, will never fully attain.

Having thus shown the immense utility of astronomy to the commerce of the world, the Letter proceeded to show how the prosecution of astronomical studies had led to an improvement in methods of mathematical calculation which must ultimately prove to be of inestimable value in every department of exact science.

The fact that the observations of to-night cannot be turned to immediate account to-morrow morning, but that the accumulated results of many observations are necessary to a single additional step of progress, is one which places the science at a great disadvantage, when its claims are canvassed in the world. The incidental facts of discovery which are of a nature to be generally understood, though they illustrate in no manner the great and proper labors of these useful men, are often seized upon by those who depreciate the value of astronomical research, as if they were the objects and ends of astronomy. A telescopic comet is announced, and the discoverer is rewarded, perhaps, by a royal medal. Now, What of this comet? says the objector, and, How is the world the better for its discovery? Well, for the present, we freely admit that we shall sleep no warmer in our beds, nor wake any richer in the morning, on account of it. Yet the reward is a just reward for vigilance, and vigilance certainly is valuable. Experience has, moreover, shown that the observation even of comets has no slight interest in its relations to the theory of gravitation, to the physical condition of the realms of space, and to the permanence of the system to which we belong. But let the comet go; class it with the Antarctic continent discovery by Wilkes, or with the boomerang of his Feejee islanders. We are not happier or less happy for the one or for the other; yet the Antarctic continent is, after all, a great fact; and the boomerang is a small one which there was surely no harm in recording.

The objector sometimes, however, unconsciously founds his strictures upon discoveries which are not trifles. The under-

signed had heard the question gravely raised, What advantage has the world derived from the discovery of the planet Uranus? The fact, remarks the objector, is called an important one; and yet mankind had got along very well without it. Now mankind got along well enough for a time without buttons and without breeches; and much longer without the printing press, and without the steam-engine. Mankind felt no need of cannon when there was no gunpowder, nor of telegraph posts when there was no galvanism. Mankind got along very well without Uranus, and could have got on much longer under the same privation, had not Uranus been discovered. But to say that the discovery has been of no use, — this is an admission which we are not prepared to make. It has been of use, as may be easily illustrated.

First, however, let attention be drawn to an analogous discovery of somewhat later date, the history of which is both curious and instructive and may best precede what relates to Uranus. On the first day of January, 1801, the very first day of the nineteenth century, the distinguished astronomer, Piazzi, of Palermo, observed a minute planet, never before noticed by human eye, since known by the name of Ceres. Compared with Uranus it is but a sand-grain to a mountain. Compared even with our moon, it is but an insignificant globule — a pepper-corn to an orange. Yet its discovery had a value. Piazzi silently observed it, designing, so soon as he should have satisfactorily determined its orbit, to surprise the world by the announcement of a new member of the solar system; but it soon plunged into the overwhelming blaze of the solar radiance, and was lost to view for months. Unable, from the few observations he had gathered, to determine the path of the stranger, Piazzi at length laid the observations themselves before the astronomical world. The period of the probable emergence of the body from its veil of light having arrived, innumerable telescopes were directed toward the region of the heavens in which its track was presumed to lie; but not all the scrutiny nor all the perseverance of all the astronomers of Europe could suffice to recover the lost planet again to human view. Gradually a suspicion began to be whispered that the pretended discovery was no discovery at all; but that Piazzi

had fabricated the observations with the malicious design to puzzle and annoy his contemporaries.

Now, at about this very period, a mathematician of Germany had had his thoughts turned toward a defect in the existing state of astronomical science, in regard to the determination of planetary paths. While this defect continued, it was impossible to test the question whether the observations were genuine or not. The occasion stimulated him to supply the defect; and the result, the *Theoria Motus Corporum Cœlestium* of Gauss, was one of the most valuable contributions to mathematical science ever made. By the aid of the *Theoria Motus* the path of the planet Ceres was traced from the time when it escaped from the hands of Piazzi. Gauss said to the astronomers, "Look yonder, and you will find your truant star." They looked, and the little globule was recovered on the first clear night thereafter.

Now, what the planet Ceres did for the world was to improve mathematical science — the science whose useful applications on the earth are infinitely varied, and without which all our knowledge of the heavens derived from mere observation would be of no value whatever, either to navigation or to any other end. And what the planet Ceres did, that the planet Uranus has done in a different manner.

From an early period following its discovery, this planet had been a very burden upon the patience of astronomers, and a sore trial to their faith. From its motions as actually observed, its prospective motions, as they ought to be, were deduced by computation, and its path was prescribed to it with a confidence which the tested power of physical astronomy had rendered somewhat strongly assured. But Uranus seemed very little to heed the dictates of the astronomers, and the path which they assigned him was one in which he chose not to walk. Moreover, after his discovery, the fact presented itself that he had already been observed nineteen times before, without being recognized as a planet — once so long before as 1690; and that when the positions which he occupied at the times of those ancient observations were compared with what they should have been according to the law of his later motion, there was a disagreement to an extent so

large as to make it impossible to assign any path whatever to this contumacious planet, so as to recognize the theory of gravitation, and harmonize the old observations with the new. Here was a case of real perplexity. It raised the question whether the law of gravitation is, after all, a law which can be universally relied on. Evidently the decision must go against the law, unless it could be shown that some disturbing body, heretofore overlooked, existed within the limits of the system, and of which nothing was known except in the seeming caprices of Uranus. The data on which to proceed were evidently much slighter than when Gauss attacked the problem of Ceres. Ceres had been seen; the unknown disturber of Uranus, never. But as if to illustrate the truth that, as difficulties accumulate, human energies correspondingly rise to their encounter, it was not a single champion who rushed forward to the support of troubled science; two simultaneously, with equal enthusiasm, equal perseverance, and equal final success, attacked the difficulty, and bore off the plaudits of the world. Leverrier wrote to his friend at Berlin, "Examine the point I describe, and you will find the disturber." Galle turned his telescope in that direction, and in the self-same hour, Neptune was found. Simultaneously, Adams laid his finger on the map of the heavens, and said to the astronomer of Cambridge, "It is in this lurking-place precisely that you will find the author of all our confusion." The astronomer Challis, distrusting isolated observations, commenced a systematic sweep of the whole region. He saw and recorded the planet twice without knowing it, and failed to make the discovery simply because he deferred the comparison of his observations until too late. Thus, the benefit which has resulted to the world from the discovery of Uranus is analogous to that of which Ceres was the occasion: it has wonderfully stimulated ingenuity in the improvement of mathematical methods and has thus contributed to the advancement of that science without which no other exact science can exist.

Why should the State of Mississippi participate in educational measures by which the science of the world is enriched? Why should not such pursuits be left to older

communities? In answering these questions the Letter addressed not only the reason of the people of the State, but also their State pride. He observed that, for want of institutions devoted to the higher studies, native talent would lack its necessary stimulus. It was true that, when once aroused, talent would find ample opportunity for education and exercise elsewhere; but without home institutions the likelihood was that it would never be aroused to energetic activity. The number who might be induced to enter on advanced studies through the influence of such institutions might be few, but their value to the State might be inestimably large. Moreover, it was universally conceded at the South that Southern youth ought to be educated at home. The Southern sentiment on that point was right, and it would be right even if the South had no peculiar interests to make home education especially important. Yet the fact was that the flower of the Southern youth was still sent to be educated at Northern schools. The excellence of Southern schools was universally extolled; indeed, the praise bestowed upon them was so excessive and so indiscriminate as to check the spirit of improvement by producing in their managers a contented faith in their own merits which was not by any means well founded; but the true opinion of educated and intelligent parents was quite practically shown by the simple fact that they did not send their sons to the institutions of the South, but to Northern institutions. Moreover, the judgment of such parents was amply justified; for, unless the enlightened course of the Trustees of the University of Mississippi had made it an exception, "no institution of learning in all the South could justly claim for itself an undeniable equality of merit with any one of the older colleges of the North, and much less could any

Southern institution justly arrogate to itself superlatives of praise."

But the excellences of an educational institution must be caused by three things, — the personal ability of teachers, the methods of instruction, and the material appliances provided for imparting instruction. The first and second of these elements of excellence might be dismissed in a comparison of Southern with Northern schools, because the Southern teachers were in many instances men of undoubted ability, and the methods of instruction were the same in both sections of the country. The difference must therefore be sought in the defect, at the South, of the means and appliances which are necessary as auxiliaries to the highest instruction, and the remedy for that defect would be found in supplying what was needed, not in denouncing any one for observing its effects, nor, assuredly, in denying that the defect existed. The Trustees of the University of Mississippi at a meeting in 1856, had unanimously accepted the correctness of the principle that whatever attractions, and of whatever kind, might be operating to draw the youth of Mississippi to institutions of learning beyond the State, the same attractions ought to be created at the University of Mississippi. Much had been done to carry out that principle. The philosophical apparatus was unsurpassed by that of any institution on the continent, and in some respects it was unequalled; its mineral collections were unrivalled except in the richest cabinets of the country; in conchology it had a treasure which no other institution could approach. Astronomy was still deficient in the necessary apparatus and appliances; and yet the aid of the University had already been sought by the authorities of the United States in making observations which were to be simultaneously made in other institutions, and in the results of

which the whole world was interested. The very fact that the University of Mississippi was so recognized was a valuable distinction, and if the invitation were accepted, the reputation of the University would be instantly enhanced, since it would at once take rank with institutions of the highest scientific distinction throughout the world. The effect which such a reputation must immediately have on the prosperity of the University could not be doubtful. The State itself would gain in reputation before the world, as an enlightened community, and it would deserve its reputation, because in promoting letters and science it would be using means which the history of mankind has shown to be universally efficient in making the people of any community happier and better. Not only would the higher learning be advanced, but preparatory schools would be constrained to advance in like measure, and so a class of competent teachers would be raised up to supply satisfactory instruction in the common schools. In short, there was no great interest of the people of the State which would not, in time, be directly or indirectly promoted by the advance of the State University to the point of excellence which such an institution ought to endeavor to attain.

If it was objected that the State was still too new, and that its wealth was not yet sufficiently large, for such undertakings as were now proposed the answer was a categorical denial of the statement. In the sense of a political organization, the State of Mississippi was new indeed, but only in that sense. The people of Mississippi were not beginners in the duties or habits of citizenship. They had been trained to the life of citizens from their birth, and all that was asked of them was to do as their fathers had done, and as they themselves would have done elsewhere. Their wealth was ample for all that was proposed, and the

wealth of the State was constantly increasing, but even that wealth need be drawn upon to only a small extent and for a limited time, until the endowment of the University should be made available for the purposes for which the State had received it, and to which the constitution of the State required it to be applied. The greatness of a State consists, not in mere wealth, but in the moral and intellectual enlightenment of its people; and the glory of a great and wealthy State consists in so using its wealth as to minister to these ends. Noble institutions of learning are evidences of the true greatness of a State. "What are structures of polished marble or ponderous granite compared with the majestic creations of the intellect? And what though it be given to a few to assist personally in lifting to a loftier and still loftier height the proud temple which successive generations have reared to science in the midst of the nations, surely no one can be insensible to the sublimity of an edifice whose foundations are as broad as the foundations of the earth and whose vaulted dome is studded with the stars of heaven!"

CHAPTER X

Effect of Barnard's Letter to the Trustees — Two years of progress — Barnard and the University of the South — Discouragement — Report to the American Association for the Advancement of Science on the Coast Survey of the United States — The astronomical observatory and its telescope — A petty persecution — A case of discipline — Charges against Barnard of unsoundness on the slavery question — His defence and acquittal — Barnard's views on slavery — A Union man at the South — Thanksgiving discourse in 1856 — A letter from Jacob Thompson — A meeting with Jefferson Davis — The astronomical expedition to Labrador — Barnard is elected president of the American Association for the Advancement of Science.

CHANCELLOR BARNARD'S Letter to the Board of Trustees of the University was read with interest and satisfaction far beyond the borders of Mississippi. He received from many eminent men hearty congratulations on the service he had done to education. From Dr. Orville Dewey, a native, like himself, of Sheffield, he had a commendation which particularly gratified him.

I have read your Letter [said Dr. Dewey] throughout with interest, and the arguments for astronomy with more than interest — with a sort of triumph, as the cumulative statements swelled up in a grand heap. Instead of praising you, which I have hardly a right to do, I will tell you a *tell* from one who has. Dr. Walker said to me that you had written better on university education than any other man in this country.

At home he was rewarded with more success than he had hoped for. Though the Trustees could not expect that Barnard's proposals, in their larger sense, were likely to be realized for many years, they set honestly

and vigorously about the work in behalf of which he had invoked their immediate efforts. Yet he had to encounter all the difficulties and discouragements which reformers must expect from mere unintelligence in coadjutors who are heartily in sympathy with them, but who do not, and can not, fully understand their whole mind. He had this additional difficulty, that at every step it was necessary to carry the public, and so to carry the Legislature, with him, as well as the Trustees. It would be idle to deny that under pressure of these difficulties he sometimes felt discouraged, and was often — perhaps too often — exasperated. But he never lost courage, and for that he deserved no special praise, because his work, as a whole, went steadily on, and he had good reason to know that, if his projects could not be carried successfully out in Mississippi, or if they could be carried out only after too long a time, he would have no difficulty in transferring his labors to some more hopeful sphere.

The record of the next two years was one of constant progress. The number of students rose rapidly; the library was increased; the main building of the University was enlarged; a new dormitory and a second boarding-house or Commons Hall were erected; the professors' dwellings were repaired and enlarged; a gymnasium was provided; new buildings were constructed for the department of Natural Philosophy, and the Chemical Laboratory was substantially rebuilt. Last of all, Barnard's darling scheme of an Astronomical Observatory was adopted and extended to include a Magnetic Observatory; suitable buildings were erected for both, and the necessary instruments for both were ordered. How completely the Board of Trustees had committed itself to his views of a State university was shown in their

Report to the Legislature of 1859, in which they declared that "the sense of the people of Mississippi demanded and favored the elevation of the University into a school such as its name denotes — a school of Universal Instruction." But for the beginning of the war between the States in 1861, there is little reason to doubt that special scientific schools of various kinds would have been inaugurated in the course of that year.

Even in 1858 Barnard's Letter had the effect of making public education a subject of unusual interest at the meeting of the Legislature, and while some of the projects which were discussed there were wholly impracticable, he sedulously encouraged the discussion. To his intimate and confidential friend, Dr. Hilgard, State Geologist of Mississippi, he wrote under date of November 11:

I wish you would give Howry any advice and help you can on University matters. Favor the agricultural project. Whatever practical absurdity it may for the present involve, if it helps to continue the sinews of war or to fund the debt, it is all well. I have told Howry to encourage it by all means, but to say at the same time that it can't be managed without money. Of course it will be an excrescence; it can't be a part of undergraduate instruction. Encourage the Normal idea; but maintain that it will require special methods, and be just as distinct an addition to labor as if a new department or two were to be added to our present course. The Normal School must, in fact, be an independent department. It will require more officers and more money, but it will be a grand thing for the State.

Again, under date of December 1, he wrote to the same correspondent:

I am glad to see that education is in so high feather in Jackson. I am encouraged to hammer away upon the same old anvil. Nothing prevents me but the cost of publishing, even though I "print at the North" cheaply. If the Board

would foot the bill, I would put out for popular circulation, some *sockdolagers* on the economy of educating the people by a thorough and efficient system of common schools, subject to a common direction and supported mainly by public appropriations. I would, in short order, break up the popularly diffused error which assumes antagonism between the higher and the lower education.

When a man of real power makes his power felt in any community, he begins to be in request for positions in which such power as he possesses are required, and the forceful intellectual energy which Chancellor Barnard was exhibiting led to more than one intimation that he might, if he would, be called to some other position of eminence in education. He was particularly pleased with a suggestion that the office of Vice-Chancellor, that is, of active head, of the University of the South might be offered him. It may be said without exaggeration that the scheme of the University of the South, at the time when it was first proposed by Bishop Polk of Louisiana, was the grandest scheme of a great university which had ever been conceived in this country. It was wholly original with Bishop Polk, a fact which is the more remarkable, as he was not himself a university man, but a graduate of West Point. He had all Dr. Barnard's aversion for the dormitory system, which he abhorred rather than disliked. He had formulated and proposed to the other Southern bishops the complete plan of a literary, professional, and scientific university, including schools for the acquisition of all learning, more than a year before Dr. Barnard published anything on that subject, and on reading Barnard's Letter, he at once opened a correspondence with him. Their views were similar; their aspirations were thoroughly sympathetic; there was much in the more than half-imperious positiveness of the

college-bred professor which was allied to the soldierly character of the quondam cadet of West Point, now a bishop, who was soon to fall in battle on a bloody field. Barnard was inspired with the grandeur of Polk's plans and with the good assurance of their fulfilment, which nothing but civil war disappointed. Polk, on his part, saw in Barnard a breadth of thought and a force of character which might be of inestimable value in the organization of the University. Bishop Green of Mississippi was enthusiastic in his advocacy of Barnard as the one man to be secured, and to be secured, if possible, at once, to join in the preliminary work of the enterprise, and for that purpose to visit and study the educational institutions of all kinds, including the gymnasiums, upper schools, technical schools, and universities of Europe, so as to be prepared with detailed plans for every department of the new institution. For a time this prospect dazzled Barnard and made him restive under the petty difficulties and obstructions with which he had to contend at Oxford, and he was disappointed and annoyed that Bishop Green's plan was not adopted without delay. He was hard worked at this time, and through the few letters which have been preserved there runs a certain tone of irritability, alternating and contrasting with a tone of eager but confident hope. Thus on July 1 (1859) he writes to Dr. Hilgard:

Had the Bishop [Green] here — a very pleasant time. He said it wouldn't be in the way of a man of science to be a Roman Catholic, if he wanted to belong to the University of the South. This was said *apropos* of the present Mississippi State Geologist, whom he considers a man of more merit decidedly than his predecessor. He told me that, if it could be fixed, he wanted me to go to Europe next year at the expense of the University of the South, but without resigning

here, say on furlough from this institution. The only trouble he apprehended was that no provision of funds had yet been made. He said, without any pumping or fishing, "You shall be President of the University, if I can make you so." He had formerly hinted more vaguely that they would want me; this time he was more explicit. I have begun, therefore, to form my staff, and I have named my Master of the Horse from the geological field of Mississippi. I hope he will find domestic bliss on the Sewanee Mountain. N. B. that you are not to trumpet abroad this matter of the University of the South. Bishop Green says, "I want you to stay here [Oxford] three years longer." Serving a pretty good space for Rachel!

Towards the close of the year his mood has changed, and he writes, on November 11, as follows:

My dear Hilgard: The M. D. made a failure after all. I told him when going on that I hardly knew how to bid God-speed to a young man bent on the insane and suicidal — suicidal so far as happiness is concerned, certainly — pursuit of a professorship in a Southern college; told him, as the result of my own experience, that if I stood in life where he was, I would take up any mechanic art, I would even be a private soldier or a day laborer, before I would again be an officer in a Southern college. But my flint is fixed; my destiny is marked out.

A few days later (November 16) he writes:

The misery of a situation in Mississippi consists in the destructive tendencies of the people. I wrote Young only a week ago that so intolerable is the feeling of uncertainty of the future, that I would rather occupy the humblest station anywhere, where human affairs had any stability, than the highest here. As I have thought it quite possible not only that the University would not secure anything more from the Legislature, but that even the $20,000 law might be repealed at this session, and possibly a successful assault might be made on the charter itself, of course I have had my apprehensions also for your interests. The failure of an immediate

explosion here has surprised me. I attribute it in some measure to the Governor's very emphatic language; for though he has greatly lost political strength, — and mainly by one unfortunate act of clemency, — yet no one doubts his judgment, and a very small potato would only look smaller in attacking the University or its intrinsic merits. While I ascribe a good deal of the singular quietness of the electric fluid to the paratonnerre of the Governor, I take some small amount of credit also for my own publication and Stearns', though both of them were "printed at the North." You see it is easy to call men fools when the public has no evidences to judge them by; but after those publications I suppose the sciolists will be likely to seek other grounds of complaint. Not that the publications contain much in themselves, but they are adapted, in my opinion, to show asses how little they know. As to C.'s opposition, it is practically of no importance; but I regard the University as a thing too far above the ruling stupidity of the day to be a success; and therefore I do not expect to stay here beyond another year or, at most, two.

Indeed, I have for some months been seriously thinking of resigning and leaving the State in July next. My mind will be decided in the course, probably, of this session. Several propositions were thrown out to me tentatively while I was at the North. They all had the one most welcome feature which belongs to nothing in Mississippi, — peace, tranquillity, permanence. I did build a little on assurances made to me by members of the Trustees — Trustees! I share your disgust at that word — of the University of the South. Now, I begin to believe that the thing is going to be a good deal like "Direct Trade with Europe," "Norfolk Steam Ferries," *et id genus omne.* If they would put a practical and energetic man at the helm, it would do; but with ten bishops to manage it — Southern bishops, moreover — what is it likely to amount to but *vox* —you know the rest.

Ebullitions of impatience like the foregoing were indulged only in the confidence of intimate friendship; to those who did not enjoy his perfect confidence he bore himself with entire serenity, and if he secretly fretted

at trivial difficulties or resented what he deemed to be needless delays in the execution of his plans, he sought the scholar's natural satisfaction in intellectual occupation. At a meeting of the American Association for the Advancement of Science, held in Montreal in August, 1857, he had been appointed one of a Committee of Twenty to inquire into the Coast Survey of the United States and report to the Association.[1] Soon after the meeting, Judge Kane, who had been named as Chairman, addressed a circular letter to his associates of the Committee, setting forth the topics on which it was especially desirable that they should present a report, but at the same time advising them that he did not wish to "circumscribe the range of their communications, nor indeed to define the subjects which should enter into the report." He said that, unless it should be otherwise ordered by the Committee, it would be his object "to submit to the Association, and through it to the community, a popular view of the objects and course of the Survey, and of the influence it is exerting, and may continue to exert, on different interests of the country." In conclusion he begged his associates, as a personal favor to himself, to give him their earnest coöperation in preparing the material of the report. This courteous appeal had all the

[1] The members of this committee were as follows: Judge J. K. Kane, Pres. Amer. Philos. Soc., Pa., Chairman; Gen. J. G. Totten, Chief Eng. U. S. A.; Profs. B. Peirce, Harvard; John Torrey, U. S. Assay Office, N. Y.; Joseph Henry, Sec. Smithsonian Institute, D. C.; J. F. Frazer, Univ. Pennsylvania; Wm. Chauvenet, U. S. Naval Acad., Annapolis; F. A. P. Barnard, Univ. Miss.; John Leconte, Col. of S. C.; Wm. M. Gillespie, Union Col., N. Y.; F. H. Smith, Univ. Virginia; W. H. C. Bartlett, U. S. Mil. Acad., West Point; Wolcott Gibbs, Free Acad., N. Y.; Stephen Alexander, Col. of New Jersey; Lewis R. Gibbs, Charleston Col., S. C.; Joseph Winlock, Sup't Am. Naut. Alm., Ky.; James Phillips, Univ. N. C.; William Ferrel, Nashville, Tenn.; Edward Hitchcock, Amherst Col., Mass.; James D. Dana, Yale Col., Conn.

effect that the distinguished Chairman could have desired. There was a general response to his request for contributions, and some of the members of the Committee replied at considerable length; but on February 21, 1858, before these papers could be completely analyzed, or even arranged, Judge Kane died, justly lamented wherever his name was known. At the meeting of the Association, held at Baltimore in the month of April following, Chancellor Barnard, though he was not present, was appointed Chairman of the Committee, and the whole work of preparing and publishing the report was entrusted to him. He found it to be no easy task. The wide range of topic and treatment suggested by Judge Kane had been somewhat liberally construed, and it was no light labor to unite and condense the various contributions into one clear and consecutive report. In his present irritable frame of mind Barnard was none too gentle in his criticisms of the work of his colleagues. On October 23 he wrote to his friend Hilgard:

If I don't write you, you mustn't mind it for the present. I have sixteen [University] exercises per week — three a day, except Saturday, and I am so interrupted that I am nearly crushed with my official work. I have had the Coast Survey on hand. It has to be wholly re-written. I would not give two straws for all the material furnished, except that which came from the Coast Survey Office itself. I have two other literary tasks also,[1] which I could less easily explain; and such has been the constant succession of interfering causes that, with the pile of papers all the time by me, I have not been able to add one line to the report for nine days. So you see I must now — there seems to be a cessation for the moment —

[1] Probably an essay on "The Pendulum," published by Van Nostrand, N. Y., 1859, and a contribution to the proceedings of the American Association for the Advancement of Science, "On the Means of Preserving Electric Contacts from Vitiation by the Spark."

use all my time, night and day. In fact, I have cut into the night heavily several times already. I have got the *heft* — in the Yankee, not the German sense — off my hands, as far as composition goes. It is true the tail-piece is to be made, and some of the crude compositions of the *savans* — none of them creditable, if published as they stand — are to be worked in, if possible. Now the task is to copy — for it must all be copied; Joseph's coat of many colors would be uniformity itself compared with the MS. as it stands. *Hic labor, hoc opus est.* I will write you as often as I can. I suppose no good is to come of the Legislature. I am in a frame of mind in which I care little personally either way. I am inwardly strong in the consciousness of having done my duty and in the conviction that I have done some work here which will not die with me. If they break down the University, I am content with my part in the verdict of posterity.

The Report on the Coast Survey was published in November, 1858. It was signed by all the members of the Committee, but in form, as in fact, it was a personal report. In an "Introduction Explanatory," Barnard narrated the history of the work. He told how it had been put into his hands and the difficulties with which he had had to contend in discharging the duty imposed upon him. In conclusion he tendered his thanks to those of his associates whose contributions had come into his possession, for the valuable aid they had afforded him. Beyond this merely formal recognition of them he did not go. The work was honestly his own, and he published it in such a form that it should be known to be his. It was a pamphlet of nearly ninety pages octavo, closely printed, but although it was recognized as a work of great ability, and had the immediate effect of putting its author as high in the ranks of men of science as he already stood as an educator, it would be needless and out of place to attempt here to analyze its contents. During the

same year in which the report was published he delivered an oration before the Society of the Alumni of Yale College on "The Special Responsibilities and Opportunities of Educated Men as Citizens," and in the following year he was admitted by his *alma mater* to the degree of Doctor of Laws, which had already been conferred upon him by Jefferson College, Mississippi.

Meanwhile he was pressing on, as well and as rapidly as possible, in the preparatory work of the Astronomical Observatory of the University, and also of a Magnetic Observatory for the automatic registration of the various elements of terrestrial magnetism. In 1859 the buildings were completed, and the instruments were ordered from the best makers. The construction of the telescope was committed to Mr. Alvan Clark of Cambridge, Massachusetts. The lens of the telescope in the Observatory at Harvard was fifteen inches in diameter. Barnard ordered a lens of nineteen inches, which Clark at first hesitated to undertake. He proposed instead to construct a lens of the same dimensions as that of Harvard, offering to test it, when completed, in the Harvard tube, and then to give it to Barnard for nothing if it were not found to be equal to the Harvard glass. Barnard insisted on the construction of a glass of nineteen inches, and was ready to comply with the usual terms of such orders, which required the payment of one third of the stipulated price in advance, one third when the glass had been so far ground as to be evidently perfect, and the remainder on the completion of the instrument. Mr. Clark declined to receive any part of the price before the instrument should be finished. Unfortunately it was not until the summer of 1861 that he was able to announce its completion. The country was on the brink of civil war when Barnard received a letter informing him that if he would visit Cambridge

about the end of June, he would then be able to make an observation through his telescope. At that very time, however, postal communication between the North and the South came to an end, and travel without passports ceased. The telescope was forgotten in the whirl of popular excitement. It could not be delivered, and it was never paid for. It is now mounted in the Dearborn Observatory at Chicago. Its lens is about eighteen inches and one-half in diameter. The instruments for the Magnetic Observatory were made by Mr. Wurdemann of Washington; the building was ready to receive them, and Mr. Wurdemann was nearly ready to deliver them when the outbreak of the war put an end to the whole scheme on which so much time and earnest labor had been expended.

But the telescope, at least, was destined to have an auspicious opening of its service to astronomy. In 1862, when Barnard had just reached Washington, one of the first persons he chanced to meet was Lieutenant, afterwards Admiral, Gilliss, who exclaimed, "I have just been in Cambridge to test your telescope. The glass has not yet been mounted in a tube, but it has made an important discovery already. It has detected a companion to Sirius!" In a subsequent visit to Cambridge Barnard heard the story from Mr. Clark himself. In testing glasses, it was Clark's custom to mount them on a long swinging pole, like a well-sweep, fixing the glass firmly at one end and attaching to the other end a short tube containing the eye-pieces. In testing Barnard's glass, he had directed the apparatus towards the dog-star, while the star was still concealed behind a corner of the house. His object was to see how long the brightness of the star might be perceptible before the star itself came into the field of view. While he observed the time, his son used

the eye-piece, and as soon as Sirius appeared, the younger Clark exclaimed, "It has a companion!" The observation was immediately verified, and the elder Clark always expressed his regret that he himself had not been the first to see the companion of the dog-star.

Towards the close of 1859 and in the beginning of 1860 Barnard was greatly annoyed by a petty persecution, the motive of which was purely personal, but the pretext of which was an allegation that he was not a trustworthy citizen of the South. This was a charge which it was easy to make against a man of Northern birth, and which was both humiliating in itself and difficult to repel. There was more or less disaffection towards him in the Faculty. It would have been strange if his growing influence and distinction had not caused some motions of envy among his colleagues, and it is more than probable that his naturally imperious temper and the irritability which he manifested at that time of his life may have given some cause of resentment. It does not appear, however, that more than one of his colleagues was actively opposed to him, and the occasion of dissension did little honor to those who were concerned in it. The facts were these: One of the students of the University who had been noted by the Faculty in general as a disorderly and ill-behaved person, entered Barnard's private premises during his absence, and brutally maltreated a female servant. Barnard, having assured himself of the fact of the assault, wrote to the student, charging him with the offence and advising him to withdraw. The young man called on Barnard and made an unsatisfactory denial of the charge, but agreed to withdraw. Two days later, as this promise had not been fulfilled, Barnard wrote again, saying that unless the student should leave immediately, he would write to his guardian and give a full account of the

offence. The student then refused to leave the University without a trial before the Faculty, to which he was entitled under the statutes. The trial was held accordingly. The student pleaded Not Guilty, but he afterwards explained that, although he had committed the assault, he had not committed it at the time stated in the charge, and was therefore entitled to plead that he was not guilty as charged in the presentment. In his defence he endeavored to prove an alibi, in which he was thought by some of the Faculty to be successful, while others thought that he failed. The truth probably was that he may have succeeded in proving that he was not on Barnard's premises at the time when the assault was said to have been committed, but that he still left in the minds of a majority of the professors a clear conviction that he had committed the assault. The difficulty of the whole case was that it was impossible to prove the fact of the assault by the evidence of a white person, the only white person who could have proved or disproved it refusing to do either. A majority of the Faculty felt that they were not at liberty to convict a student on evidence which the State did not admit in courts of justice, that is to say, on "negro evidence," and on that only at second hand without direct examination and cross-examination of the actual witnesses. In this opinion there can be little doubt that the majority were right though the minority maintained that the Faculty were not so bound by legal rules as to be debarred from rendering a verdict of Guilty when they were fully satisfied that the accused was guilty. In support of the view of the minority, instances were cited in which much less strictness had been applied in receiving evidence against a student; but the introduction of the negro question into the case sufficed to make the majority immovable, and when a resolution was

moved as the verdict of the Faculty, "That Mr. H., having been found guilty of the offence charged against him, be, and is hereby, suspended from the University," the motion was lost by the following vote :

For the motion — Barnard, Boynton, Moore.

Against the motion — Richardson, Stearns, Whitehorne, Phipps, Carter.

The following resolution was then offered : "That although the Faculty are morally convinced of Mr. H.'s guilt, yet they do not consider the evidence adduced to substantiate the charge as sufficient, legally, to convict him." This resolution was adopted by the following vote :

For the motion — Barnard, Stearns, Whitehorne, Moore, Phipps.

Against the motion — Richardson, Boynton, Carter.

A motion was then made to permit the minority who had voted to sustain the charges against the accused to spread on the record their reasons for that verdict. The reasons which they desired to record were substantially to the effect that his own conduct had furnished a serious presumption against him ; that, in their opinion, he had failed to prove an alibi ; that the only witness who could have given evidence of his innocence had refused to testify on that point ; and that a member of the Faculty had declared that he knew the accused to be guilty on the testimony of a third person, whom, however, he declined to name. After a long discussion this motion was carried, all the Faculty voting in the affirmative with the single exception of Mr. Carter, who voted in the negative.

It was not long before the secrecy of the Faculty meeting was disregarded, and indeed Professor Carter denied that he was bound by any obligation of secrecy in regard

to Faculty proceedings. It was soon published abroad that Chancellor Barnard had tried to convict a student on negro evidence, and he was accused of being inimical to Southern institutions. For a time he paid no regard to these rumors, but at length, stung to the quick by a persecution for which he knew that there was no foundation, he requested that a meeting of the Board of Trustees should be held, and that the whole affair should be thoroughly investigated. The meeting was held at his request on February 29, 1860, when the charges which had been made against him by one Dr. Branham in the presence of Colonel A. H. Pegues, a member of the Board, were laid before the Board as follows:

1. That Barnard was unsound on the slavery question.
2. That he advocated the taking of negro testimony against a student.
3. That a student was arraigned upon negro testimony.
4. That on the question of the expulsion of the student, Barnard and two other Northern men voted in the affirmative, while all the Southern men voted in the negative.
5. That during the discussion of the question Barnard asked Professor Richardson whether he would not believe his negro man against a student, and that, when Richardson said he would not, Barnard declared that he would.
6. That all the information in the case was furnished by a negro woman.
7. That Barnard had stated that the woman had pointed out to him the man who had assaulted her.
8. That notwithstanding the vote of the Faculty, Barnard wrote to the student's guardian to take him away, and that he did so. [This was true.]
9. In case the Board of Trustees refused to arraign and try Barnard for taking negro testimony against a student, Dr. Branham threatened to publish the whole affair in

The Mississippian over his own signature, and so make it known to the people of the State.

These charges were laid before the Board by Barnard himself in a communication in which he betrayed unusual excitement. He said:

Of these allegations, and of the whole matter or matters to which they relate, I invite the fullest and most searching investigation on the part of your honorable body. I invite, further, an examination into the tenor of my past life, not only for the period of twenty-two years that I have spent in unwearied devotion to the cause of Southern education, but for that earlier period of youth when I had not yet expected ever to be a resident of a Southern State, but in regard to which I have, providentially, in my possession testimonials by Southern men of the most unexceptionable character.

If I entertain now, or if your investigation shall discover that I have ever entertained, sentiments which shall justify any man, however captious, in pronouncing me "unsound on the slavery question," then, gentlemen, do your duty, and remove me from a position for which I am morally disqualified.

But if, on the contrary, after the severest scrutiny of my acts and my utterances, you find that the injurious allegations by which it has been attempted to strike me down from my post of usefulness and to expose me to public opprobrium, are totally and entirely groundless and false, then I ask of you, in justice to one who has for nearly six years honestly, conscientiously, and faithfully consecrated to your service all the energies of his intellectual and physical being, to put the stamp of your emphatic condemnation upon an outrage, in my view, without a parallel in the annals of civilization.

The investigation of the charges against Barnard by the Board of Trustees was full and thorough. Every professor of the University was heard, and Dr. Branham also appeared before the Board. The result was what might have been anticipated. The Board adopted the two following resolutions unanimously:

Resolved, That the charges are, in their opinion, wholly unsustained by the evidence, and that the said F. A. P. Barnard stands fully and honorably acquitted of every charge brought against him.

Resolved, That after a patient hearing and investigation of all the testimony in the case, we, as Trustees, and as Southern men, have found our confidence in the ability and the integrity of the Chancellor, and his fitness for his position, increased rather than diminished, and declare our full conviction that his labors are doing great service to the cause of education and science and placing the reputation of the University upon an immovable basis.

This annoying incident might perhaps have been passed over in silence, if it did not serve to illustrate the attitude of Dr. Barnard as a man of Northern birth living at the South before the war of the Rebellion. There were scores of thousands of men at the South in much the same position as he, and it will some time be the duty of the historian of that period to trace the motives and influences by which they were affected. In such an inquiry the true sentiments of representative men will be difficult to learn, and will often be misunderstood. In the case of Barnard himself there is already a sort of mythology. He has been represented as a fugitive from the South, as if he had been driven away by violence on account of his known aversion to the Southern cause. Nothing could be more utterly untrue. The Branham charges were dismissed as baseless slanders; to the last moment of his residence at the South, more than a year after the outbreak of the war, he was not even suspected of disaffection to the cause of the South, and he was even offered a place of confidence under the Confederate government. This fact will appear further on. In the mean time it is proper to show his sentiments on the slavery question.

There is nothing to show that he ever entertained any

strong feelings on that subject. He was not a man whose feelings governed his convictions. Born at the North and under the influence of antislavery agitation, he was brought up to regard slavery as an evil in itself and as a misfortune to the country. Yet even in his youth, he perceived the full force of the argument that property in slaves was recognized in the Constitution of the United States, and held that the Federal Government was bound by the Constitution to protect slave property according to the terms of that instrument. Hence Barnard was never an abolitionist; as long as the Whig party continued to exist he was a resolute and ardent adherent of that party. Before he went to the South he was inclined to favor the African colonization scheme which contemplated the voluntary emancipation of the slaves by their masters, and their deportation to the west coast of Africa. When he had lived for a time at the South, he saw that the colonization scheme was visionary. Compulsory emancipation was out of the question. There seemed to be no way to the abandonment of slavery without some bloody revolution which it would be wickedness to precipitate. He was not a man to waste his time or his energies on the solution of insoluble problems, and there is no evidence that he gave any large amount of thought to the slavery question. He accepted slavery as an unwelcome fact; he acquiesced in it as an established fact; he defended it as a fact that could not, in his opinion, be annulled or eliminated from the social state of the South; and, finally, he participated in it by becoming, of his own will, a slaveholder. His course in public and private was perfectly consistent from beginning to end. In the investigation made by the Board of Trustees he was able to present documentary testimony of unimpeachable authority, and reaching back to 1837, that he was "a warm supporter of

Southern institutions," "and that on all important questions which might agitate the North against the South, his actions and feelings would be truly Southern." After an acquaintance with him of twenty years, men like Judge Ormond and Mr. Garland were ready to testify that they "had never heard his attachment to the institutions of the South called in question," and that in their intercourse with him they had never witnessed "anything in act or speech calculated to induce a suspicion that he was not entirely identified with the South and attached to her institutions and domestic policy." This was not a merely negative inference; it was supported by Barnard's own positive declaration. In the presence of the Board he said:

> As to my sentiments on the subject of slavery, my record is clear for my whole life. As for that early period of it when I resided in New York, and before I ever thought of becoming a citizen of the South, I submit extracts from letters written by Southern men in 1837. . . . As to my nearly seventeen years of residence in Alabama, the testimony of Judge Ormond and President Garland, obtained without my knowledge, has been presented. Of the sentiments I have consistently professed since I came here, enough has been said by others. I was born at the North. That I cannot help. I was not consulted in the matter. I am a slaveholder, and, if I know myself, I am "sound on the slavery question."

On the subject of the Union, Barnard was quite as consistent as on the subject of slavery. He was a Union man. Whatever political influence he had was always exerted in fostering a spirit of loyalty to the Union. He contemplated the possibility of a disruption of the Union with horror. Yet he had cast in his lot with the South, and he stood by his section. When he found that he must send a manuscript to the North, if he would have it well and

cheaply printed, he did not hesitate to do so in spite of the outcry that he ought to pay higher prices for inferior work at home; but he did feel that good work ought to be done as cheaply at the South as at the North, and he was never weary of exhorting the people of the South to diversify their industries, so that they should not be dependent on the North for work or for commodities which they were amply able to provide at home. In his eagerness to promote Southern industrial independence he was ready to coöperate even with the "fire-eating" radicals whom he detested, and actually attended one of their conventions, sitting patiently day after day for an opportunity — which never came — to introduce a project for preparing a series of school-books to be published and used in the schools of the South, which were then dependent on the North as they still are for their whole supply. In these feelings he was perfectly at one with the best men of the South. Only an insignificant minority of the Southern people desired disunion for its own sake, but all enlightened Southerners desired the commercial and industrial independence of their section; and so did Barnard. However strongly averse to disunion, there were very few men at the South who did not apprehend that the growing abolition sentiment at the North might give the power of the national government into the hands of a party pledged to interfere with Southern rights under the Constitution, and in that event they knew that a disruption of the Union would follow unless it were prevented by force. In this apprehension Barnard shared deeply and anxiously. In a Thanksgiving sermon delivered immediately after the exciting presidential campaign of 1856, he gave no uncertain expression to his love of the Union, but he spoke with equal clearness and conviction of his forebodings concerning it. An extract from this discourse may well

be given here, as it was submitted to the Board of Trustees in Barnard's defence by his friend Colonel Pegues in answer to the charges of Dr. Branham. The sermon had been delivered at Oxford on Thanksgiving Day, November 20, 1856, and had been published by request.

A far graver menace than this seemed to spring out of our disturbed relations with a portion of our own fellow-citizens inhabiting a different section of our common country. The year through which we have just passed has indeed, in this respect, been the darkest of all which have left their record upon the page of our country's history. It was this time no trivial cloud which had suddenly gathered to darken for a moment our political firmament, but it was one which had long hung lowering in the distance, sometimes rolling up in formidable masses toward the zenith, revealing in occasional flashes the angry fires which were slumbering in its bosom, and again subsiding for a time to less portentous dimensions, but never wholly disappearing — it was this which, during the last anxious summer, the friends of God and of peace and of human progress were breathlessly watching, as, in darker and still darker volume, it spread itself over the entire heaven, and seemed ready to burst into a storm whose violence should shake the continent.

It is no purpose of mine to discuss the causes which, during a long series of years, have fomented a state of feeling among our people so much to be deplored, so fraught with danger to our peace, so menacing to the permanence of our unity as a nation. Such a discussion is not meet either for this place or for this occasion. But it is proper and it is fitting, since the catastrophe so tremblingly anticipated by so many anxious hearts has been for the time — may we not believe, in the purposes of God, forever? — averted, it is proper and it is fitting for me to remind you that this deliverance imposes upon you a deeper debt of gratitude to your Almighty Benefactor than any other national blessing which He has bestowed upon this people since their original recognition into the family of nations.

That the union of these States was originally a benefit to every member of the confederacy, I believe that no man has ever doubted. That, so long as the principle of equality among the several members, on the basis of which it was established, remains intact, it must continue to be, no less than it was originally, a benefit to all alike, I believe to be just as undeniable. That its disruption, therefore, in itself considered, must be a calamity, and an incalculable calamity, admits in my mind of not a shadow of doubt. Yet it is no less true, on the other hand, that every benefit, small or great, of which the union is the source, springs out of that simple basis just mentioned, which is the foundation of the constitution; and that, so soon as that principle ceases to be recognized, — so soon as the constitution as administered ceases to be the constitution which our fathers framed, — then the Union is in fact, to all intents and purposes, substantially dissolved already, and its formal dissolution becomes a mere question of time.

In this simple proposition, unless I greatly err, is embodied the deliberate conviction of far the greater number of our own people. The feeling of attachment to the Union is nowhere more ardent and nowhere more general than in these Southern States. We love the Union because our fathers loved it, and, for the honor and reverence in which we hold their memories, we would cherish it as they cherished it before us. We love it, because, with a faithful observance of its conditions, it is a fraternal bond uniting in its wide embrace a vast and scattered family whose members, however remotely separated geographically, are still one in origin, one in language, one in religion, and one in their undying love of liberty. We love it because its stability secures to us as a people a position of equality among the great powers of the earth, and enables us to present to other powers a front so imposing as to command universal respect, and to repress the spirit of aggression from without. And we love it because we believe it to be capable of securing to ourselves at home the greatest political good of the greatest number; and because, still further, in the depths of that gloomy chasm which its ruins must leave behind, we know not what evils may lie concealed. If, therefore, this beautiful political structure which our fathers reared is destined to be undermined,

ours will not be the sacrilegious hands which shall sap its foundations. That practical sundering of the bonds which unite us with our brethren, in which the real dissolution must consist — that invasion of the independence of sovereign States and of the principle of equal rights, which treacherously subverts the constitution while professing to observe it — that great wrong to humanity and sin against God will never be our work. But, should this lamentable consummation be brought to pass by other hands, and should all the valuable ends for which the Union was established be successfully frustrated, then, when the temple of our constitutional liberties shall have been spoiled of all its treasures, and the ark no longer reposes in the sanctuary, let it not be imputed to us for faithlessness or impiety, if we turn our backs upon the dishonored edifice and refuse to worship longer within its desecrated walls. It will not be we who will have dissolved the Union; it will be we who will have said, The Union is dissolved.

It would have been equally absurd to suspect that the preacher who had uttered these sentiments was actuated either by disloyalty to the Union or by any sort of hostility to the South or its institutions. Yet it would hardly have been possible to frame a more distinct declaration that the triumph of the Free Soil party would be a virtual dissolution of the Union, which the South would only have to accept and pronounce. In the success of that party he agreed at that time with other Southern men in thinking that the dissolution of the Union would be virtually accomplished, so that it would remain for the South only to accept the fact and say, "The Union is dissolved." Nevertheless, when the election of Mr. Lincoln took place, he did not consider that event a sufficient reason for secession from the Union. When secession followed, he deplored it and "hoped against hope" for better times; but he publicly acquiesced in it; and after he had retired from the University of Mississippi, the Board of Trustees, in a re-

port to the Legislature of the State, pronounced a glowing eulogy upon him, in which this passage occurs:

Still less has he ever mingled in political strife; yet it is known that, since the bitter agitation of the slavery question at the North, his pen has been wielded with effect in support of the institutions of the South. All this, unfortunately, has not exempted him from imputations growing out of his Northern birth. Yet we frankly say, if there is any ground for a charge of want of sympathy with us in our great struggle for Southern independence, we have never seen its evidence.

The annoyances attending the Branham charges against him lasted but a few months, and whatever evil influences might have been anticipated from them were completely dissipated by the action of the Board of Trustees, which was immediately published and circulated throughout the State. He was justified by good men everywhere, as a kind and just master, who had done his duty in protecting his helpless servant against outrageous and brutal treatment from a white man of bad reputation. The feeling of Southern gentlemen was well expressed in a letter written to him by Mr. Jacob Thompson:

WASHINGTON, D. C., Feb. 19, 1860.

DR. F. A. P. BARNARD: My dear Sir, Nothing could have taken me more by surprise than the difficulty now thrown in your way. I hoped most sincerely you would find the time to pass this way on your way from Philadelphia. I wished to hear what was the matter now up. But on Friday evening, Macon, Mr. Sheegog, and Mr. Beanland, from Oxford, arrived. I heard from them their understanding of the matter, and on their version of the story I am wholly at a loss to understand your accusers. Your fault is that you received information from your servant girl which implicated a student, and you acted on this information to reach the truth; and this is set down as showing your free-soil proclivities. If this be so, I

am the worst free-soiler in the State: I am a downright abolitionist. No man strikes my negro that I do not hear his story. I will listen to my negroes' grievances. Before God and man I believe this to be my duty. No man has a right to touch him or her without my consent, and he who would not do the same would be despised by every man in Oxford.

The whole matter, as these young men relate it to me, is so absurd that I can hardly credit their report. But I must insist that you be not moved by these things. Have moral courage to stand by your post and do your whole duty. Such trials will only prove your firmness and worth, and the mischief will fall on the heads of your adversaries. Your Friend,

J. Thompson.

Soon after this affair Mr. Jefferson Davis was at pains to give very evident expression to his esteem for Barnard. In the early summer of 1860 he visited Oxford to deliver a political address.

His visit [says Barnard] occurred just after the investigation of my administration of the affairs of my office. As most of the principal people of Oxford called on Mr. Davis at his hotel, I went among the number. They arranged themselves in a semicircle. It so happened that I was in the middle of the crescent, and at one of its extremities stood the man who had been my accuser. Mr. Davis glanced from one end of the row to the other, and then, instead of beginning at either end, he came straight to me in the middle, and offered me his hand. The incident was a trifling one, but to the company there assembled it had a profound significance. The next day Mr. Davis called upon myself and my wife at the University. The speech he made to the people during his visit was a singularly eloquent one. As there was no hall in the village large enough to hold his audience, he spoke in the public square. From the flag-staff in the enclosure there floated over the crowd a large United States flag. The burden of his speech was the usual one of Southern rights and Southern wrongs, but he expressed no desire to break up the Union. On the contrary, he professed sincere attachment to it, pro-

vided that under it his fellow-citizens could enjoy their just rights. Pointing to the flag above him, he said, "I slept under that flag for eleven years, and why should I desire any other?" Of course he intimated that it was possible that Mississippi might be driven out of the Union, but he sincerely hoped no such disaster might arise. His speech was far from being a decidedly disunion speech. In point of violence it fell far short of many which I heard in those days from much inferior men. The impression made upon me by Mr. Davis was certainly far from unfavorable, and personally he seemed to be a very amiable man. This impression was afterwards very much strengthened by what I saw of him in Richmond.

Barnard had many gratifying assurances of the undiminished confidence of his Southern friends, but he still deeply resented the unfounded charge of secret disloyalty to the Southern people whom he had served with zealous fidelity for nearly a quarter of a century. It would be difficult to estimate, or, indeed, to overestimate, the bitterness which then began to rankle in his heart against the noisier champions of Southern principles and pretensions. Until the Branham investigation, he had opposed them with impassioned argument, but without personal feeling; now his sense of personal wrong at once deepened and justified the scorn and detestation with which he regarded them. The labors and trials of the past few years had somewhat strained him. For several months he had been extremely irritable, and if he had not had an opportunity of timely relaxation, the Branham affair might have made him morbid. That opportunity came to him, however, in a very gratifying proposal from Professor Bache that he should accompany the Astronomical Expedition which was then about to proceed to Labrador. He accepted the invitation gladly, and left Oxford to join the Expedition shortly before the annual Commencement of 1860. His account of that expedition

may be best given in his own language though with some considerable abridgment.

In 1867 the American Association for the Advancement of Science appointed a committee of twenty members to examine and report upon the history and result of the American Coast Survey. The chairman of this committee was Judge Kane of Philadelphia; but on his death a few months later, the chairmanship was transferred to me. I spent a good deal of labor in preparing the report of this committee, which was printed in the following year, and was so satisfactory to Professor Alexander D. Bache, the distinguished Director of the Survey, that he became from that time forward one of my warmest and most serviceable friends. He showed his friendship in a very practical way when the outbreak of the Rebellion had left me stranded with no apparent means of support; but his kindness did not wait so long for its first manifestation. In 1860, when it was proposed to send an expedition of American astronomers to Labrador to observe the total eclipse which occurred in July of that year, he invited me to join the party. In order to accept this invitation it was necessary for me to leave Mississippi a week or two before the Commencement at the University. I obtained leave of absence, accordingly, and reached New York on the eve of the day appointed for sailing. Next morning I repaired to the steamer which was lying in the harbor, but the chief of the party, Professor Alexander, of Princeton, did not make his appearance. The hour for sailing arrived. Professor Bache said to me, "You will have to take the chief direction"; and so it seemed that I should be obliged to do; but at the very last moment, the head of Professor Alexander appeared above the rail, and we were all right. The expedition was of great interest to me, as it introduced me to various and interesting meteorological phenomena of the polar seas, including magnificent and almost nightly displays of the aurora borealis, extraordinary refractions, duplications and inversions of distant objects, and any number of icebergs of most picturesque shapes. At one time I counted as many as forty icebergs in the field of vision around us. Our voyage extended to Cape Chudleigh, at the mouth of Hudson's Strait,

and we called on the way at several interesting settlements of Labrador fishermen. Our passage along the inhospitable Labrador coast was not without its perils. That coast is continuously rock-bound from the Strait of Belle Isle to Cape Chudleigh, and is bordered with rocky islets which, at the indentation of the coast in which the Moravian settlement is situated, constitutes a perfect archipelago. Off this point on our outward trip we were menaced by a storm, and our captain thought it expedient to run in among the islands to find a safe refuge. Late at night we cast anchor in what seemed to be a favorable retreat; but next morning when we attempted to run out to sea again, we found ourselves involved in the intricacies of a labyrinth of water-ways. To make matters worse, after we had expended some hours in the attempt at escape, we ran upon a reef, where our steamer hung fast. We did not spring a leak; but in spite of all our efforts we could neither advance nor retreat. The captain sent out a kedge anchor far astern, and attaching the cable to our windlass, endeavored to pull the ship back; but could not stir her an inch. Dropping the kedge to the right and to the left, he found that he could swing the vessel on its centre. All our hopes now rested upon the possibilities of the tide. In certain books the tides of Labrador were represented to rise thirty feet or more, but we did not know the state of the tide. If it were full, the prospect was that we should soon be left stranded high and dry, and that we might be obliged to take to our boats and endeavor to look up the Moravian settlement, with the prospect, if we should find it, of remaining there a year or two before we could be relieved, or, if we should fail to find it, of starving on the rocks of Labrador! There was an anxious period of waiting, during which I kept my eyes upon some rocky pinnacles that stood a little above the surface of the water, endeavoring to judge by their apparent enlargement or diminution whether the tide were rising or falling. For a long time — it seemed to me distressingly long — there seemed to be no change; but by and by the rocky points appeared to me to be sensibly diminishing. It was true; the tide was low and was just on the turn. After the flow had fairly commenced, the ship was gently lifted, and we were once more

free. But we had not escaped from our difficulties; we were still involved in the intricacies of the archipelago. Very soon, however, we discovered that we were not entirely alone in the world. At a distance from us we saw a moving object, which proved to be a native Esquimau in his kayak. By signs we called the stranger to our vessel. He looked at us with astonishment, but readily climbed the ship's side and held up to us a string of fish (dolphins, the sailors called them), each two or three feet long. He was disposed to give them to us very freely; and the captain accepted them. In turn, he wished to give something acceptable to the Esquimau, and offered a bottle of whiskey, which the man slightly smelled and put away with disgust. The captain then offered him sheets of what the sailors call "hard tack," that is sea biscuit having about the consistency of granite. This the man seized with great delight and with many expressions of thanks. We concluded that he had been under the influence of the Moravian missionaries, and our conclusion was presently confirmed by the fact that he understood some words of German. We had no German scholar on board, but one of our party [Oscar Lieber, son of Dr. Francis Lieber of Columbia College] had a slight knowledge of the language. Our communications with the native, however, were conducted chiefly by signs; and as the captain desired to get out of the archipelago, the Esquimau traced a map with water on the top of a sea chest, indicating the course we ought to steer. Our visitor then departed in his kayak, and by following his indications we found ourselves at sea again.

This was the only native of the country whom we saw unmixed with what may be called civilized society; for that term, I presume, might be applied to the communities of fishermen on the coast who have intermarried with the native Esquimaux.

Of the Esquimaux who had married with whites we saw a good deal in the fishing settlements. At one point, called Domino Harbor, we made a stop of two days. Our steamer was one of small dimensions and was incapable of carrying a supply of coal for a voyage of two thousand miles and back. In going out we therefore made a stop out at Sidney in Cape

Breton, where we took in a supply and made a contract for an additional supply to be sent to meet us in our return at Domino Harbor. We accordingly stopped at Domino on our return and met our supply schooner loaded with coal. We reached Domino on a Saturday morning and received our supply during that day; but we did not leave until Monday morning. The appearance of Domino Harbor surprised me by its commodiousness and security. It had the appearance almost of an artificial dock in the form of a perfectly regular oblong rectangle, half a mile long and about a furlong wide. On the banks there was quite a village inhabited by fishermen, some of whom spent their winters in Newfoundland, while others remained upon that desolate coast throughout the year. Their principal occupation was fishing, but they also practised hunting and trapping for furs, and many of them had very beautiful skins for sale. The skins of the white fox were especially beautiful, being of snowy whiteness. Our company made many purchases, and some of us pretty well exhausted our funds in doing so. One would hardly have supposed that coin would be esteemed in such a settlement, but we soon found that the value of a dollar was quite well understood by those simple half-savages. We found also that they had decided religious sentiments, and when they ascertained that there was a clergyman on board, they insisted that I should preach to them. This I did on the Saturday night, taking for my text "Those who go down to the sea in ships and do business on the great waters," etc. I was a little uncertain about my psalmody, not being a remarkable vocalist myself, and therefore I gave out no hymn; but as soon as the sermon was concluded some tuneful precentor in the congregation suddenly broke out in a burst of melody which was promptly taken up by the whole congregation.

Our captain had resolved to set sail the next day notwithstanding that it was Sunday; but the whole population protested. There were children who had not been baptized, and the people desired to avail themselves of this opportunity to secure a proper performance of that rite. Moreover, one of these children was at a distance and had to be sent for. The captain was prevailed upon to delay, but the child did not

come. On Monday morning, when the impatience of the captain was such that he was about lifting the anchor, suddenly a group of boats came thronging from the shore, the infant was brought at the eleventh hour, and the baptism took place, to the great satisfaction of the parents.

During the Saturday, while the coal was being taken on board, I went out with a party of fishermen to catch cod. The fishing was done with hook and line, and the bait was a small fish which is caught in vast numbers, the fishermen dipping them up, I believe, in buckets. When my party was ready to go, it was discovered that the bait had been forgotten. My companions applied to the nearest boat, which had a sort of well in the middle, filled with bait. A bucketful was immediately dipped up out of the well and handed to us. I proposed to pay for the supply, but our neighbors laughingly refused to receive any money for it. When we had reached the fishing-ground, we anchored and threw out our lines, and the voracity with which the cod took the hooks was astonishing. The bait was scarcely beneath the water before it was seized and swallowed, and our arms were tired with pulling out the endless succession of fishes. On returning to the village, I wandered about among the wretched inhabitants, and could hardly understand how it was possible to maintain life under such conditions. The cottages were built of slender fir saplings placed close together and banked with earth on the outside. The roof was formed in like manner, so that the cottages looked rather like barrows than like houses. The smallness of the timbers was not a matter of choice, because no tree on that sterile soil attained a height of more than ten or fifteen feet. The village was thronged with dogs, many of them large and handsome. I spoke of them to an old fisherman, and he said, "The dog is the Labrador horse." In point of fact, all transportation is managed in those settlements with dogs harnessed to sledges. Our company admired the dogs exceedingly, and we bought several. I myself purchased a beautiful young Newfoundland pup which I brought with me to New York. At that season [the heat of summer] I did not dare take him to Mississippi, and left him in charge of a workman at Fort Tompkins on Staten Island, where my brother was in charge of

a military construction. It was reported to me that the dog died. I have always believed that he was stolen.

While we were at Domino we had a curious illustration of the depth of the religious sentiment in this hybrid population. Towards night on the Saturday afternoon, Mr. Lieber came across a fur dress which an Esquimau woman was offering for sale. It was very attractive, and Mr. Lieber desired to buy it; but not having the necessary amount of money with him, he said to the woman, "Bring it over to-morrow morning to the ship and I will pay you there." To go to the ship was a small matter, for the people were constantly crossing the harbor in their boats; but the woman answered him, "I can't sell it to-morrow; to-morrow is Sunday." Mr. Lieber, in telling the story, said that he had never been so conscience smitten in his life.

I was very much interested in observing the process of curing fish. The drudgery was principally done by the women, who removed the head, the viscera, and the scales, and then, splitting the fish completely through, spread it open on the sands of the beach to dry. The whole shore was covered for miles with these drying fish, which were turned over from time to time to make the exposure more thorough and complete. After the desiccation was sufficient the fish was gathered up and heaped up in fish-houses, which were built on the water's edge so that their contents might be readily transferred to vessels coming to receive them. I went into some of these fish-houses, and I was astonished to see how carelessly the fishermen walked on the piles of fish, without any consideration of neatness. The fish is their main food supply. Whatever bread-stuff they use must be brought from towns in Newfoundland or on the Bay of St. Lawrence, and of course they have very little. They are about as badly off for vegetables, since the only soil they have is but a few inches deep and hardly allows them to raise anything. The thinness of their soil makes the burial of the dead a matter of some difficulty. They told me that they had to transport the bodies of their dead twenty miles along the coast to a place where they could be decently interred. They felt their religious privations very seriously. They told me that they were

visited once or twice a year by a bishop of the Anglican Church from Canada; but as they were inclined to dissenting, and in fact to Methodist, sentiments, that was not very satisfactory to them. Many of them seemed to have a desire for reading matter, and I resolved that I would send them a box of books and tracts after my return to New York, — a purpose which I am sorry to say I failed to fulfil.

I have said nothing thus far of the scientific object of our expedition or of our success, which was very imperfect. The central line of the eclipse which we had been sent to observe passed slightly to the south of Cape Chudleigh, and as we approached the line, we looked out for some convenient landing place. Near the coast we found the bottom beneath us so rocky and irregular that we were obliged to proceed very slowly. In fact, for some distance we sent a boat ahead to sound the passage for us. We also continually threw the lead from each side of the vessel itself, and the irregularity was such that we would occasionally find the bottom at a few fathoms on one side and no bottom at all on the other side. After some hours of this rather hazardous running, we discovered the mouth of an inlet which admitted us to a capacious bay several miles in depth and perhaps a mile in breadth, affording us a secure land-locked harbor. We arrived a few days before the eclipse, landed our instruments, and pitched our tents. I think we had seven telescopes and several chronometers; and besides these, we had a set of instruments for magnetic observations for which a special encampment was made apart from the astronomical camp. We had also a wooden structure intended for a camera obscura on a large scale. Several days and nights were devoted to the astronomical determination of our position, and before the day of the eclipse arrived each of the seven members of the astronomical corps was assigned his particular duty. When the expected morning arrived, we were grievously disappointed to find the sky entirely overclouded. There were moments when the sun seemed to be about to come out; but it never did shine clearly, and although we were able to observe one of the internal contacts, the main object of the expedition was entirely lost.

Nothing could exceed the desolateness of the country around us. The whole surface was covered with broken rock, for the most part bare, but in many portions overgrown with heavy moss which grew with great luxuriance in the brief, warm summer. It formed a carpet in which the foot would sink ankle deep and with no little danger of being pinched between the irregularly placed stones beneath. We saw no inhabitants, although one of our parties in an excursion came across a deserted Esquimau hut which was filthy to the last degree. We saw no animals except here and there a seal swimming in the waters.

As our party embraced a number of assistants in the Coast Survey, we took advantage of our stay in our harbor, which we named "Eclipse Bay," to make a hydrographic survey of that convenient haven, thinking that it might be of some use to future voyagers on that coast. A lofty peak on the south side of the harbor we named "Mount Bache," from the Superintendent of the Coast Survey. We did not ascend to the summit of this peak, but we reached a height from which we could look far out upon the ocean and could see immense ice-floes, covering many square miles of surface, drifting slowly down from Baffin's Bay. Considering our nearness to Greenland, we had a strong desire to run across to Upernavik, but we were obliged to deny ourselves this gratification for two reasons: first, our supply of coal would probably not suffice to last us till we could reach Domino if we extended our voyage so far as Greenland; and secondly, we had been enjoined to get home in time to meet the American Association for the Advancement of Science, which, in 1860, was to hold its annual session at Newport, Rhode Island. We had plenty of time, as we believed, but our homeward progress was unaccountably slow. We hardly made more than six or eight knots an hour. The cause of this sluggishness was discovered only after the ship reached New York and was put into dry dock. It then appeared that a timber forming a portion of what is called the "false keel" of the vessel, had been turned around on a central bolt so as to stand at right angles to the course. In this position it formed a steady drag upon the progress of the vessel, and lost us probably two or three days' time on our return.

An accident which occasioned us a very serious danger happened to our binnacle also, but whether at the same time or later we could not discover. When we were off the Nova Scotia coast, not far from Cape Sable, we were enveloped in a fog so heavy that we could not see each other through the ship's length, much less any object outside. The captain prudently reduced the ship's speed till it scarcely moved. While thus slowly creeping along, we felt a heavy shock, and it was perceived that the bow of the boat had struck an absolutely vertical granite cliff. Fortunately we had suffered no serious damage, and we thought it best to lie still until the fog should lift. When it did so, we discovered that we had run in between two reefs extending on each side of us out into the ocean, so that there had been hardly more than space enough for the ship to enter. If our course had been slightly different either way, we should have run on one or the other of these reefs and been completely wrecked. Our running ashore at all was owing to the twisting of our binnacle, in consequence of which, relying as we did upon the compass during the fog, we had run many miles out of our way, and were close on shore when the captain supposed us to be well out to sea. In spite of all our efforts to reach Newport before the adjournment of the meeting of the Association, we did not arrive until just after it had adjourned. The return of the eclipse expedition had been looked for in that session as an event of the greatest interest, and though we were too late for the regular meeting, most of the members were still in town, and gave us a very enthusiastic reception at an evening meeting which was immediately held.

Professor Alexander, the chief of the expedition, was the retiring President of the Association, and he delivered an elaborate address, in the course of which he mentioned some of the incidents of the expedition. It appeared, too, that in my absence I had been elected President of the Association for the next following year, and of course, as President-elect, I was called out, and spoke as well as I could at such short notice. As the meeting for 1861 had been appointed for Nashville, Tennessee, and the Civil War broke out before that time, the meeting was indefinitely postponed by the standing

committee, and the Association did not reassemble until 1866, when it was called to meet at Buffalo, under my Presidency. Owing to this accident I held the office continuously longer than any other President. During the following year, 1867, I was absent from the country at the time of the meeting, and did not then deliver the usual retiring address; but in 1868, when the Association met at Chicago, I was called upon to do it and performed the duty.

CHAPTER XI

Political excitement at the South — The delusion of peaceful separation — Barnard's views expressed in letters to a friend — The students of the University enlist — Barnard's resignation is not accepted — Barnard at the Convention of the Southern Dioceses — Barnard's resignation accepted — Visits military schools of South Carolina and Virginia — Applies to Mr. Davis for a passport — On the fall of Norfolk Barnard returns to the North — Contrast between the North and the South — Barnard in the Coast Survey Service — Letter by a refugee — Treason at the North following the tactics of treason at the South — Earnest support of the administration — Two letters from General Sherman.

On his return to Mississippi after the Labrador expedition Barnard found the State in a blaze of political excitement in anticipation of the result of the presidential election. Throughout the State there was a general feeling that the election of Mr. Lincoln would both justify and demand a disruption of the Union. But there were many who stoutly maintained that it ought to have no such effect. They did not believe that the mere election of a Republican or Free-Soil President would create a condition of things which would require a dissolution of the Union, and still less did they think that the equal rights guaranteed by the Constitution would be so impaired by that event as to justify the Southern States in pronouncing that the sacred bond of the Union had been virtually dissolved. They maintained that the guarantees of the Constitution could not be held to have been overthrown by the mere election of an executive who would be absolutely powerless in the presence of an adverse legislature holding both branches of Congress, and of a judiciary which could be trusted to defend the Constitution against

all invasion even by the combined powers of a President and a Congress. The event, therefore, which Barnard had admitted would not only justify but effect a dissolution of the Union, would not, in their opinion, be involved in the election of Mr. Lincoln. Even after the election there remained a strong feeling of reluctance to proceed to extreme measures, and not a few of the more extreme party began to doubt whether it would be wise, after all, to fulfil the threats which had been made sincerely enough during the heat of a political campaign. When Governor Pettus announced his intention to summon the State Legislature to take measures for calling a convention to adopt an ordinance of secession, experienced politicians greatly doubted whether such an ordinance could be adopted in the State of Mississippi. The professor of law in the University was a zealous secessionist. He had practised his profession in the courts of nearly every part of the State. He was thoroughly acquainted with the sentiments of the people and had expressed his own both freely and strenuously in the local newspaper at Oxford, of which he was the virtual editor. Yet, when the intention of Governor Pettus to convene the Legislature was first reported at the University, Barnard met the professor of law hurrying home for the purpose of writing to the Governor to forego his purpose. The only effect of that step, he said, would be to reveal the weakness of the party of secession, notwithstanding its apparent strength. He said to Barnard, "I have visited every part of this State; I am intimately acquainted with the sentiments of the people everywhere, and I am perfectly satisfied that it is impossible to take Mississippi out of the Union." The Governor persevered in his purpose, and it is a singular fact that every member of the Vestry of Barnard's congregation voted for delegates to the convention who were

pledged to oppose the adoption of an ordinance of secession. But the opposition was quickly and easily overpowered. Such words as "submissionist," and even the unendurable epithet of "coward," were applied to those who hesitated to resist and resent the success of the Free Soilers — who were always classed with abolitionists — in gaining possession of the Executive Department of the Federal Government; and it was vehemently proclaimed that no Southern State could honorably remain in a Union whose chief executive officer had been elected under pledges to use his official power in the impairment of the constitutional rights of those States. In the strife of tongues Barnard kept silence, but he did not share in the delusion that a peaceable dissolution of the Union was possible. In the evening of the day on which the ordinance of secession had been adopted at the State capital he met Mr. J. B. De Bow, editor of *The Southern Review* of New Orleans, who had been editor of the United States Census of 1850. Mr. De Bow said that he had been present when the vote on the ordinance was taken, and that it had been a very touching scene. Old men, he said, had been moved to tears. Barnard replied that they might well weep on such an occasion. De Bow asked what he meant, and Barnard answered, "I mean that to plunge a country into war may well be a cause of tears." "War!" exclaimed De Bow, "there will be no war." Barnard rejoined that there was war already. "What," he asked, "is the ordinance of secession but a declaration of war?" "That is all nonsense," said De Bow. "We are not making war. If there is a war, the North will make war on us, and the North cannot make war on us for three good reasons. First, she has no motive for war; her interests depend on peace with the South; she lives by her Southern trade, and she will submit to anything

rather than lose it. Second, she has no means to make war except what she gets by preying on the South, and war would deprive her of all her resources. Third, she can get no men; her people are divided; half of them are ready to take our side already. If there is war, it will be between two Northern factions, and blood may flow in the streets of New York and Philadelphia, but there will be no blood shed in the South." As Mr. De Bow had had better opportunities of knowing the resources of the two sections than any other man in the country, it is easy to see how natural was the delusion of the masses of the Southern people, when he and other men like him, on whom the people depended for their information, were so completely and so sincerely deluded in their conception of the facts of the case. Barnard was not deluded in the least. At the time of secession he expected war as its result. As a consistent Southern Whig he did not now believe that the only cause which could justify secession had occurred; he regarded the means by which it had been precipitated as an insane and treasonable conspiracy to constrain the people to a course which their love of country must have made repugnant to them, and which was certain to be ruinous in its consequences. His own love for the Union remained undiminished, and his worship of the flag, though it must now be cherished secretly, was as reverent as ever. His feelings at this time were warmly expressed in a letter to Miss Gilliss, a daughter of Admiral Gilliss, then at the head of the Naval Observatory of the United States, who had sent him a miniature flag of the Union.

University of Mississippi, Feb. 19, 1861.

My dear Miss Gilliss: My gratification was greater than I know how to express in receiving your charming letter of the 10th instant, with its beautiful and most acceptable inclosure.

I shall owe the post office a new grudge, in addition to the many I had against it before, for having consumed nearly a week in bringing to me an evidence of remembrance so well suited to throw a little light upon the gloom of my miserable corner of secessiondom. It is true that a badly served mail is better than we have any right to demand, and I endeavor to be as grateful as I can that it continues to bring us anything at all. I thank you most sincerely and from the bottom of my heart for the sympathy in our forlorn condition which the gift of this beautiful little badge proves you to entertain; and I shall treasure up the emblem with jealous care, not only in remembrance of the giver, but also that, in spite of the revolutionary madness which has blotted out the glorious stars and stripes from this Southern sky, I may have the satisfaction, at least in private, of still continuing to feast my eyes upon that cherished flag, which will ever be the only one which I shall acknowledge to be the flag of my country.

Mrs. Barnard assumes to put on a few jealous airs upon the occasion, and desires me to say that she intends to engage some one of our most secessionist young ladies to make me a rosette or cockade as a sort of counter-weight to this gift. I give her message, but I assure you that I could not be induced to touch one of those treasonable affairs, not if — no, not even if — you were to offer it yourself. I am for the Union, first, last, and forever.

The elections of Virginia and Tennessee have put a great deal of heart into us wretched victims of a folly without a parallel in history. We still cherish quite a bright little secret hope of recovering our position again in the Union which has wrought for us so many blessings and so little of harm. It is true we seem now to be pretty far gone in our delirium as a people, but I have heard occasional utterances from our most determined revolutionists which may fairly be interpreted to indicate a willingness to listen to terms. For instance, a member of the Mississippi Convention assured me only a few days ago that, *were the Union now to be restored unconditionally,* the South would have gained substantially all that she has been contending for; that is to say, the South has demonstrated to the North by her determined action in this emer-

gency that she is at any time ready to maintain her rights at the point of the bayonet, and to the extremity of dissolving the Union, if necessary, and has thus put an effectual curb on the aggressive spirit which has been aiming at the destruction of her institutions. This is the argument; if the secessionists are satisfied with it, I am; but in point of soundness of logic, I confess its force has failed to impress me.

The events attending and following the inauguration of Mr. Lincoln at Washington did nothing to calm the fears or strengthen the enfeebled hopes of men like Barnard. A month after that event he wrote again to Miss Gilliss.

UNIVERSITY OF MISSISSIPPI, April 6, 1861.

MY DEAR MISS GILLISS: Some two or three weeks ago I met with a trifling accident which disabled me for a time from any considerable use of my eyes, especially from writing. I was engaged in one of my favorite mechanical operations — working at the lathe — when a minute particle of metal struck me in the eye, producing no great pain, and, as I supposed at the time, no injury worth noticing. In the course of the next twenty-four hours, however, an inflammation developed itself which for a time gave me some concern, but which happily now has nearly or quite subsided. I trust you will pardon the introduction of this little piece of personal history, which seems necessary to account for my dilatoriness in replying to your charming letter of last month.

The affairs of our unhappy country and the indications of a still further disruption of its distracted elements continue to occupy all thoughts with us, and I presume with you. Since the accession of the present administration, my hopes for a brighter future have been growing daily more faint; and I cannot but be compelled sadly to admit that the glory of the Union has departed forever. The scene which Washington has presented through the month of March is one which no patriot can contemplate without a sickening feeling of disgust. Nothing but a scramble for the pickings of office, nothing but a scene of selfish strife for the promotion of momentary individual interests, while the country is writhing in the pangs of

dissolution, and the noble fabric which our fathers erected with so much labor and care is crumbling into ruin. We who, in the South, still love the Union, had a right to look to Mr. Lincoln and his Cabinet for some indications of a policy which might strengthen our hands and aid us in restoring the integrity of the nation. They have given us nothing of the kind. They have not given us a policy. The vacillation concerning Fort Sumter is at once contemptible and disgraceful; and the delay, either, on the one hand, distinctly to avow a policy of peace, *and act upon it,* or, on the other, to call Congress together and demand supplies and authority for waging war, — which they are not likely to get, — exhibits an indecision and moral weakness which must soon forfeit to them all respect at home and abroad.

Meanwhile the war fever was spreading rapidly throughout the South, and in the expectation of hostilities at Fort Sumter and Pensacola thousands of the flower of the Southern youth were enlisting in the ranks and offering their services by companies and regiments to the governors of their several States. The students of the University formed themselves into a military company, called the University Greys, and made application to the Governor to muster them into service. Backed by Professor Lamar, afterwards Associate Justice of the Supreme Court of the United States, Barnard wrote to the Governor, begging him not to comply with their request. His appeal was made in vain; the company was mustered in and was soon sent to the front. But Barnard was resolved to do his whole duty in the premises. He was not willing passively to allow the absolute ruin of the University, nor was he willing to permit scores of young men and boys who were under age, and for whom he was largely responsible, to be betrayed by momentary enthusiasm into an enlistment as common soldiers, without at least invoking the intervention of their parents and guar-

dians. To them, therefore, he addressed a circular letter in which he asked them to authorize him to demand from the Governor the discharge of their minor sons and wards. Like his appeal to the Governor, this effort was made in vain. From most of the parents and guardians of the students he received assurances that the enlistment of the youths was sanctioned and approved by their elders, and in the few instances in which he was allowed to claim the discharge of a student, the purpose was not to withdraw the youth from military service, but merely to facilitate his transfer to some other company which had been raised in the neighborhood of his own home. The University Greys were ordered to Pensacola. On the removal of the Confederate government from Montgomery to Richmond, they were ordered to Virginia. They suffered heavily in the first battle of Bull Run, and early in the war which they had entered so lightly many of them perished of camp fever. It is believed that very few of that boyish band of student soldiers lived to return home after General Lee's surrender.

Thus the very first effect of the secession of Mississippi which fell under his own observation was the suspension, and an imminent prospect of the complete ruin, of the great work to which he had devoted all his energies. After the departure of the University Greys not a dozen boys were left at the University. The classes were completely broken up, and no one could foresee when, or in what circumstances, they would be reorganized. Shortly after the capture of Fort Sumter the Trustees were convened in special session, and Barnard sent in his resignation. It was not accepted. The Board deputed a committee of its members to visit him and request him to withdraw it. Notwithstanding the angry conditions of the hour, they urged their conviction that there would be no serious

war, and that the classes of the University would in all probability be reorganized in the autumn. They reminded him that they had expended large amounts of money, by his request and under his advice, for the prosecution of plans which had not yet been realized, and they insisted that he could not properly leave them to bear responsibilities which they had incurred under his guidance. They begged him at least to retain his office as Chancellor of the University until it should be morally certain that their hopes were groundless, and promised that, in the autumn, if it should then appear to be impossible to reopen the institution, they would accept his resignation. With that understanding he withdrew his resignation, and prepared to spend the following summer as quietly as he could.

In a letter to Miss Gilliss, written June 5, 1862, after referring to the interruption of the postal service, he said:

I have little to say which would not be saddening instead of cheering, or which would not relate to a subject which must for the present be tabooed — the unhappy state of the country. That, among the changes which our national misfortunes have brought with them, your father has been thrown into the position which, in my judgment, he ought always to have held, is one pleasant subject of reflection amid the many that are painful. — I could sincerely wish that, since you must suffer exile, we could have got possession of you down in this distant corner of Secessia. It would have been a great relief to the gloom of our present solitude.

We are indeed inhabitants of a solitude. Our University has ceased to have a visible existence. Its halls are completely deserted, and its officers are without occupation. A large proportion of the students have yielded to the prevailing military mania and are now at Pensacola and Harper's Ferry. Still, we do not expect to remain suspended indefinitely. We shall reopen in September. In the meantime we

have a long period of inaction to waste amid the anxieties of this unnatural war.

I expect in about a month to visit Montgomery as a member of a convention to consider what is to be done about the relations of the Church in these dioceses to those of the States still in the Union. I am greatly unwilling to see a severance made complete between them; and yet, as the constitution of the Church embraces, in so many words, the dioceses "in the United States of America," we become, of necessity, severed from it the moment our political severance is complete. I cannot but hope that we may arrive at some plan of union which may preserve, in all particulars substantially unbroken, a connection which has so long and so happily existed.

I continue to hope against hope that hostilities may soon cease, and that we may once more be restored to the enjoyment of those blessings of peace and fraternal intercourse of which we only know the value now that we know what it is to have lost them. I shall not dismiss the hope that I may, at some not very remote day, have the pleasure of welcoming you in this my quiet home.

It will always be difficult for persons who are not intimately acquainted with the state of feeling in the South at that time to appreciate the mingled sentiments of a man in Barnard's position. In his devotion to the Union there had never for an hour been the slightest faltering; and because he loved the Union, he had all along opposed the antislavery agitation which he knew to be sapping the foundations of the Union in the affections of the people of the South. For the institution of slavery, in comparison with the permanence of the Union, he seems to have cared nothing either way; and hence he was equally indignant at the Northern agitators who were ready to imperil the Union for the sake of hastening emancipation, and at the Southern agitators whom he believed to be plotting the disruption of the Union under a pretext of resentment at Northern aggression. In

presence of the catastrophe which he had long foreseen and had always dreaded, he could do nothing but recognize and accept facts which he deplored as national calamities. When the cotton States seceded, he did not seem to question that their secession, however needless or unwise, was an effectual act. It grieved him to the heart to think that "in spite of its revolutionary madness" it had "blotted out the glorious stars and stripes from the Southern sky." He continued, indeed, to "cherish a bright little secret hope" that the "delirium" might pass, and that the Southern States "might recover their position in the Union which had wrought so many blessings and so little of harm." A month after Mr. Lincoln's inauguration his hopes for a brighter future had grown daily more and more faint until he mournfully confessed himself "compelled to admit that the glory of the Union had departed forever." In looking forward to the Convention of the Southern Dioceses of his Church, which was to be held at Montgomery in the month of July, he had clearly accepted the dissolution of the Union as an accomplished fact. Part of the purpose of that meeting was "to consider what was to be done about the relations of the Church in these dioceses to those of the States still in the Union." His earnest wish was to prevent a complete disruption of the ecclesiastical union which had existed in the Episcopal Church of this country; but he fully accepted the judgment of Southern Churchmen who held that, as the constitution of the Church itself embraced only dioceses "in the United States," the Southern dioceses became of necessity severed from the dioceses which were "still in the Union," "the moment that their political severance was complete"; and he gave no intimation that, in his belief, their political severance was not complete. When hostilities had actually begun, he

"continued to hope even against hope" that they might soon cease; but it does not appear to have occurred to him that they would ever be terminated by the conquest of the South; and in his place as a preacher of the Gospel, while he faithfully exhorted his people to cherish all charitable feelings towards their adversaries, and humbly to repent of the pride which he told them had been their great sin, he called upon them to recognize the Confederacy in their prayers. In a sermon delivered at Oxford on June 13, 1861, his closing words were these:

Let me, in conclusion, recall your attention to the lesson which it has been my object this evening to inculcate. If God has visited us with affliction, let us remember that we have shown ourselves but parsimoniously grateful for His abundant mercies. If He threaten to bring us low, let us bear in mind that the loftiness of our pride has merited His just displeasure. Let us therefore seek His face with deep contrition and humility of heart, humbly beseeching Him to make our present trials the means of reclaiming us to Him, and of making us, as individuals and as a people, more faithful in our duty than we have ever yet been, or than we ever would have been, had we not been afflicted. And, in the words of our most worthy and well-beloved Bishop and Father in God, let us entreat Him, "in His infinite wisdom and power, so to overrule events, and so to dispose the hearts of all engaged in this painful struggle, that it may soon end in peace and brotherly love, and lead not only to the safety, honor, and welfare of our Confederate States, but to the good of all His people and the glory of His great Name, through Jesus Christ our Lord."

It is easy after the event to magnify the delusion of the people of the South in underestimating the spirit and resources of the people of the North; but it is quite as easy to forget that no one at the North imagined that the Southern States either could or would bring such im-

mense resources or so indomitable a spirit to the support of their cause. The truth is that no one on either side dreamed of the magnitude of the conflict which lay before them. No one imagined for a moment that the combatants would be numbered by millions of men or that the cost would be counted by thousands of millions of money. In the temper which existed in June, 1861, if either side had foreseen only the destructive energies which would be wielded by the other, that side would have declined the gage of battle. In June, 1861, Barnard saw before him every day more than sufficient evidence that the South both could and would maintain its cause with a devotion which would make the war, if it were long continued, an appalling conflict. He knew how egregiously the South had underestimated the power of the North, but he also knew how little the people of the North appreciated the determination, and now that war was begun, the unity, of the people of the South. Southern misapprehension could not be removed; it was possible that Northern error might be corrected, and that peaceable negotiation might yet take the place of bloody and destructive strife. It was probably under this belief, and with this hope, that, in the Convention of the Church at Montgomery, Barnard supported a resolution which contained an outspoken indorsement, by the Church, of the political changes which had necessitated the meeting. The resolution was not approved. The representatives of the Church felt that, whatever might be their views as citizens, they had no right, in the capacity in which they were then assembled, to meddle with political affairs further than to recognize the course of events, and the resolution in support of which Barnard had spoken was laid on the table by an almost unanimous vote.

The news of the first battle of Bull Run reached Bar-

nard while he was visiting friends at Tuskaloosa, and his hopes of peace fell to zero. The resumption of his work at the University was now out of the question. Secession had ruined him. The plans he had made were frustrated. The work he had done was wasted. At more than fifty years of age he was left without means of subsistence, and in the section of his country to which he had given nearly quarter of a century of unremitted labor there was neither place nor occupation in which he might earn his bread. He had foreseen that all this might happen, and when he had consented to withdraw his resignation as Chancellor of the University, he had stipulated that, in case it should ultimately prove to be necessary to renew it, the Trustees would secure for him from the Governor a passport to the North, where it would be possible for him to obtain employment in his profession as a teacher. This stipulation had been willingly agreed to; but when the Board met in September, it appeared that it could not be fulfilled, as the power to issue passports was now in the exclusive possession of the Confederate government. This was not so great a disappointment, however, as it might have been if the Trustees had not proposed to retain his services in another capacity.

The Legislature having learned at a recent session that the University had been practically broken up by the enlistment of the whole body of the students, had passed an act authorizing the Trustees to establish for the time being a military school for boys and to carry it on in the buildings of the University. In accepting Barnard's resignation, the Board conferred on him the honorary degree of Doctor of Sacred Theology in token of their high esteem, and then requested him to do them the service of visiting the military schools of South Carolina and Virginia, and to report to them on the methods of

organization and instruction pursued in those institutions. His expenses were to be paid by the Board, of course, and his salary was to be continued until his report should be made. When he should return, the members of the Board promised to use their united influence with the Confederate government to secure him a passport to the North. He was glad to render the desired service, and he has left some interesting notes of his tour of investigation.

I accepted the commission very willingly, and made a visit to the South Carolina Military School at Columbia, proposing afterwards to visit the Virginia Military Academy at Lexington. I found the school at Columbia still in operation, notwithstanding the excitements of the war, but I learned that the Virginia school was suspended, and that its principal, Colonel Francis Smith, who was an old acquaintance of mine and a classmate of my brother's at West Point, was somewhere in the Confederate military service. I thought it more important to see Colonel Smith than immediately to visit his school, and as I did not know where he was, I resolved to go to the War Office at Richmond to find out. I learned there that Colonel Smith was in command at Craney Island in the James River, at the mouth of Norfolk Harbor. I applied, therefore, for a permit to visit the Colonel at his camp. I was received by him with great courtesy, and he showed me all over his defences. The island was very strongly fortified, and to my civilian eyes seemed impregnable. The Colonel had a very lofty wooden tower of observation. He took me to the top of it and gave me a powerful hand telescope. With this instrument I began sweeping the horizon, and, observing a little speck, which I took to be a flag on an adjacent Confederate fort at Sewell's Point a mile or two distant, I directed my instrument towards that object. To my surprise I discovered it to be the stars and stripes of the United States waving over Fortress Munroe, at a distance of not less than nine miles; but as it was a very large flag and the telescope a powerful one, I could see its folds with the utmost distinctness. The sight

thrilled me from head to foot with a feeling I had never before experienced. I had not seen the flag then for many months, and I was beginning to despair of ever seeing it again, but this brief glimpse of it seemed to give me new life.

Colonel Smith informed me that in order to secure the information I desired it would be quite necessary for me to visit the Military Academy at Lexington; and in order to facilitate my studies there he gave me letters to his family and to his adjutant, who still remained there in charge. It was necessary for me to return to Richmond before going to Lexington; and, while at the Capitol, it occurred to me to make a personal application to Mr. Davis for a permit to leave the Confederacy. I therefore called at the executive office the morning after my arrival in Richmond, and found myself one of a throng of forty or fifty persons all waiting to speak to the President. After a detention of half an hour in the corridor we were at length admitted and formed a long semicircle, myself being near one end. Next to me stood one of my colleagues in the University, a British subject who had never been naturalized. This gentleman presented to Mr. Davis a letter from the British Consul at New Orleans asking for him a permit to cross the line. The President very courteously gave him a reference to the Secretary of War and granted his request. I came next. Not being willing to make my request audibly in the presence of so many good Confederates, I had prepared a brief statement in writing which I handed to Mr. Davis and which he rapidly glanced over. Instead of replying, he said to me, with a very gracious smile, "Take a seat on the sofa here, Doctor, and I will talk to you presently!" I took a seat accordingly, and Mr. Davis proceeded to listen to the rest and to dismiss them successively until no one remained present except him and myself.

He then sat down by me and began to inquire what were my motives for desiring to leave the Confederacy. I told him that he was very well aware that all my family were on the other side of the line, and moreover that I had no means of making a subsistence in the Confederate States, since my occupation was completely gone; to which he replied, "Oh! I will find you occupation enough; you are the very man

that I want at this time." He then proceeded to say that he desired to create a bureau for the investigation of the natural resources of the Confederate States, both vegetable and mineral, in short, to make a general natural history survey, and that he would put me entirely in charge of that work. It was in vain that I disclaimed fitness for such a charge; he was unwilling to listen to a refusal, and sent a messenger to the Chief of Ordnance, Colonel Gorgas, to explain the project to me more in detail. In the mean time, Mr. Meminger, Secretary of the Treasury, came in and joined with the President in endeavoring to overcome my objections. In my conversation with Colonel Gorgas I presently perceived that the thing most immediately desired of me was the direction of works for obtaining sulphur from the copper sulphurets of western Tennessee, and the production of sulphuric acid for us in preparing fulminates. Mr. Davis had assured me that my business should be entirely disconnected from military operations, but these statements of Colonel Gorgas showed me that the representation was hardly sincere.

I left Mr. Davis without promising anything, and he asked me to call upon him at his house in the evening. I did so, and we had a long talk over the matter, in the course of which I assured him that I could find him a man much better fitted for the proposed work than I was myself, and that if he would permit me I would nominate such a man. But he seemed to be determined to make the matter personal entirely, and when I positively refused to accept office, he begged me to defer my decision, to reflect upon the matter, and to write to him. As this was the best that I could do, I left him and proceeded on my mission to Lexington.

At Lexington I was received very politely by Mrs. Smith and by the adjutant in charge of the buildings, and this gentleman explained to me with great particularity all the details of the establishment. I then went on by stage from Lexington to a point on the Memphis and Charleston Railway, after which I proceeded rapidly to Jackson, where the Trustees of the University were in session. I made to them a written report and then bade them my final farewell. The body manifested a very sincere regret in parting with me, and as I left the

room one of the leading members, Judge William L. Sharkey, one of the ablest and best men I have ever known, followed me into the corridor and expressed in the strongest terms his deep sense of the loss which the University and the State had suffered, and added in conclusion, "I look upon your withdrawal as nothing less than a grave public calamity." Expressions of this kind which came to me from several members of the Board were particularly gratifying. On the day on which my resignation at Oxford was accepted, Ex-Governor McRae, who had been Chairman of the Board, remarked to me: "In parting from you I have at least one satisfaction in the recollection that I have always voted for every measure which you have recommended." After the war was over, I remember a manifestation of feeling by Judge Sharkey which was equally gratifying. Under the first government organized in Mississippi after the war, Judge Sharkey was elected to the United States Senate. He went to Washington, but was not allowed to take his seat. It was in April, 1866, I think, that General Grant was presented by his fellow-citizens with a dwelling in Washington City, and a large party were assembled in that house to celebrate the occasion. In passing about from room to room, I entered an apartment where there happened to be for the moment no other company; but just at that moment from a side door Judge Sharkey entered also. He approached me impulsively and threw around me his arms, expressing the strongest gratification at having met me once more.

From Oxford Barnard went first to Tuskaloosa, not wishing to be exposed to the dangers and inconveniences of a region which might at any moment become a scene of military operations, but he did not remain long in Alabama. After storing his effects in what he vainly thought would be a place of safety, he and Mrs. Barnard betook themselves to Virginia and lived at Norfolk until the capture of that city by the Federal troops in the month of May, 1862. Why he went to Norfolk, and how he was occupied during the months he spent there, is not known. In the only reference to the subject which he is

known to have made it seems to be implied that he used some peculiar means (which he did not think it expedient to tell) to find a way to reach the North ; but the eventual opening of his way was the capture of Norfolk, which he could hardly have been an agent in bringing about.

With the fall of Norfolk Barnard's life at the South ended. When he reached Washington, he was called a "refugee," and somewhat later, he applied that designation to himself. In the sense of a person who has taken refuge from the calamities of war in an invaded country, Barnard was a refugee, but in no other sense. He had been subjected to no sort of molestation; he had been threatened with none, and there was no reason why he should apprehend any. He was not suspected of disaffection to the Southern cause or the Confederate government. Some of the highest officers of the Confederacy were his personal friends. He enjoyed the confidence of Southern Churchmen and Southern people wherever he was known. There is not the slightest doubt that, in his heart of hearts, he was "a Union man"; but he had behaved with such consistent prudence that his sentiments exposed him to no danger. In the sense of a person who flees from danger or persecution, Barnard was not a refugee, and at the close of the war he found that his old friends at the South remained his friends still.

When Dr. Barnard found himself within the Union lines, whatever doubts he might have entertained of the issue of the struggle between the sections were completely dissipated. At the South he had seen a lack of the material of war and of the necessaries of life; at the North there was abundance. At the South there were neither factories nor skilled workmen; the North was teeming with productive industries. The South was shut in from communication with the rest of the world, while every

civilized nation on earth was sending into Northern ports an abundant supply, not only of commodities, but of men. Every day of the war was a drain upon the resources of the South, which, if long continued, must inevitably end in exhaustion, while the North was developing unsuspected powers and discovering resources of inexhaustible wealth. With these facts before him, Dr. Barnard could no longer doubt the issue of the conflict, and he therefore held that a speedy termination of the war, whatever present cost or suffering it might entail, would be as real a benefit to the South as to the North. He forthwith joined the ranks of those who urged that the war should be prosecuted with the whole energies of the nation and insisted that opposition to the national administration on any ground whatever was nothing less than treason. Animated with these sentiments, he called with Mrs. Barnard to pay his respects to Mr. Lincoln. When he reached the White House, the President was engaged in a Cabinet meeting, but on receiving their cards, he instantly rose from his seat, went out to meet them, approached them with extended hand, saying, "Come in; I have heard of you before; come right in *here*," and so introduced his guests without ceremony into the midst of the assembled Cabinet.

Dr. Barnard would have been glad, of course, to find work in his own profession, but for a time none could be found, and for want of other occupation, he was engaged for a time in reducing the observations of southern stars which had been made by Lieutenant (afterwards Captain) Gilliss at Santiago, Chili, as Chief of the American Astronomical Expedition of 1849–52, which were then in preparation for publication by authority of Congress. While thus occupied, he was invited by his friend, Professor A. D. Bache, Chief of the Coast Survey, to take a position in that service, which he gladly did. The duty assigned

to him was the direction of the Map and Chart Department, which consisted chiefly in superintending the publication and distribution of the maps and charts, but an incidental part of the work, which for a time occupied his whole energies, was the preparation and publication of war-maps, illustrative of the military operations in progress in different parts of the Union. As the seat of war was changed from day to day, these maps were corrected accordingly; and as their value depended on their prompt appearance after every new movement, they required constant vigilance and great activity on the part of the director. The public interest in the progress of the war caused the war-maps to be highly appreciated, but there were few who knew that they were produced under the direction of a Southern college president who could find no work to do in his own profession.

In the latter part of 1863, the president of a Western college published a letter, addressed to President Lincoln, in which the disasters of the war and the possibility of defeat for the Union cause, were ascribed to the weakness and irresolution of Mr. Lincoln. It was on this occasion that Dr. Barnard published his "Letter to the President of the United States, by a Refugee," of which mention has been made. It was extensively copied in the newspapers and was widely read; but in view of facts of very recent date, its vehemence must be admitted to have been somewhat excessive. It was but a few years since Barnard, himself a slaveholder, had indignantly denied the charge that he was "unsound on the slavery question," and had invited the Trustees of the University of Mississippi, if that charge could be sustained, to "remove him from a position for which he was morally disqualified." At that time he had proved by the evidence of men with whom he had lived on terms of intimacy for quarter of a

century that he had never given them the slightest reason to believe that he disapproved of slavery. It might, therefore, have been well for him to have left it to some other man to denounce "that relic of primeval barbarism, that loathsome monument of the brutalities of the ages of darkness, that monster injustice — cursed of Christian men and hated of God — domestic slavery." That, however, is a question of propriety which was not then thought of, and of the remorseless force of argument and invective with which he pressed the charge of deliberate treason upon the critics of the administration there can be no question at all.

He told how he had witnessed for many years "the working out of a giant conspiracy by which an entire people were betrayed against their will into overt acts of treason and open war upon their country, its flag and its government." He had "observed, during the period of an entire generation, the careful preparation of the mines and magazines by which it was designed to blow up the entire political fabric." He maintained that the disunion sentiment at the South had been wholly factitious and was still largely fictitious.

I have seen [he said] the light of hope die out in hundreds of bosoms where the love of country long survived the inauguration of the rebel reign of terror. I have seen the weak, or the timorous, or the base, on the most frivolous of pretexts, repudiating the sentiments which they have always before professed, and with the vociferous zeal of recent converts — a zeal always most vociferous when the conversion is pretended and the convert a hypocrite — mouthing upon the corners of the streets the creed of treason, which, in spite of their ostentatious apostasy, they yet loathed in their heart of hearts. And I have seen even the men of sternest principle — men who through months of anguish cherished the hope that the gigantic wickedness which had deprived them of a country would yet

be stricken down by the hand of the government — in despair of relief, and in obedience to what they esteemed an inexorable destiny, giving in at length their adhesion to the tyranny they could not resist, and, hopeless and heart-broken, bowing their necks to the yoke.

In the criticism of Mr. Lincoln and the administration, Dr. Barnard could see nothing else than the same "leaven of *treason* at work in the heart of loyal communities" which at length precipitated the present conflict.

The demon of rebellion [he said] is lurking in secret places among our own valleys and hills, and the hour may at any moment sound when the crimson deluge which has already rolled over Virginia, and Tennessee, and Mississippi, and Arkansas, and Missouri, shall burst upon the States north of the Ohio. . . . The dark conspirators are too wary to declare their purpose in advance. They seek to lull suspicion by setting themselves up as the foremost champions of the Constitution they aim to subvert. They denounce, with furious violence, measures absolutely indispensable to preserve the government from overthrow. They demand for rebels in arms every right to which loyal citizens are entitled. According to them, it is unconstitutional to touch the property which gives to insurgent traitors the power to be mischievous. It is unconstitutional to restrain traitors among ourselves of the liberty which they employ in organizing bands to obstruct the movements of national troops, even on their way to defend the national capital. It is unconstitutional to aid, by legislation, a loyal State in ridding itself of a political ulcer whose rottenness, where it has been allowed to run its course, has corrupted the whole body politic, and has nearly cost the nation its life. It is unconstitutional, in short, to do anything to save the Constitution: and nothing is constitutional but the right to subvert the Constitution. Thus, open and violent resistance to the authorities which the Constitution itself has created, is inculcated as the legitimate and proper and even obligatory means of upholding the Constitution: and revolution is urged as the only possible means of saving the country.

Precisely the same machinery [he continued] is being employed by Northern traitors which was successful in the South. State authorities are set up against the government of the whole country. Local state pride is enlisted. Sectional jealousies are enkindled. A conflict is kept up which is designed to last long enough to generate a degree of exasperation among the people sufficient to render the experiment safe; and then, suddenly, the central power is to be defied, and the revolution made complete. This method of inaugurating rebellion is the most insidiously dangerous that was ever contrived. It apes the forms of legitimate proceeding to an extent which imposes on law-abiding citizens who presently find themselves rebels without their own consent. And it is a species of rebellion, strong in possession from the start, of all the regular organization of an established state. Any unhappy recusants among a people so betrayed are deprived of even the equal chance which, in rebellions elsewhere, belong to the persistently loyal, of striking for their independence; for, without organization themselves, they are surrounded, from the earliest moment, by an organized police who repress the first indication of disaffection by arrests, imprisonments, and executions under the forms of law, or are subjected to the violence of mobs, who proceed, with the encouragement of the authorities themselves, to hang or mutilate without any regard to law at all.

And here we have the obvious and rational explanation of a political phenomenon which has excited the special admiration of Mr. Russell and other foreign observers; viz. the singular and beautiful unanimity which the insurgent people have displayed in their ill-omened cause. Such observers have even remarked, apparently without drawing the unavoidable inference, that this unanimity extends no less to the immigrants and adventurers from foreign lands, too recently arrived in the country to be able to comprehend in the least the alleged causes of grievance, than to the people who are native and to the manor born. Indeed, it may be safely said, that there never occurred a rebellion since history began in which the insurgent chiefs, from the earliest hour of their usurped authority, were able to command a machinery so comprehensive, so resistless, so thoroughly effectual for secur-

ing unanimity among their wronged and betrayed victims, as the Southern conspirators found ready made to their hands in the State organizations. Even before the melancholy farce of secession had been enacted in any single State, these authorities were thoroughly prostituted to the uses of the conspirators. Citizens who still loved their country were menaced and insulted, in many instances assaulted with actual violence; yet they dared not appeal to the ministers of the law for protection, for they knew too well that law had no longer any protection for them. On the other hand, the ruffians who thus commenced the work of preparing a unanimous people in advance of the hour appointed, were as entirely untrammelled by any fear of consequences to themselves, as the roving bands of Bedouins who plunder helpless travellers in the desert.

Again and again Dr. Barnard insisted that the danger of the nation lay, not in the strength of the South, but in treason at the North. That, he said,

is *the* danger of the time. Our armies were never so strong as they are now. Our navy never was so efficient. If the operations in progress are slow, they are, nevertheless, sure. The resources of the rebels have been stretched to the point of exhaustion. Every man and boy capable of bearing arms among them has been driven into the field by the most sweeping and merciless conscription the world ever saw. The natural sources of nitre which exist within their borders are capable of but a limited supply, and yield probably at present not a tithe of what they need; while a blockade, more severe than ever before, effectually neutralizes the efforts of foreign sympathizers for their relief. It is morally impossible that we should fail, from this time forward, steadily to gain upon the insurrection until it is effectually crushed out, extinguished, dead, and buried. But this implies and requires that while our armies are busy in the field, and our navy along our coast and rivers, pushing back, inch by inch, the rebel battalions, and extending steadily the jurisdiction of the legitimate government over reconquered soil, we should not permit a new

rebellion to burst forth in their rear, to break up their base of operations, and cut off their sources of supplies.

For the difficulties of the time Barnard maintained that the administration could not be held to account.

The situation of things, Mr. President, is not, in my view, one for the evils or dangers of which — and they are certainly grave — you can justly be held responsible; nor are they evils or dangers which it would appear to be quite in your power to control. They are evils and dangers which can only be removed or neutralized by the earnest efforts of good men and loyal men everywhere to expose, disarm, and trample under foot the treason which is lurking even in the capitals of loyal States, watching the favorable moment to betray the sacred cause of humanity and of liberty in its own home. If all such men will but realize the gravity of the crisis, and simply acquit themselves of their duty, the symptoms in the political sky, which now so justly excite anxiety and alarm, will speedily disappear. If they will not, it passes human prescience to tell in what condition another twelvemonth may find our unhappy country.

If Northern and Western treason were to be successful, Dr. Barnard, in the following passage, anticipated the verdict of history which in that case must be rendered:

The year 1862 opened auspiciously for the cause of the Union. Its arms were everywhere successful — everywhere its flag advanced. Disastrously defeated on the banks of the Cumberland and Tennessee, the rebels hastily withdrew from all their advanced posts in the West, and fell back to the borders of the State of Mississippi. The important city of Nashville fell. Most of the important towns and harbors of the Atlantic seaboard and of the Gulf were captured and held by the Federal forces. The great navy-yards of Norfolk and Pensacola were recovered. The Union flag waved once more over New Orleans. The whole Mississippi River, with the exception of a single point, passed under the complete control

of the Federal flotillas. In view of these multiplied disasters the rebels were seized with dismay. Hopeless discouragement appeared in every countenance. Their wretched people, left to themselves, would speedily have abandoned the conflict. But the leaders, rendered desperate by the urgency of the crisis, resisted with the obstinacy of men who see the gallows staring them in the face. They resorted to a conscription sweeping and merciless to a degree unknown in all the history of tyrannies. They pursued and punished the disaffected with a vindictiveness which appalled and crushed out opposition. Thus insubordination was promptly checked, and their rapidly recruited armies soon found themselves numerically superior to the forces opposed to them. Then, in turn, the Federals were at some points driven back. A series of disasters in Virginia unreasonably discouraged a portion of the American people, and furnished to secret sympathizers with the rebellion, of whom there were always many in the loyal States, a favorable opportunity to excite, by all the insidious arts which demagogues know how to employ, discontent with the administration. It was not very difficult to mould a popular chagrin, not unnatural under public reverses, into disaffection toward the men who were at the head of public affairs; nor very much more so to turn against the government itself the disaffection which was at first directed toward men. Accordingly, although the President, by wise and prudent measures, soon succeeded in correcting all the evils which had accrued from previous disasters, and had so ordered affairs as to insure, beyond reasonable doubt, the early and complete triumph of the Union arms, yet, precisely at this critical juncture, his plans were totally disconcerted and his power completely paralyzed by a new rebellion suddenly outbursting in the Northern States. The remainder of the history is soon written. Civil war presently raged from one end of the country to the other. The East was arrayed against the West, and a party in the West was in secret alliance with the South. The position of the Union armies in the Southern States became most critical. They fell back, closely followed by the Southern insurgents. Washington was lost. The central government was broken up. The Union was practically dissolved. Soon,

in the confusion which followed, the component elements of this once magnificent nationality became so bitterly and irreconcilably hostile to each other as to render reconstruction hopeless, and thus the greatest republic of ancient or modern times miserably perished.

The letter concluded as follows:

If, Mr. President, the record of our downfall is to be written, it will, as I most sincerely believe, be written in terms like these. But I will not yet believe that it is to be written at all. My faith is yet strong in the virtue of the people. If it were equally strong in their vigilance, or in their zeal in the cause in which they have so much at stake, I should have no misgivings. Still hope predominates over apprehension; and when, to human view, the clouds around us seem darkest, my trust is in God. Surely He cannot permit this giant iniquity to triumph! Surely He *will* reward our patience and our perseverance at last. Surely the time cannot be distant when He will restore to us the blessings of peace; and along with peace will give us back our country, and our whole undivided country.

From the time of the publication of this letter, Dr. Barnard was a marked man. His appointment to some permanent position of honor and usefulness at the North was assured; and on the resignation of President King, he was elected President of Columbia College. The following letters from General Sherman will show that while he was vigorously and even vehemently maintaining the cause of the Union at the North, he was not forgetful of his old and tried friends at the South:

HEADQUARTERS, 15th ARMY CORPS.
Camp on river 18 miles from Vicksburg, July 28, 1863.

PROFESSOR F. A. P. BARNARD, Coast Survey Office, Washington, D. C.

MY DEAR FRIEND: On my return from Jackson I found many letters, and yours of July 8 among the number. That you should have associated my name with the great result achieved in re-

ducing Vicksburg, and driving out of Mississippi the army of Johnston, has given me more real pleasure than the plaudits of a million of the crowd. The appreciation of one who knows, one who feels the importance of an event such as has recently transpired, is what I am proud of. Well do I remember you and your talented and pure minded brother, as also your wife, with whom I would not have dared [?] even a mere acquaintance, and I assure you that last November, when I rode through the grounds of the College at Oxford, I thought of you and asked where you had lived and thought I saw the traces of your life in the Observatory, of which I remember you spoke at the time we were travelling down that road which I have just destroyed root and branch.

My own head and heart have been so full of the importance to us as a people and nation of the Great Mississippi, that I have been blinded to all else, and now that it is once more free to the navigation of the world, I feel like sinking down into a quietude more like that of a recovery from a long period of intoxication. I followed Johnston to Jackson, drove him across the Pearl, and knowing the arid nature of the stretch to Meridian, I let him go, pursued by the fears of a following army. But the truth is that our men, from long service in trenches, have become apathetic and listless, and must have rest.

We are now encamped in shady groves near clear water, along the Big Black, just above where it is crossed by the railroad. Our ranks are thinned by the effects of battle and climate, and I hope our Government will not relax its efforts in consequence of recent successes, but fill up our ranks and let us push on to a conclusion. We must succeed, for 'tis not possible that the beautiful fabric of government erected by our forefathers should tumble into anarchy or be rent by schism. I fear Anarchy more than Rebellion. Our tendency has been towards universal freedom, license, and anarchy. This war may be designed not only to vindicate the strength of the National Government, but to satisfy our people that all must submit to the Laws, absolutely and implicitly; that unless we must obey the law, no matter how apparently tyrannical, we may be forced to choose another more exacting and cruel Tyrant as a master. All will still work well if we can maintain discipline in our

ranks, and I am working for that as much if not more than mere success over the open avowed enemy.

For your kind letter I thank you, and will ever feel recompensed in knowing that notwithstanding the abuse of the dirty whelps of newspaper scribblers who profess to make public opinion, I enjoy the respect of such men as Professor and General Barnard.

In some haste from press of business,

(signed) W. T. SHERMAN, *Major General.*

HEADQUARTERS, 15 ARMY CORPS.
Camp on Big Black, Sept. 14, 1863.

PROFESSOR F. A. P. BARNARD, Coast Survey Office, Washington, D.C.

DEAR SIR: Be kind enough to acknowledge to Professor Bache receipt from me of a copy of his Historical Sketch of the Progress of this Rebellion, or, rather, of the recovery of Rebel Territory.

Our troops have since unopposed visited Harrisonburg and Monroe on the Washita. Steele is moving on Little Rock. I doubt if opposition be made there. Shreveport is the strategic centre of the Trans-Mississippi, and we operate to a disadvantage till the high waters, when we can make short work of the Red and Arkansas River Districts.

I think we must secure the Line of the Alabama next, and then connect with Rosecrans.

Mr. Marshall has come to Vicksburg. I have not yet seen him, but expect to in a few days. Who in Jackson would likely know of your friend Hilgard?

Yours truly,

(signed) W. T. SHERMAN, *M. G.*

CHAPTER XII

A sketch of the history of Columbia College — First mention in the records of Trinity Church, New York — Bishop Berkeley — Lotteries for the founding of a college — Dr. Johnson appointed President — First matriculation of students in 1754 — The Royal Charter granted — Opposition to the Charter — Trinity Church conveys land to the corporation of King's College — The dread of a Church establishment — The College seal — The foundation stone of the College buildings laid — First Commencement in 1758 — Mr. Cooper elected President in 1763 — Grant of land in Gloucester County and how it was lost — A grammar school established — Foundation of the New York Hospital — Condition of the College in 1773 — Political controversies — Dr. Cooper sails for England — Rev. Benjamin Moore *Praeses pro tempore* — The College buildings occupied by troops — Suspension of the College from 1776 to 1784 — Organization of the University of the State of New York — Separate organization of Columbia College — The first Trustees — Organization of the Board in 1787 — Dr. W. S. Johnson chosen President — The faculties of Arts and of Medicine — Library increased — College faculty enlarged — James Kent, Professor of Law — Reduced means and their consequences — Dr. Wharton of Philadelphia elected President, 1801 — Bishop Moore on December 31st of the same year appointed to the same office — A new charter obtained in 1810 — Bishop Moore resigning, Rev. William Harris is elected President and Rev. Dr. John M. Mason Provost in 1811 — The Medical School is incorporated with the College of Physicians and Surgeons in 1813 — The Botanic Gardens granted to the College in 1814 — History and value of the grant — In 1816 Dr. Mason resigns, and the provostship is abolished — Mr. James Kent is reappointed Professor of Law and delivers lectures which were afterwards published as commentaries — Grammar school established — Hon. William A. Duer, LL.D., succeeds Dr. Harris as President, 1829 — A double course of studies introduced in 1830 and discontinued in 1843 —Fiftieth anniversary celebrated 1837 — Nathaniel F. Moore, LL.D., succeeds President Duer, 1842 — The study of German and elocution — Charles King, Esq., LL.D., succeeds Dr. Moore as President, 1849 — Emeritus professors — Plans for a system of post-graduate instruction — The College removed in 1857 to the buildings formerly occupied by the New York Institution for the Deaf and Dumb — Plans for parallel course of study — Establishment of the Law Schools in 1858 — A School of Mines projected in 1863 — Election of Dr. Barnard to succeed President King, 1864.

THE history of Columbia College has yet to be written. An outline of its origin and progress, by President Moore, was printed in 1846, and was continued to 1869 by the Rev. Beverly R. Betts, Librarian of the College. From these and other sources, Professor J. H. Van Amringe has compiled an "Historical Sketch of Columbia College in the City of New York, 1754–1876," to which we are indebted for the greater part of the information contained in the present chapter.

KING'S COLLEGE

From an address delivered before the Alumni of Columbia College by C. C. Moore, we learn that the earliest intimation of a design to establish an institution of the higher learning in the City of New York is contained in the records of Trinity Church, from which it appears that, as early as 1703, "the Rector and Wardens were directed to wait upon Lord Cornbury, the Governor, to know what part of the *King's farme*, then vested in Trinity Church, had been intended for the College which he designed to have built." The inference from this record would seem to be that the foundation of a college had been contemplated at the time of the conveyance of the King's farm to Trinity Church, and that Trinity Church was understood to hold some part of that tract of land in trust for that purpose. The laudable desire of the corporation of Trinity to discharge the trust which had been committed to it was not at that time gratified. In 1729, during Bishop Berkeley's residence in this country, it may have been temporarily revived; for, after Berkeley had failed in his endeavor to found a college in Bermuda, he would gladly have renewed it in "some place on the American continent, which would probably have been New York"; but it is not known that any practical steps were taken to

promote his object, and there is no record of any further agitation of the subject during the next seventeen years.

In 1746, however, an act was passed, and received the Governor's assent, "for raising the sum of £2,250 by a public lottery for this colony, for the encouragement of learning, and towards the founding of a College within the same," and on August 23d, 1749, Bishop Berkeley wrote to Dr. Johnson, then residing at Hartford, Connecticut: "For the rest, I am glad to find a spirit towards learning prevail in these parts, particularly New York, where you say a college is projected, which has my best wishes."

The first lottery having been successful, others were authorized for the same object, and in November, 1751, their proceeds, amounting to £3,443 18s., were vested in ten Trustees, of whom one was a Presbyterian, two were members of the Dutch Reformed Church, and seven were members of the Church of England, some of the seven being also vestrymen of Trinity Church. On the 8th of April, 1752, Trinity Church offered to convey to the Trustees "any reasonable quantity of the Church farm (which was not let out), for erecting and use of a College." It was probably contemplated from the first, that the College which was thus to be endowed with a portion of the lands of Trinity Church, should be in some distinctive way connected with the Church of England, but nothing of that kind appears in the offer made by the Rector and Vestry of Trinity, nor in the report thereon which was made to the Assembly two years afterwards. As soon, however, as it became known that the Trustees intended to obtain a Royal Charter for the College, the popular apprehension of anything in the nature of a Church establishment in the province occasioned a violent opposition to the measure.

On November 22d, 1753, nearly a year before the Charter was granted, and eighteen months before it was delivered, the Trustees invited the Rev. Dr. Samuel Johnson, of Stratford, to accept the Presidency of the College. His salary as President was to be £250, which the Trustees acknowledged to be inadequate, but they intimated that the Vestry of Trinity Church would in some way make an addition to the amount, and in the month of January, 1754, he was informed that, in case of his acceptance, the Vestry of Trinity had agreed to call him as an assistant minister. After some consideration, Dr. Johnson went to New York and entered upon the duties of the Presidency about the month of June. Meanwhile, on the 16th of May, about a month after his arrival in New York, a draft of the proposed Charter was read at a meeting of the Trustees, and a formal protest against it was offered. It was approved, nevertheless, and the Trustees not only proceeded with their application for the Charter, but gave public notice of an examination of candidates for matriculation. At this first examination, which was held in the first week of July, 1754, the following eight students were admitted: Samuel Ver Planck, Rudolph Ritzema, Philip Van Cortlandt, Robert Bayard, Samuel Provoost, Thomas Marston, Henry Cruger, and Joshua Bloomer. The instruction of these young freshmen was begun by Dr. Johnson, in a schoolhouse belonging to Trinity Church, on July 17, 1754.

The Royal Charter constituting King's College was granted and passed the seals on October 31, 1754. It appointed, as Governors of the College, the Archbishop of Canterbury and the first Lord Commissioner for Trade and Plantations, who were empowered to act by proxy; the Lieutenant-Governor and Commander-in-

Chief of the Province of New York; the eldest Councillor, the Judges of the Supreme Court of Judicature, the Secretary, the Attorney-General, the Speaker of the General Assembly and the Treasurer of the Province; the Mayor of the City of New York; the Rector of Trinity Church; the Senior Minister of the Reformed Protestant Dutch Church, the Ministers of the Ancient Lutheran Church, of the French Church, and of the Presbyterian Congregation, in the City of New York; and the President of the College; all these *ex officio*, and together with them, four and twenty of the principal gentlemen of the city, namely, Archibald Kennedy, Joseph Murray, Josiah Martin, Paul Richard, Henry Cruger, William Walton, John Watts, Henry Beekman, Philip Van Planck, Frederick Philipse, Joseph Robinson, John Cruger, Oliver De Lancey, James Livingston, Esqs., and Benjamin Nicoll, William Livingston, Joseph Read, Nathaniel Marston, Joseph Haynes, John Livingston, Abraham Lodge, David Clarkson, Leonard Lispenard, and James De Lancey, the younger, Gentlemen.

Though the Charter was granted in October, 1754, the opposition to it was so violent that it was not delivered to the members of the new corporation for more than six months. In a letter to Bishop Sherlock which was written on the very day of its delivery, Dr. Johnson said:

I humbly thank your Lordship for the most kind regard you express towards me, in view of my undertaking the care of this young College, which I hope will live, in spite of the most virulent opposition it meets with. The Charter at last passed the seals in October, while I was returned into the country. But the clamor was so great that there were some alterations in the draught after I went away, for which I am very sorry, and particularly that the Bishop of London was left out from being one of the Governors.

At last, on May 7, 1755, Lieutenant-Governor James De Lancey, attended by Mr. Goldsbrow Banyer, Deputy Secretary of the Province, bearing the Charter, delivered that important document at a meeting of over twenty of the gentlemen who were named in it as Governors. After a suitable address by the Lieutenant-Governor, Mr. Horsmanden, a Judge of the Supreme Court, administered the oath of office to the Governors of the College, after which Mr. Chambers, who presided at the meeting, made a reply to the Lieutenant-Governor on the part of the Governors, gratefully acknowledging the honor he had done them, expressing the hope that they would always merit the continuance of his protection, favor, and countenance, and declaring that they had nothing more at heart than to promote the glory of God, the true Protestant religion, and a generous education of youth in the liberal arts and sciences.

The College being now incorporated and capable of holding the land destined for it by Trinity Church, the corporation of Trinity, on May 13, 1755, delivered to the corporation of King's College deeds of conveyance of a piece of land therein described as "situate on the west side of the Broadway, in the west ward of the City of New York, fronting easterly to Church Street, between Barclay Street and Murray Street, 440 feet, and thence running westerly along Barclay Street and Murray Street to the North River." The conditions of this gift, which had been previously inserted in the Charter, and had been the pretext of a furious opposition to the granting of the Charter, were "that the President of King's College for ever, for the time being, should be a member of, and in communion with, the Church of England as by law established; and that the Morning and Evening Service in the College should be the liturgy of the said Church,

or such a collection of prayers out of that liturgy, together with a Collect peculiar for the College, as should be approved by its President and Governors." At the same time, however, the charter expressly denied to the College the power of making any laws or regulations tending "to exclude any person, of any religious denomination whatever, from equal liberty and advantage of education, or from any of the liberties, privileges, benefits, and immunities of said College, on account of his particular tenets in matters of religion."

The popular dread of the beginning of a Church establishment in connection with King's College seems to have been unreasonably excessive. It would have been extraordinary at that time for any institution of learning in the British dominions not to have some religious connection; and in view of the fact that the only endowment of the institution was to be derived from property held by Trinity Church, it was not unreasonable that the President of the College should be required to be a communicant of the Church of England, or that the daily prayers should be taken from the liturgy of that Church, always provided that the benefits of the institution should be free and open to all students without regard to their religious associations or convictions. How little the Governors of King's College were disposed to make the College sectarian in character, and how ready they were to make it serviceable to other denominations than the Church of England, was significantly shown at the very meeting at which the Charter was delivered. After the reply of Mr. Chambers to the Lieutenant-Governor, the Rev. Mr. Ritzema, Senior Minister of the Reformed Protestant Dutch Church, said that he was sorry to have observed the differences and animosities which had arisen concerning certain restrictions in the Charter. He expressed his hope that some means

might be devised to heal them, and the opinion that it would greatly conduce to that end if his Honor would be pleased to grant, either by addition to the Charter or in such other manner as should be thought most proper, that there should be established in the College a Professor of Divinity, with a suitable allowance of salary, for the education of such of the youth of the Dutch Church as might be intended for the ministry, the Professor to be chosen by the Consistory of the Church for the time being. In reply, the Lieutenant-Governor expressed his approval of the suggestion and his willingness to grant any application in accordance with it that the Governors might address to him. Thereupon the Governors unanimously adopted Mr. Ritzema's proposal and appointed a committee to prepare their petition accordingly. At their next meeting, a draft of the petition was approved, and the committee was directed to present it to the Lieutenant-Governor ; and on the 3d of June following, Mr. Banyar, Deputy Secretary of the Province, delivered to the Governors His Majesty's additional Charter, making provision for the establishment of a Professor of Divinity according to the doctrine, discipline, and worship established by the National Synod of Dort.

On the same day, a device for the seal of King's College was adopted by the Governors. It was prepared by Dr. Johnson, and continues to be the seal of Columbia College, with no other change than the necessary alteration of the name. The description is given as follows by Professor Van Amringe, literally from the minutes:

THE DEVICE OF THE COLLEGE SEAL. — The College is represented by a Lady sitting in a Throne or Chair of State, with Severall Children at her knees to represent the Pupils, with I Peter. II., 1, 2, 7 v., under them to express the Temper with which they should apply Themselves to seek for

True Wisdom. The words are, Wherefore laying aside all Malice and all Guile, and Hypocrisies and Envies and Evil Speakings, as New-Born Babes desire the Sincere Milk of the Word that ye may grow thereby, &c. One of them She takes by the hand with her left hand expressing her benevolent design of Conducting them to true Wisdom and Virtue. To which purpose She holds open to them a Book in her right hand in which is (in) Greek letters ΛΟΓΙΑ ΖΩΝΤΑ, the living or lively Oracles, which is the Epithet that St. Stephen gives to the Holy Scriptures — Acts 7 : 38. Out of her Mouth over her left Shoulder, goes a Label with these words in Hebrew Letters ORI–EL — God is my Light; alluding to Ps. 27 : 1, expressing her Acknowledgement of God the Father of Lights, as the Fountain of all that Light, both Natural and Revealed with which She proposes to inlighten or instruct her Children or Pupils; whereof the Sun rising under the Label is the Emblem or Hieroglyphic, alluding to that expression, Mal. IV., 2. The Sun of Righteousness arising with healing in his Wings. Over her head is Jehovah in a Glory, the Beams coming triangularly to a Point near her head, with these words around her for her Motto, IN LUMINE TUO VIDEBIMUS LUMEN — *In thy light shall we see light.* — Psal. 36 : 9. On the Edge around are engraved in Capitals, SIGILLUM COLLEGII REG. NOV. EBOR. IN AMERICA — *The Seal of King's College at New York in America.*

In 1756 the Governors of King's College undertook the erection of a college building : and on July 23 the first stone, bearing the following inscription, was laid by Governor Sir Charles Hardy:

Hujus Collegii, Regalis dicti, Regio
Diplomate constituti in Honorem
Dei O.M. atq : in Ecclesiae Reiq : Publicae
Emolumentum, primum hunc lapidem
Posuit Vir praecellentissimus, Carolus
Hardy, Eques Auratus, hujus Provinciae
Praefectus dignissimus. Aug^{ti}. die 23°.
An. Dom. MDCCLVI.

In 1756, Mr. William Johnson, A.M., a graduate of Yale, who had been appointed in 1755 as an additional instructor, went to England to take Orders, and Mr. Leonard Cutting, of Pembroke Hall, Cambridge, was appointed in his stead. In November, 1757, Dr. Johnson left the city on account of the prevalence of small-pox. He remained in the adjacent county of West Chester for more than a year, during which time his service to the College was interrupted; and Mr. Cutting being unequal to the care of all the thirty students who were then connected with the institution, Mr. Treadwell, a graduate of Harvard, was appointed Professor of Mathematics and Natural Philosophy. A supply of instruments for teaching experimental philosophy was imported from Europe for Mr. Treadwell's use.

On June 21, 1758, shortly after Mr. Johnson's return to the city, the first Commencement of King's College was held. The degree of Bachelor of Arts was conferred on five of the eight students who had been admitted in 1754, and upon three other gentlemen who had been educated either in Philadelphia or at Princeton. On the same occasion, the degree of Master of Arts was conferred upon twelve gentlemen who had been educated elsewhere, some of the twelve who already held the degree being admitted *ad eundem*, and others being admitted *honoris causa*.

In the following year, there was no public Commencement, but the degree of Bachelor of Arts was conferred on one candidate who had been educated at Princeton, and on one of the six students who had been matriculated in 1855. Of the other five original members of the class, it appears from the record of the College, that one "in his third year, went to Philadelphia"; another, "about the middle of his second year, went into the army"; a third,

"after three years, went to merchandise"; the fourth, "after two years, went to privateering"; and the fifth, "after three years, went to nothing"!

In October, 1759, Dr. Johnson again left the city, to escape from the terrors of small-pox, and during his absence, which continued until the month of May following, his duties were divided between Mr. Cutting and Professor Treadwell. The declining health of the latter, who died in 1760, made it necessary to find some one to take his place, and a committee was appointed to write to the Archbishop of Canterbury and other fit persons to aid them in procuring competent men "to assist the President in carrying on the education and instruction of the youth of the College." Archbishop Secker seems to have taken considerable interest in the matter, though for a time without success. It was not until November, 1761, that Mr. Treadwell's chair was filled by the appointment of Mr. Robert Harpur, a gentleman who had been educated at Glasgow; and it was only in the autumn of 1762 that the Rev. Myles Cooper, A.M. (afterwards D.C.L.), Fellow of Queen's College, Oxford, was sent out by Archbishop Secker to fill the Chair of Moral Philosophy and assist the President in his instruction and government. In the mean time, about one-third of the College building — the part which afterwards stood between the wings of the old edifice in College Place — had been so far completed that in 1760 the officers and students began to lodge and mess there. The plan was greatly admired, and the Rev. Dr. Burnaby, who was then travelling in the Province, wrote of it as follows:

The College, well finished, will be exceedingly handsome. It is to be built on three sides of a quadrangle, fronting Hudson's or North River, and will be the most beautifully situated of any College, I believe, in the world. At present, only one

wing is finished, which is of stone, and consists of twenty-four sets of apartments, each having a large sitting-room, with a study and bed-chamber.

On March 1, 1763, Dr. Johnson resigned the Presidency of the College, and on April 12, Mr. Cooper was elected as his successor. The administration of the new President was vigorous, and for several years it was exceedingly successful. At the meeting of the Governors, at which Dr. Johnson's resignation was accepted, it was resolved to establish a Grammar School, which was opened shortly afterwards under the charge of Mr. Matthew Cushing, of Charlestown, Massachusetts. Within a short time a librarian was appointed ; the Statutes of the College were revised and improved, and the scheme of studies in the Classical Department of the College was greatly enlarged.

In October of the same year, Mr. Cutting resigned his position, and it was not until two years later that Dr. Clossy, who had been educated at Trinity College, Dublin, and was the author of an able work on "Morbid Anatomy," was induced to accept the vacant position, with a salary of £144. A further salary of £36 was assigned to him as Professor of Natural Philosophy, Professor Harpur thereafter teaching only Mathematics.

On February 26, 1767, a committee which had been appointed to petition the Governor of the Province for a grant of land, reported that they had obtained a grant of twenty-four thousand acres. The committee was thereupon empowered to view the lands, and if it should then be thought proper, to have them surveyed. From subsequent proceedings which were taken in 1770 for the more speedy settlement of these lands, it appears that they were situated in the new county of Gloucester, that they had been erected into a township with the usual privileges,

and that they were intended to become the site of the county town, to the great advantage of the College. Unluckily, however, it turned out that the township was comprehended within a tract of country which had been long in dispute between New York and New Hampshire, and which was erected after the Revolution into the new State of Vermont. In the settlement of the affair it was agreed on the part of the State of New York that, in consideration of a sum of $30,000, all grants of lands, lying within the limits of Vermont, which had been previously made by the authority of New York, should be declared to be null and void; and so the magnificent landed endowment of the College, on which so many hopes had been founded, was irretrievably lost. The considerations of public policy by which the State of New York was induced to consent to this settlement were, no doubt, weighty; but the surrender of the right of the College to a property which would speedily have furnished it with an ample revenue was a misfortune which no subsequent assistance from the State could be expected adequately to repair.

In 1767, the Grammar School appeared to have been less successful than the expense incurred in supporting it had entitled the Governors to expect. It was therefore reorganized with a smaller staff than before, but the Governors were so far from being discouraged by this disappointment, that they proceeded to adopt a scheme, proposed by Dr. Clossy, for the establishment of a Medical School. In connection with Dr. Clossy, Drs. Middleton, Jones, Smith, Bard, and Tennent undertook to act as professors. Drs. Middleton, Jones, and Bard soon afterwards projected the foundation of the New York Hospital, and at the Commencement of the College, in 1768, Dr. Bard set forth the necessity and usefulness of a public infirmary so warmly and pathetically that Sir

Henry Moore himself immediately set on foot a subscription for that purpose.

For several years the College, the Grammar School, and the Medical School seem to have made steady and substantial progress. The teaching Faculty was gradually enlarged, and the President and Governors must evidently have intended so to extend the plan of the institution as to make it a true university. Among the papers of the College is one attributed to Dr. Cooper, which was probably written in 1773 or 1774, giving the following account of the condition and prospects of the Institution at that date:

Since the passing of the charter the Institution hath received great emolument by grants from his most gracious majesty King George the Third, and by liberal contributions from many of the nobility and gentry in the parent country; from the Society for the Propagation of the Gospel in Foreign Parts, and from several public-spirited gentlemen in America and elsewhere. By means of these and other benefactions, the Governors of the College have been enabled to extend their plan of education almost as diffusely as any college in Europe; herein being taught by proper Masters and Professors, who are chosen by the Governors and President, Divinity, Natural Law, Physic, Logic, Ethics, Metaphysics, Mathematics, Natural Philosophy, Astronomy, Geography, History, Chronology, Rhetoric, Hebrew, Greek, Latin, Modern Languages, the Belles-Lettres, and whatever else of literature may tend to accomplish the pupils as scholars and gentlemen.

To the College is also annexed a Grammar School for the due preparation of those who propose to complete their education with the arts and sciences.

All students but those in Medicine are obliged to lodge and diet in the College, unless they are particularly exempted by the Governors or President; and the edifice is surrounded by an high fence, which also encloses a large court and garden, and a porter constantly attends at the front gate, which is closed at ten o'clock each evening in summer and nine in

winter; after which hours the names of all that come in are delivered weekly to the President.

The College is situated on a dry, gravelly soil, about one hundred and fifty yards from the bank of the Hudson River, which it overlooks; commanding, from the eminence on which it stands, a most extensive and beautiful prospect of the opposite shore and country of New Jersey, the City and Island of New York, Long Island, Staten Island, New York Bay with its Islands, the Narrows, forming the mouth of the harbor, etc., etc., and being totally unencumbered by any adjacent buildings, and admitting the purest circulation of air from the river and every other quarter, has the benefit of as agreeable and healthy a situation as can possibly be conceived.

Visitations by the Governors are quarterly; at which times premiums of books, silver medals, etc., are adjudged to the most deserving.

This Seminary hath already produced a number of gentlemen who do great honor to their professions, the place of their education and themselves, in Divinity, Law, Medicine, etc., etc., in this and various other colonies, both on the American continent and West India Islands; and the College is annually increasing as well in students as reputation.

From the account of Dr. Cooper, King's College had now reached a condition of prosperity which justified the most sanguine hopes of its friends and patrons in England and America; but their hopes were doomed to disappointment. The dispute between the American Colonies and the mother country was growing rapidly to the dimensions of an international quarrel, and if the Colonies had earnest and enthusiastic supporters in England, England had loyal and devoted adherents among the colonists. The controversy grew daily more and more embittered, and as a loyal subject of the Crown, Dr. Cooper considered himself bound to take an active part in maintaining the authority of the Government. He distinguished himself in controversy with Smith, Livingston, and other literary

champions of the Whig party, and he had the misfortune to be worsted by an anonymous antagonist whom he presently discovered to be one of his own pupils, Alexander Hamilton, then a student in one of the Junior classes. The talents and popularity of Dr. Cooper won for him the respect and affection of his students, but did not prevent them from rejecting his Tory principles. Some of them, indeed, like Jay and Livingston, Maurice and Benson, Van Cortlandt and Rutgers, Troup and Hamilton, were among the first to pronounce for independence, and were destined to become leaders of their countrymen, both in the cabinet and in the field.

"It would be an injustice to the memory of Dr. Cooper," says a writer in the *Analectic Magazine*, "not to add that, far from betraying anything like mortification or resentment, he uniformly treated his youthful antagonist, Hamilton, with good humor and even respect," which there is every reason to believe was kindly reciprocated. This academic tolerance, however, did not extend to the populace. A letter was published, bearing date, Philadelphia, April 25, 1775, and addressed to Dr. Cooper and four other gentlemen of New York, which ascribed to them, and to their assurances of the defection of New York, "all the hostile proceedings of England — the blood of their fellow-subjects who had fallen in Massachusetts — towns in flames — a desolated country, butchered fathers, weeping widows and children, with all the horrors of a civil war." They were denounced as parricides and were told that "the Americans, reduced to desperation, would no longer satisfy their resentment with the execution of villains in effigy." The letter was signed "Three Millions," and concluded with this significant exhortation: "Fly for your lives, or anticipate your doom by becoming your own executioners." This warning was speedily

followed by a popular outbreak. On the night of May 10, a mob of several hundred men forcibly entered Dr. Cooper's apartment in the College, but, fortunately, one of his former pupils had succeeded in advising him of his danger just in time to enable him to escape. He made his way, "only half dressed, over the College fence, reached the shore of the Hudson, and wandered along the river bank until near morning, when he found shelter in the house of his friend, Mr. Stuyvesant, where he remained for that day, and during the night following took refuge on board the *Kingfisher*, Captain James Montagu, an English ship of war at anchor in the harbor, in which, soon afterwards, he sailed for England."

Six days after the escape of the President, the Rev. Benjamin Moore, an alumnus of the College who had recently returned from England in Holy Orders and who afterwards became Bishop of New York, was appointed *Præses pro tempore*, as it was still supposed that Dr. Cooper might return. In consequence of Dr. Cooper's absence, no public Commencement was held that year, but the degree of Bachelor of Arts was conferred on seven students, two alumni of the College were admitted to the degree of Master of Arts, and eight students were matriculated.

On the 6th of April, 1776, the Treasurer of the College received a message from the *Committee of Safety*, desiring the Governors "to prepare the College within six days for the reception of troops." The students were dispersed; the library and apparatus were deposited in the City Hall; the College buildings were converted into a military hospital. In the end, almost all the apparatus was wholly lost; of the library, only six or seven hundred volumes were discovered about thirty years afterwards in a room belonging to St. Paul's Chapel, and no one knew

how or when they had been placed there. The seizure of the College building and the practical suppression of the institution were probably prompted by misdirected political animosity; but whatever Dr. Cooper's personal course may have been, the history of the United States bears witness to the fact that the alumni of King's College did noble service to their country both during the War of Independence and in the hardly less trying times which followed.

In 1776 no public Commencement was held, though six students were admitted to the degree of Bachelor of Arts, and the College record of the year remarks that "the turbulence and confusion which prevailed in every part of the country effectually suppressed every literary pursuit." Nevertheless, some instruction appears to have been given outside the walls of the College, for in 1777 two students were matriculated; the Governors must have continued to hold occasional meetings, as there still exists a certified copy of the records of a meeting held on May 17, 1781; and it appears from the minutes of a meeting of the Trustees of Columbia College, held on March 18, 1788, that "Mr. Moore, the President *ad interim*, occupied during a part of this period (1776–1784) a house furnished by Mr. Lispenard for the use of the officers and students of the College when the College edifice was converted into a hospital." For eight years, however, from 1776 to 1784, King's College was virtually suspended, and it was only revived by an act passed on May 1 of the latter year "for granting certain privileges to the College heretofore called King's College, for altering the name and charter thereof, and erecting an University within this State."

Columbia College.

The University of the State of New York was organized by the Act of May 1, 1784, under twenty-one Regents who had power to visit and inspect all colleges and schools established in the State; to appoint a president of any college or a principal of any academy which might be vacant without reasonable cause for one year; to incorporate new colleges; and to confer all degrees above that of Master of Arts which were known or granted by any university or college in Europe. On November 26 of the same year, this act was amended, but the provisions of the amended act were found to be so obscure and inconsistent, that it was impossible for the Regents to proceed with satisfaction in the reorganization of King's College. Accordingly, on April 13, 1787, a new act was passed, entitled "An Act to Institute an University within this State, and for other Purposes therein Mentioned." Under this act the University of the State of New York was continued with the same powers as before, but the administration of the Institution formerly known as King's College was committed to a separate corporation. "The Charter heretofore granted to the Governors of the College of the Province of New York in the City of New York in America" was "fully and absolutely ratified and confirmed in all respects," with these exceptions: (1) The College was thenceforth to be called Columbia College, and the style of the corporation was to be "the Trustees of Columbia College in the City of New York"; (2) No persons were to be trustees "in virtue of any offices, characters, or descriptions whatsoever"; (3) The clauses of the Charter requiring "the taking of oaths and the subscribing of a declaration," "making a person ineligible to the office of President on account of his religious tenets," and "pre-

scribing a form of public prayer to be used in the College," were repealed; (4) The provision of the Charter requiring obedience to the laws of England was likewise repealed, and it was enacted that laws and ordinances made by the Trustees should not be contrary to the Constitution and Laws of the State of New York; (5) The provision of the Charter requiring a quorum of fifteen Governors for the despatch of business was amended so that a quorum of thirteen Trustees should suffice.

Twenty-nine Trustees of Columbia College were named and appointed in the act, and it was provided that when their number should be reduced by death, resignation, or removal to twenty-four, these twenty-four should be the Trustees in perpetual succession, with power to fill vacancies, as granted in the original Charter. All rights, privileges, and immunities, previously conferred upon the Governors of King's College, and all property, real and personal, belonging to that corporation, were granted to and vested in "the Trustees of Columbia College in the State of New York."

The first Trustees of Columbia College, appointed by the act of April 13, 1787, were the following:

James Duane, Samuel Provost, John H. Livingston, Richard Varick, Alexander Hamilton, John Mason, James Wilson, John Gano, Brockholst Livingston, Robert Harper, John Daniel Gross, Johann Christoff Kunze, Walter Livingston, Lewis A. Scott, Joseph Delaplaine, Leonard Lispenard, Abraham Beach, John Lawrance, John Rutherford, Morgan Lewis, John Cochran, Gershom Seixas, Charles M'Knight, Thomas Jones, Malachi Treat, Samuel Bard, Nicholas Romein, Benjamin Kissam, and Ebenezer Crossby.

The Trustees of Columbia College assembled for organization on May 8, 1787, when Robert Harper and Brock-

holst Livingston were reappointed to their respective offices of Clerk and Treasurer which they had held under the Regent of the University, and by-laws which had been previously established by the Regents, so far as they were applicable to the present Constitution of the College, were adopted.

On the 21st of the same month, William Samuel Johnson, LL.D., son of the first President of King's College, was elected President, but did not signify his acceptance to the Trustees until the month of November following. When he took charge of the institution, the College proper had thirty-nine students, nearly one-half of whom were Freshmen. Ten of the students had rooms, and five of the ten were boarded, in the College. The annual income of the institution was about £1330, and out of this modest sum the Trustees maintained a Faculty of Arts consisting of three Professors. The Faculty of Medicine likewise consisted of three Professors. During the next five years nothing of great importance appears to have occurred, except that in 1788 John Randolph, of Mattoax, Virginia, afterwards better known as John Randolph of Roanoke, and his brother, Theodoric, entered the Freshman class. Theodoric does not appear to have passed beyond his Sophomore year, but John is known to have continued his studies as a Junior in 1790.

In February, 1792, the Trustees, acting at the instance of the Medical Society of the State of New York and in concert with the Regents of the University, enlarged the Faculty of the Medical School by the appointment of a Dean and seven Professors. Dr. Samuel Bard, who had been Professor of the Theory and Practice of Medicine in the first Medical School established by the College in 1767, and who had more recently held the Chairs of Chemistry and of Natural Philosophy and Astronomy, under the Re-

gents, was elected Dean; the Professors associated with him were Drs. Baily, Post, Rodgers, Hamersley, Smith, Nicoll, and Kissam, all men of acknowledged eminence in their profession.

A few months later, the Trustees were encouraged by the liberality of the Legislature to make a large addition to the College Library, and what was of more importance, greatly to increase the teaching staff of the department. The Legislature made a grant of a lump sum of £7900 and a further appropriation of £750 to be paid annually for a term of five years. With this assistance the Trustees felt justified in proceeding to the erection of an additional building, the foundation of which was laid along the west side of the College Green, at right angles to the existing edifice, and on the northern end of this foundation a structure was begun which was intended to contain a hall and several recitation-rooms.

The Trustees next proceeded to the enlargement of the teaching Faculty of the College. Dr. Kunze was reappointed Professor of Oriental Languages; Dr. Mitchill, Professor of Natural History, Chemistry, Agriculture, and Botany; M. de Marcelan, Professor of French. In the following year, 1793, Mr. James Kent was elected Professor of Law, and in 1795 the Rev. Dr. M'Knight was appointed Professor of Moral Philosophy and Logic; the Rev. John Bisset, A.M., Professor of Rhetoric and Belles-Lettres; and a Professorship of Geography was added to that of Mathematics and Natural Philosophy, which was already held by Dr. Kemp.

It unfortunately turned out that the Trustees had undertaken more than their means permitted them to accomplish, and in 1796 they were obliged to ask for a further appropriation from the Legislature to enable them to complete the College building. The application was refused;

the committee in charge of the building was instructed to proceed with it until the money in their hands should be expended; and in the month of June, 1796, the committee was further directed to sell the perishable building material which then remained on hand. In 1797, the appropriation of £750 per annum which had been made for five years by the Legislature was not renewed and the Trustees were greatly embarrassed. Professor Kent's lectures on Law were discontinued in 1798. In February, 1799, the teaching Faculty was still further reduced. The Chairs of Rhetoric and Belles-Lettres, and of Logic and Moral Philosophy, were committed to the President; Mathematics, Natural Philosophy, and Geography were united under one Professor; the Latin and Greek languages, and the Roman and Greek antiquities, were united under another; the Professorships of Oriental Languages, of French and of Law, were altogether discontinued; but a Chair of Natural History and Chemistry was established, and these studies were included in the regular academic course.

On July 16, 1800, says Professor Van Amringe:

> Dr. Johnson, having nearly reached his 74th year, and feeling the infirmities of age, resigned his presidency and retired to Stratford. The tranquil life to which he was there restored, and the air of his native village, reëstablished in a great degree his bodily health, and in the enjoyment of a leisure so well earned by the professional toils and highly important public services of his previous long career, he lived to enter upon his 93d year, "retaining to the last his vigor and activity of mind, the ardor of his literary curiosity, and a most lively interest in whatever concerned the welfare of this country and of the Christian world."

On May 25, 1801, the Rev. Dr. Wharton, of Philadelphia, was elected President. His acceptance was signified

by letter on August 3d; but on December 11th of the same year he resigned his position. On December 30th, the Trustees resolved that the President should in future be released from the Professorship of Rhetoric, Belles-Lettres, Logic, and Moral Philosophy, which had been attached to his office in 1799, and that he should thereafter be charged only with the superintendence of the institution, including the duty of presiding at examinations and commencements, and such other duties as were appropriate to his office. Under this arrangement the Right Rev. Benjamin Moore, Bishop of New York, who had been appointed *Præses ad interim* on the departure of Dr. Cooper in 1775, was appointed on the following day to the office of President; and, at the same time, the Rev. Dr. Bowden, who was also an alumnus of the College, was appointed to the Professorship of Moral Philosophy, Rhetoric, Belles-Lettres, and Logic, which for the two previous years had been held by President Johnson.

The internal organization of the College under the Presidency of Bishop Moore was far from perfect, and was probably not intended to be permanent. He did not reside in the College nor take an active part in the administration of its ordinary discipline, the government of the students being committed to the Faculty. Nevertheless, under the wise and judicious conduct of Drs. Kemp, Wilson, and Bowen, the institution continued for ten years to grow in numbers and to increase in reputation. A grant of land which was made by the Regents of the University in 1802 yielded a certain revenue, and the real estate in the city which belonged to the College grew daily more valuable, so that the Trustees were enabled to complete the hall and recitation-rooms on the north end of the new foundation.

It was impossible at that time to do more. The remainder of the building which had been so hopefully begun fell gradually to ruin, while the original edifice presented a decayed and unsightly appearance. But the internal life of the College was vigorous. In the month of June, 1809, upon the recommendation of a committee consisting of Mr. Rufus King and the Rev. Drs. Mason, Abeel, Hobart, and Miller, the standard of scholarship required for admission to the College was notably raised, and on October 1, 1810, the whole course of studies and the system of discipline were revised in accordance with the new statute of admission. This action had the double effect of elevating the standard of collegiate education and of establishing the College in the respect and confidence of the community, so that, in the spring of 1810, the Trustees obtained a new charter from the Legislature by which certain restrictions in the former charter were removed and certain defects which experience had discovered were supplied. Among other alterations, the limit of the term for which the College might grant leases was extended from twenty-one years to sixty-three years.

From the Annual Report of the Regents in February, 1810, it appears that the number of students matriculated for that year was 135; and the Trustees observed that "the Regents will perceive that, notwithstanding the embarrassments with which she has had to struggle, Columbia College not only maintains her ground, but increases her importance." They further observed that they have so far prosecuted the theoretical and practical system of the College as "to lay a broader and stronger foundation for sound and thorough education than, as they believed, has hitherto been known in these States."

Columbia College having now (1811) been brought to

a state of prosperity which required the undivided service of the President, Bishop Moore resigned his office, and in the following month the Trustees created the new office of Provost. The Provost was to supply the place of the President in his absence, to share in the general superintendence of the College, and to conduct the classical studies of the Senior class. Under this new arrangement, the Rev. William Harris was elected President and the Rev. Dr. John M. Mason was elected Provost. The President being *ex officio* a member of the Board of Trustees, an act of the Legislature was obtained under which the Provost was made eligible to membership in the same Board, and in May, 1813, Dr. Mason was elected a Trustee. The division of responsibility between the President and the Provost does not seem to have worked well, and was not long continued. In July, 1816, Dr. Mason resigned his office, and in November following the Trustees resolved that the powers and duties of the Provost, with the exception of taking the classical studies of the Senior Class, should be committed to the President. Under this arrangement, President Harris became the sole responsible head of the College.

The College of Physicians and Surgeons having been established in the city of New York by the Regents of the University, the Trustees of Columbia, on November 1, 1813, agreed to incorporate their Medical School with that new institution, and in accordance with this agreement, the separate exercises of the Medical School of Columbia College were then discontinued.

In 1814, the Legislature made to the College a grant of about twenty acres of land on Manhattan Island, previously occupied as a Botanic Garden by the late Dr. Hosack, from whom it had been purchased by the State. The grant was made on condition that the College should

be removed to that tract of land within a period of twelve years, and was intended by the Legislature to be a partial compensation for the large estate in Gloucester County which the College had lost when Vermont became a State of the Union. The land was at that time about three miles from the city, and was valued at about $250 per acre, or altogether, at about $5000. When it passed into the possession of the Trustees it was yielding a trifling income, but as the city was extended further and further northward, the revenue derived from it was wholly inadequate to meet the taxes and assessments which were levied upon it. For many years, the management of this property was a matter of great perplexity to the Trustees; but at length, in 1850–52, it was so judiciously leased that it has become a very valuable endowment of the College. It is now situated in the best part of the city and extends east and west between Fifth and Sixth Avenues, and north and south between Forty-seventh and Fifty-first Streets.

It does not seem to have been expected that the Legislature would exact from the Trustees a fulfilment of the condition annexed to the grant of the Botanic Garden, that the College should be removed to that place within a period of twelve years, and in 1819 the condition was repealed. Meanwhile, in 1817, the Trustees having made a careful examination of their financial resources, resolved to make thorough repairs of the old edifice, and also to erect additional buildings. The old building was greatly altered, part of it being reserved as a dwelling-house, and the rest being so arranged as to furnish a Chapel, a Library, and the necessary recitation-rooms. Two wings were added, each fifty feet square and each containing two houses for professors. In the prosecution of this work, the Trustees were aided by an appropriation of

$10,000 from the Legislature; but, notwithstanding this assistance, when the Building Committee presented its report on October 2, 1820, it appeared that the cost of the additions and alterations had so far exceeded the estimates that a considerable debt had been incurred. It is creditable to the Trustees that they did not allow this embarrassment to hinder them either from rewarding a faithful member of the Faculty, or from undertaking a necessary extension of the College curriculum. On the resignation of Dr. Wilson, who was obliged by increasing infirmities to lay down his Professorship, the Trustees, in consideration of his "faithful and eminently useful services during eight and twenty years, of his advanced age, and the peculiar circumstances of his situation," granted him a liberal annuity for life. A division of the Professorship of Mathematics and Natural Philosophy having been found to be necessary, it was divided accordingly into two Professorships of Mathematics and Astronomy, and of Natural and Experimental Philosophy, the former remaining to Dr. Adrain, and Mr. James Renwick being appointed to the latter. Dr. Wilson was succeeded by his adjunct professor, Mr. Nathaniel F. Moore, and Mr. Charles Anthon was promoted to the position vacated by Professor Moore. Thus, for the first time in its history, most of the Chairs of the Faculty of Columbia were filled by her own alumni, Professors McVickar, Moore, Anthon, and Renwick having all been educated and graduated at Columbia, whereas, before 1817, only three professors, Bishop Moore, the Rev. John Bowden, and the Rev. John Vardill (who probably never entered on the duties of his office), were graduates of Columbia.

On November 3, 1823, Mr. James Kent was reappointed to the Professorship of Law which he had previously held from 1798 to 1818; and it was under this appoint-

ment that this distinguished American jurist delivered the lectures which were afterwards expanded into his great Commentaries.

In October, 1827, the Trustees resolved to establish a Grammar School under the control of the Faculty of the College, but the plan failed of success until it had been considerably modified, and even then it did not realize the hopes of the Trustees. In 1829 a building was provided for its accommodation on the College ground, and Mr. John D. Ogilby was appointed Master. The Grammar School continued to exist until 1864, when it was wholly discontinued.

In October, 1829, Dr. Harris died, after a service as President of over eighteen years, for thirteen of which he had been in full charge of the College. On December 9th the Hon. William A. Duer, LL.D., was appointed to succeed him.

Early in 1830, an important modification of the College system was introduced, with a view of rendering the benefits of education more generally accessible to the community. The existing course of study, which was now called the Full Course, was maintained and enlarged, and the time of daily attendance upon the professors which was required of students was materially increased. At the same time, another course of study, called the Scientific and Literary Course, was established. It was to be open to others besides matriculated students, and all persons who availed themselves of its privileges were to be at liberty to use them at their own discretion and to such an extent as they might find to be desirable. In 1836, both courses of study were again revised and enlarged. The Scientific and Literary Course in particular was greatly extended, and in order that the scientific branches of both courses might be more efficiently con-

ducted, a sum of $10,000 was appropriated for the purchase of additional apparatus and for the addition to the Library of the necessary books of reference and illustration. This appropriation is particularly remarkable, as the sum of $2300 had been expended during the previous year in the purchase of two collections of minerals. It was hoped and believed that the Scientific and Literary Course would be acceptable to many students who might lack the time or the means to prosecute the Full Course, but this hopeful expectation was disappointed. From the very first, the number of students was small, and it steadily grew smaller; from 1839 to 1843 there were in all but four; in 1843, there was not one, and in that year the Literary and Scientific Course was altogether discontinued.

On April 13, 1837, Columbia College celebrated with great solemnity the Fiftieth Anniversary of its reorganization. The Trustees, the Faculty, the Alumni, and the Students united in appropriate ceremonies. In the morning, after suitable religious services at St. John's Chapel, an oration and a poem were delivered by Alumni who had been previously appointed; odes in several languages, which had been composed and set to music for the occasion, were sung; and honorary degrees were conferred upon several distinguished gentlemen. In the evening the College was decorated and illuminated, and thrown open for the reception and entertainment of a large number of invited guests.

In January, 1838, the College Library received a valuable addition by the purchase of the Library of the former Professor Moore. At the same time, Professor Moore was appointed Librarian and was occupied for about a year in arranging the Library and preparing a catalogue.

In May, 1842, on the resignation of President Duer, after a severe and long-continued illness, Nathaniel F. Moore, LL.D., was appointed in his place.

In 1843, a Professorship of the German Language and Literature was established on an endowment of $20,000, bequeathed for that purpose by Frederick Gebhard, Esq. In the month of June following, John Lewis Tellkampf, U.I.D., of Göttingen, was appointed Gebhard Professor, and at the same time, the German Language and Literature was made a part of the undergraduate course. Certain difficulties which had been partly foreseen interfered with the success of this new arrangement. In 1847, Professor Tellkampf resigned and was succeeded by the Rev. Henry I. Schmidt, under whom the study of German in the two highest classes was made voluntary. That arrangement continued until 1857, when the study of German was made wholly voluntary in all classes, but was encouraged by the establishment of annual prizes, which had a good effect.

In December, 1844, a chair of Elocution was established for the instruction of the Freshman class.

In 1848, shortly after the death of Chancellor Kent, William Betts, A.M., an alumnus and trustee of the College, was elected Professor of Law, and in the winter of 1849–50 he delivered a course of lectures on International Law.

On the resignation of Dr. Moore, in July, 1849, the Presidency again became vacant, and in the month of November, Charles King, Esq., LL.D., was elected his successor. It was during the early years of President King's administration that the Trustees made the disposition of the tract of land known as the Botanic Garden, which has since proved to be so advantageous to the College.

In November, 1854, Dr. Renwick resigned his Professorship, and an order of Emeritus Professors was then established for the purpose of acknowledging the obligation of the College to professors who should have devoted themselves to its service for twenty years or more. These professors were to have no salaries or stated duties, but were to enjoy certain honors and privileges. Each of them was to be entitled to sit with the Faculty on public occasions, and to deliver an annual lecture in the College; his portrait was to be painted at the expense of the College and hung in some proper place in the College building; and he was to have the right of nomination to one free scholarship, to be called by his name. Dr. Renwick was the first Emeritus Professor, and since his time the following gentlemen have received the same honor: the Rev. Dr. John McVickar, Dr. Charles Davies, Dr. Henry James Anderson.

From 1853 to 1857, the Trustees were anxiously occupied with the plans for the removal of the College from College Place to some other part of the city, and for the inauguration of a liberal system of post-graduate instruction. In 1857, the old buildings were abandoned and the College was opened on the very spot and in the very building formerly occupied by the New York Institution for the Instruction of the Deaf and Dumb, in which Dr. Barnard had served from 1832 until 1838.

In forming their plans for the proposed postgraduate courses, the Trustees contemplated a certain modification of the undergraduate course as it then existed. For the first three years, the Classical Course was to be maintained, "with adaptations, however, to future studies, both sub-graduate and post-graduate"; but in addition to the Classical Course, there was to be another "Coördinate and mainly Scientific Course, with due regard to

classical and ethical instruction, to occupy two years, and a third, when the demand should justify it. These two courses, proceeding in nearly parallel lines, were to meet at the commencement of the Senior year and the students were to be prepared to undertake any of the studies to be thereafter taught."

Three schools were to be established, a School of Philosophy or Philology, a School of Jurisprudence and History, and a School of Mathematics and Physical Science, into one of which the students were to be required to enter at the beginning of the Senior year, and at the end of that year, those who had pursued the earlier Classical Course were to receive the degree of Bachelor of Arts, and those who had pursued the Scientific Course, the degree of Bachelor of Science. It was expected and intended that the studies of these schools would be continued in a post-graduate course for two years longer. In accordance with this plan, several professors were added to the Faculty and the Senior class was divided into Schools of Letters, Jurisprudence, and Science; but it was speedily discovered that the scheme could not be carried out; the post-graduate course never had any real existence; after one year of abortive experiment it was practically abandoned, and in 1859 the division of the Senior class into schools was altogether abolished.

The Professorship of Law, which had formerly been held by Chancellor Kent, and to which Mr. Betts was elected in 1848, had been merely a lectureship, and on the withdrawal of Mr. Betts in 1854, the chair had been allowed to remain vacant. A few law schools existed at that time in other parts of the country, but they attracted no considerable body of students, and candidates for admission to the bar generally pursued their studies in the office of some reputable lawyer. It was felt, however,

that in the city of New York the establishment of a school in which the principles and practice of the law might be studied under competent instructors ought no longer to be delayed. Accordingly, in 1858, the Trustees of Columbia College proceeded to organize a Law School under the supervision and control of Professor Theodore W. Dwight, of Hamilton College, who was appointed Warden and Professor of Municipal Law. Professors Francis Lieber and Charles M. Nairne were associated with him, and in 1860, Dr. John Ordronaux was appointed Professor of Medical Jurisprudence. During the first year of its existence, the exercises of the school were held at the rooms of the Historical Society in Eleventh Street, in order that they might be convenient of access to students who were employed in lawyers' offices, and in the ensuing year it was removed to Lafayette Place, nearly opposite the Astor Library. From the day of its opening, the Law School was successful; and the number of students increased from year to year, beginning with 35, it had 63 in the second year, 103 in the third, 117 in the fourth, 146 in the fifth, and in 1864, when Dr. Barnard became President of the College, the Law School had 171 students.

Encouraged by the success of the Law School, the Trustees, early in 1863, gave serious attention to a plan prepared by Mr. Thomas Egleston, Jr., for the establishment of a School of Mines and Metallurgy. In 1864, the plan was approved and adopted by the Board; Mr. Egleston was appointed Professor of Mineralogy and Metallurgy; Brigadier-General Francis L. Vinton was appointed Professor of Mining Engineering; Charles F. Chandler, Ph.D., was appointed Professor of Analytical and Applied Chemistry; arrangements were made by which Professors Joy, Peck, Van Amringe, and Rood, of the College

Faculty, were to give instruction in the school, and on November 15, 1864, a few months after Dr. Barnard's appointment as President, the School of Mines was formally opened in rooms assigned to it in the College buildings.

A note of the great struggle which was then in progress appears in a record of the College under date of October 15, 1863, when Professor McCulloh was expelled from his Professorship "for having abandoned his post and joined the Rebels."

Early in the next year President King resigned his office, and on May 18, 1864, the Rev. F. A. P. Barnard, S.T.D., LL.D., was elected President of Columbia College. Dr. Barnard entered upon his duties in the month of June, and on the 3d of October following he delivered his Inaugural Address in the College Chapel.

The careful reader of the foregoing brief and inadequate sketch will not fail to observe the gradual and irregular but progressive development of the university idea in an institution which was established as a simple college of the English pattern. In one way and another it seems from the first to have tended to an enlargement of its scope. At the very delivery of the Charter of King's College to the Board of Governors in 1755, the endowment of a Professorship of Divinity was projected and approved. In the following year, though the study of natural science in English colleges had as yet made little progress, the Trustees expended a considerable sum of money in the purchase of instruments which were required in that department. In 1764, Dr. Clossy was appointed Professor of Natural Philosophy. Three years later a Medical School was established, and the opening of the New York Hospital not long afterwards through the influence of the Faculty of Columbia provided the

students of the Medical School with the clinical advantages which are indispensable to an intelligent study of therapeutics. This is a creditable record for an institution which had existed less than twenty years, and it shows that from its first foundation King's College was possessed, so to speak, with a genuine university instinct.

After its reorganization as Columbia College we find the same instinctive outreaching towards the functions of the University. In 1787, the Medical School was reopened simultaneously with the College, and five years later it was put under the charge of a Dean supported by a Faculty of seven professors. In 1793, James Kent was appointed as the first Professor of Law, and continued to lecture for five years, when the financial embarrassments of the Board constrained them to suspend that part of their scheme. At the opening of the College in 1787, natural history, chemistry, agriculture, and botany were added to the former curriculum, and in 1798, when the Trustees were compelled by the lack of means to contract their expenses to the lowest possible amount, they still maintained the study of chemistry and natural history as indispensable parts of the College course. In 1810, though they were still in difficulties, they were wise enough to raise the standard of admission and graduation, and expressed the belief that they had been enabled to lay "a broader and stronger foundation for sound education" than had then been known elsewhere in this country. On that foundation the rearing of the structure has been conducted ever since. For many years financial embarrassments impeded the progress of the Trustees in the development of their plans, and later on the problem of the American College in its curriculum and its government became so anxious a care to all who were called to grapple with it as to

require them to proceed slowly in order that they might proceed surely. But the former plans of progress were never abandoned, and the experiments which were made were all in the line of progress. In 1823, Mr. Kent was reappointed Professor of Law, and it is to that appointment that the American bar owes Chancellor Kent's famous Commentaries. From time to time valuable collections were purchased to illustrate the studies in natural science which the Trustees steadily encouraged. In 1830, the introduction of a "double course" system, though it was speedily abandoned, showed that the Trustees were grappling with the new problem of adapting the modern college to modern needs. The establishment of a chair of German was one of the earliest practical recognitions in this country that the modern languages must be taught in modern schools. From 1853 to 1857 the Board was occupied in making plans for a system of post-graduate studies, including modifications of the undergraduate course to that end. The effort failed, but only for the time being; and the Schools of Philosophy and Philology, of Mathematics and Physical Science, and of Jurisprudence and History, which were projected in those years were prophetic rather than premature. By the establishment of the Law School under Professor Dwight in 1858, another Faculty was permanently added to the Faculties of Arts and Medicine. In 1863, the suggestion of founding a Polytechnicum under the name of a School of Mines was favorably received, and in the following year the preliminary steps to its organization were taken.

Such was the institution to the chief charge of which Dr. Barnard was called: conservative, without rigidity; progressive, without rashness; reverent to the learning of the past, yet open-minded to the necessities of the present. Columbia College had been moving more or less steadily

towards the functions and dimensions of an university for more than a hundred years; and with its School of Arts, its School of Law, and its School of Medicine already in existence, and its School of Mines hopefully projected, it might without arrogance have assumed the name of an university. It was wiser not to take that name then. A period of growth and natural development was still required, and it was the high privilege of Dr. Barnard to assume the chief charge of Columbia at the opening of that critical period.

CHAPTER XIII

Dr. Barnard as President of Columbia College — His efforts in behalf of the School of Mines — His Inaugural Address on the relation of physical science to revealed religion — Denies a conflict between science and religion — Opposition of religious men to science — Its cause, its folly, and its danger — Reasons for harmony between them — The light of science is a light of revelation — Contrast between science and philosophical speculation — Miracle — Superstition — The Bible not a book of science — Reasons why it could not be so — Evolution — Theory and demonstration — Representatives of religion ought to study science, and scientific men ought to study religion.

When Dr. Barnard was called to the Presidency of Columbia College, he was fifty-five years of age; his distinction as an educator and a man of science was universally acknowledged; his physical and intellectual faculties were at their best; and he brought to the service of Columbia a breadth and maturity of judgment which could only be attained by original thought and a large and varied experience. The position was worthy of the man, for Columbia College was an historical institution which had encountered the difficulties, and had striven, not unsuccessfully, to grapple with the problems connected with the development of academic education in America. Though a college in name, its Trustees had ever sought to realize the character and to fulfil the functions of an university; but they had not wholly escaped the dangers which attended this laudable endeavor. A simple college, as Dr. Barnard had always strenuously maintained, cannot fulfil the functions of an university. A college is intended primarily and supremely to train the mind; it is the part of an university to furnish

trained minds with special schools of professional and scientific knowledge. To crowd a course of professional or scientific study into the brief curriculum of a college cannot but fail of its purpose, since it obscures the single object of mental discipline which is the purpose of the college, while, in the nature of things, it can give nothing more than a smattering of the sciences which it labors to impart. At the time of Dr. Barnard's accession to the Presidency, the College course had been well adapted to its proper purpose, and the Trustees had made good progress towards the establishment of separate professional and scientific schools. It has already been recorded that a Medical School was established as early as 1767, and although it was subsequently united with the College of Physicians and Surgeons, it still retained its connection with Columbia. It has also been mentioned that a Professorship of Law was established in 1793, and was continued at intervals for many years; that Chancellor Kent's great Commentaries were expanded from lectures which he delivered as a Professor of the College in 1823; and that in 1858 a Law School had been organized under Professor Theodore W. Dwight as Warden. In the year preceding Dr. Barnard's election, a School of Mines had been projected, which was expected and intended to be begun, though in a very modest way, in the following year. Thus, omitting the Medical School, the educational institutions of Columbia in 1864 were the College proper, with 150 students, and a Faculty of ten full Professors, one Adjunct Professor, and one Tutor; a School of Law, with 158 students, under a Faculty of four Professors; and the School of Mines, which, at its beginning under Dr. Barnard's Presidency, had 29 students, with three Professors, five Lecturers, and one Assistant. In a broad and general way, the organization of Columbia College,

at the time of Dr. Barnard's election, was fairly representative, though only, of course, in a small way, of his ideal. In the College proper there was little to be changed, and the special schools required only to be wisely developed and prudently increased in number to fulfil the functions and realize the ideal of a true university, that is, a *Universitas Omnium Scientiarum.*

From the first, Dr. Barnard saw his opportunity in the projected School of Mines. The plans for its inauguration which had been formed before his election were not only tentative but timid. If they should miscarry, an irreparable damage would be done to the development of the university idea; but he was convinced that the original plan could not in the nature of things be successful, and he at once addressed himself, with characteristic energy, to secure for the infant institution a reasonable chance of life. The following memorandum which has been found among his papers will be interesting in this connection:

The subject which, in entering upon his office, occupied first and principally the attention of the new President, was the organization of a school to be associated with the College on the general plan of the *École des Mines* in Paris, to be called the Columbia School of Mines. A proposition of this nature had been laid before the Trustees during the previous year by Mr. Thomas Egleston, a graduate of the Paris school, and had been favorably received; but no steps had yet been taken to put it into operation. The Trustees had approved the plan, but had declined to undertake any pecuniary responsibility on account of it; the friends of the measure proposing to establish it upon a fund to be raised by subscription. A committee of Trustees had been appointed to supervise the affairs of the school, all the members of which had pledged themselves not to ask from the Board any appropriations on account of it. It was a work demanding no great expenditure

of time to lay out the plan of instruction to be pursued in the school; but it was an undertaking more difficult than had been anticipated to provide for the support of the teachers. So sanguine of success, however, were the parties interested in it, that they would not allow the realization of their project to be retarded by any merely mercenary consideration, and accordingly the school was opened with a haste somewhat reckless of consequences in November, 1864, before an adequate provision had been made for defraying even its ordinary running expenses. The natural consequence followed, that in less than three months a serious debt had been incurred, which there was no means of defraying. The President, who had been made, after his election, a member of the committee, proposed in this emergency an appeal to the Board of Trustees, but he was met by the statement, till then unknown to him, that the committee were all pledged not to go to the Trustees for money under any circumstances. His reply to this objection was, "Gentlemen, I was not appointed to this committee under any such conditions. If you will not go to the Trustees, I will do so alone. This school meets a public want. It ought to be sustained, but if the Trustees do not sustain it, it must fail. If, when they understand the facts, they refuse to sustain it, it will be time to shut the doors; but before we do that, I am determined that it shall not perish for lack of an effort." At the next meeting of the Trustees, accordingly, the President laid the facts before them, and made an earnest appeal for help. This was something so unexpected that the Board were taken by surprise, and were at first rather indisposed to listen to the appeal. The decision was adjourned to a later day, but at length a resolution was adopted to pay the outstanding indebtedness of the school and to guarantee its maintenance for the current and next succeeding year, and to leave the question of future measures to be determined by the success or failure of the school as an educational experiment. At the expiration of the time thus limited, the school had taken so strong a hold of the popular favor, that no question was ever raised as to the advisability of its perpetuation or discontinuance, and it has since been regarded as an established branch of the University system.

Before this first and most fortunate exercise of his personal and official influence, and indeed before he entered upon the active work of his office, President Barnard had the address to secure an intelligent and powerful support for his administration. On former occasions he had shown great skill in attracting public attention and in gaining public confidence. By opportune publications in Alabama he had so won the esteem of great societies that, when he afterwards found it necessary to engage in a controversy on "College Education," with particular reference to the University of Alabama, he was able to maintain his cause in the face of formidable opposition. In Mississippi, when he proposed his University scheme, he chose to address the Board of Trustees, indeed, but in such a way as first to reach the people of the State, and so to bring a powerful popular influence to bear at once upon the Board by which his project must be approved, and upon the Legislature by which the means to accomplish it must be appropriated. At the present juncture he was perfectly aware that his political publications had had much to do with his election to Columbia; but he also knew that in the work on which he was entering, his claim to public confidence must have a stronger and more permanent foundation than that of political or even patriotic sympathy. He therefore resolved to address himself to the discussion of a subject of permanent and vital interest on which contradictory and apparently irreconcilable opinions were earnestly maintained, and so to treat it as to gain the confidence and assure himself of the support of both sides. The occasion lay before him in the ceremonies of his inauguration; the topic was suggested by the establishment of a scientific school in connection with the College. At that time men had begun to talk rather

loudly of "the conflict between science and religion." On this side of the Atlantic, political excitement and the anxieties of the war had withdrawn the thoughts of men from speculative studies, but from abroad there came the echoes of an eager controversy on the evolutionary hypothesis, and students at home were already engaging in the dispute. Devout Christians passionately denounced the daring speculations of science as blasphemous denials of revealed religion, and men of science were only too ready, on their part, to accept the admission that, if what they deemed to be ascertained scientific facts were true, the Christian religion must be false. In Europe the lines of battle were clearly drawn; in America it was still possible to avert an open conflict between parties who ought never to have been opposed, since they were alike engaged in the search for truth in their several domains. No man was better qualified to intervene in an endeavor to avert so fruitless and needless a contention than President Barnard, whose devotion to science was everywhere known, and of whose sincere belief of the Christian religion there could be no question; and he sagaciously selected as the subject of his Inaugural Address "The Relation of Physical Science to Revealed Religion."

The views which were presented in this address were by no means novel; but although they had a certain freshness then which they have not now, it may be well to give an outline of them, in order to show the great skill with which the speaker treated his subject. In an address from the Alumni which was made to him at the time of his inauguration, the following sentence occurred: "You will justly appreciate the claims of modern knowledge; but you will not let it be believed that she has come with any mission to contest, much less to curtail, our unabridged Inheritance of Faith." In reply Dr. Barnard said:

I think I do not misinterpret you when I presume that your words have been chosen with reference to the imaginary conflict asserted by some to exist between the teachings of the sacred oracles of our religion and certain of the conclusions of modern scientific research. *I do not recognize such a conflict, nor admit its possibility.* All true science is to me but a form of revelation from the one great Author of all truth. I cannot conceive that He in whom there is no variableness nor shadow of turning will ever be found to contradict in His works the declarations which He has made in His written Word. And whatever may be the amount or the seeming value of that truth which has rewarded, by its discovery, the faithful labor of modern scientific investigators, or whatever the grandeur of the multiplied achievements of human intellect in every department of inquiry, I esteem all these things combined as lighter than vanity, unless accompanied by that better and higher and purer knowledge which lifts men above the material world in which they dwell, and makes them wise unto salvation.

Having thus in a preliminary way briefly stated his own position, he proceeded to his inaugural discourse. He declared himself to be unequivocally devoted to that view of college education which regards it as primarily intended to furnish a system of mental culture. He insisted that the system of education pursued in colleges like Columbia was admirably adapted to prepare the minds of students for any pursuit or position to which they might afterwards be called, and he proclaimed his opposition to the dangerous assaults and the blindly destructive spirit which were seeking to sacrifice it to visionary schemes of higher utility. After this brief statement of his educational faith, he next expressed his full sympathy with the purpose of the Trustees of Columbia to extend the field of instruction occupied by the institution. Their design, he admitted, could not at once be carried out in all its completeness. It must begin with

certain determinate branches of knowledge which would be suggested by the actual demand of the community, and at the present time he thought that the beginning ought to be made by supplying a School of the Physical Sciences as applied to the arts. The plan of such a school, under the name of a School of Mines, had been already adopted, and, if successful, it would be a nucleus around which others might cluster. The establishment of a School of Physical Sciences in connection with a college of the older learning naturally suggested the theme of his discourse.

While my life [he said] has been principally devoted to the cause of education in general, it is known, I believe, that my own special pursuits have been connected with the science of nature. I love that study both because it is beautiful in itself and because its influence upon the mind and upon the character seems to me to be eminently salutary. I believe that there is no study of which the legitimate tendencies are more distinctly to foster in man the spirit of humility, or to awaken within him feelings of profound reverence toward God. I believe, indeed, that in spreading out His wonderful works before us, and clothing them with so many attractions, it has been the manifest purpose of the Creator to make them the means of drawing men to Himself. And I believe that the religious sentiment thus naturally inspired is one which disposes the soul to receive with delight and gratitude those more distinct announcements of Himself and of His purpose toward men, which He has made in His written Word.

It was nevertheless true, he continued, that modern physical science had been resisted from its earliest beginnings by jealous suspicion and active opposition from the guardians of religion. This was not so strange as it appeared; for before the adoption of the inductive method of scientific inquiry, there was already in existence a species of natural science which rested chiefly

upon hypothesis, but which was supposed to be founded upon the authority of Holy Scripture. Many beliefs of a purely scientific character were supposed to be founded on revelation and were held as dogmas of religion, so that any different doctrine must be denounced without inquiry as heretical. Thus, in its very birth, modern science was confronted with a formidable opposition from the religious world, and although the philosophy of the Middle Ages had been long exploded, the breach between science and religion which had its beginning then, had never been entirely healed. Nature still continued to be studied in the Bible by the light of philology; and the results of biblical study were made the touchstone of conclusions drawn from careful and experimental studies of nature itself. This process, Dr. Barnard maintained, ought to be inverted; science should be used as a torch by which to read the Scriptures, or, at least, as a clue to their interpretation. Unfortunately, this view of the case had been received thus far with very limited favor by teachers of religion; and thus from ancient controversies which had perished from the memories of men, another and more recent cause of dispute had sprung into life. The discouragement of scientific research by the prejudice of a powerful but ill-informed public opinion had had injurious consequences to the progress of science; but in the end, it could not fail, if continued, to be equally injurious to the cause of religion. It was not possible that scientific research should cease, nor that scientific men should forego convictions which were founded upon complete inductive evidence. If religion disclaimed those convictions, men of science would be driven to disclaim religion, and thus, without any choice of their own, the whole weight of their great authority would be marshalled in opposition to the truth of the Bible.

This was a controversy which men of science had not invited and did not provoke.

It is the mistaken friends of religion themselves who insist on occupying the perilous position, that, if modern science be true, the Bible must be false. It is they who deride and ridicule schemes of interpretation honestly suggested with a view to reconcile the language of sacred writ with the teachings of nature; and who, with singular lack of wisdom, maintain that no such reconcilement is possible. They will not recognize the fact that, in planting themselves upon this ground, they are doing more to subvert religion and bring the Bible into discredit among men than all the speculative atheists like Spinoza, and all the ingeniously logical sceptics like Hume, and all the malignant scoffers like Voltaire, combined, have ever been able to accomplish. In spite of the most determined efforts on the part of these several classes of enemies, the Bible still holds its place in human reverence; but let it be once distinctly settled, as the final and unalterable decision of the religious world, that that volume makes it our religious duty to disbelieve and reject the perfectly demonstrable truths disclosed to us by such a science, for example, as geology, and it needs no extraordinary prescience to perceive that, before another generation shall have passed away, its authority will be utterly destroyed. It has astonished me that there should be so many good men who do not see this danger. It has astonished me still more that there should be so many who do see it very clearly, and yet imagine that it may be averted by putting a ban upon science and endeavoring to suppress its cultivation. Such efforts are, in the very nature of things, futile. Truth cannot be frowned out of existence, nor is there any weight of human authority heavy enough to keep it down. On the other hand, error, in the field of physical inquiry, needs neither persecution nor denunciation to disarm it of its power to harm; it has only to be let alone, and it will inevitably die of itself.

Having thus shown the danger to religion which would be involved in a fruitless antagonism with science, Dr.

Barnard next proceeded to set forth reasons why there should be peace. He urged that there is nothing in the ends which science has in view which ought to alarm the most devout believer in revelation, for the only object of science is the ascertainment of truth; in the pursuit of truth, science rightly disregards all previous opinions. Many beliefs which were once universal had no other foundation than ignorance or superstition; and so experience has justified the investigator of nature in refusing to be biassed by opinions which may have no better foundation. The researches of science are confined to the physical world, and although, even there, her range is limited by the range of human observation and by the imperfect power of the human understanding, yet within those limits her methods are sure. When she has reached results that are verified by observation, those results are unquestionable. For teachers of religion to deny or to denounce them is simply idle; and it is as foolish as it is idle, for the scientific spirit which prompts men to an investigation of nature, springs from that desire to know, and that capacity to enjoy knowledge, which have been implanted in man by his Creator. Scientific research is therefore in accordance with God's will; to resist it is to resist God's will; and to refuse to accept the truth which God reveals to inquiries which He himself had prompted and ordained, is to refuse a true light of divine revelation. A religious man ought to welcome every light of revelation, and since truth is never inconsistent with itself, there ought to be no fear of loss of truth from the discovery of new truth. No truth of science either is or ever can be inconsistent with any truth of religion; in fact, religion and science must both alike ultimately rest upon a basis of reason. If the conclusions which science claims to have fully established are not to be relied on, then nothing in the whole

circle of human knowledge is certain; and on the other hand,

the fact of revelation itself is ascertained to us by evidence offered to the reason. It is a fact purely historical, to be examined precisely as other historical facts are examined. If we are competent to judge of its credibility, if we are even justified in asserting that we know its truth, then certainly we may reasonably claim that we are capable of tracing effects in the material world to their physical causes, more especially when, in our personal experience, we have been familiar with the operation of those causes all our lives.

But these physical causes, these powers of nature, as they are called, what are they? If we suppose that they exist without God, that they operate by any inherent energy of their own, we are pantheists, we have no need of God at all, our only God is nature. But if, on the other hand, we suppose that they are only modes through which God sees fit to manifest His own energy, the truths to which we are led by their attentive study are nothing less than *revelations*. They demand our acceptance not merely upon the authority of imperfect human reason, but as being directly vouched for by God Himself. The distinction commonly made between nature and revelation, therefore, as means through which we may be permitted to know God, is in this view unimportant, perhaps prejudicial to the interests of true religion. It is, at any rate, a distinction of form merely, and not of essence. To the prophet God speaks through His Spirit, to the philosopher through His works: in either case the truth of the communication rests upon the same guaranty.

Whatever conflict there had been between science and religion had been manifestly founded upon misapprehensions on the religious side. So far as the scientific world must be held responsible for it, the responsibility, generally speaking, must be laid upon sciolists rather than upon men of acknowledged eminence. It is true that distinguished students of nature, and even original discover-

ers, have been sceptics in religion, but not more frequently than any other class of men of equal mark, and Dr. Barnard proclaimed his solemn conviction that the tendency is strongly in the opposite direction.

I believe [he said] that the study of nature tends positively to foster the spirit of humility, of self-abasement, of reverence, of devotion. *I believe, indeed, that it is the only study, except that of the Bible itself, that does so.* With the study of language or of abstract mathematics it cannot in this respect be compared, for in regard to the sentiments just spoken of, their influence is indifferent. But with abstract philosophy, or even with that theology which affects philosophy, the comparison is easy; for the world is full of instructive examples. Philosophy, I suppose, is as far from physical science as it is possible to be. Philosophy and physics are each other's antipodes, — the two poles of their intellectual sphere. . . . These two subjects, philosophy and the physical sciences, are the two and we may almost say the only two, which stimulate the curiosity of men to know the causes of things, which lift men's thoughts to the First Great Cause of all things. The first of these, rising on presumptuous wings into the limitless region of the transcendental, boldly essays to bring God Himself within the grasp of the finite intellect; but baffled in the vain endeavor, ends usually in blotting Him out of existence, or confounding Him with His works. The other, bowing before the august majesty which it dares not attempt to conceive, seeks, in a lowly and teachable spirit, to comprehend some little fragments of these lower works themselves, and shrinking from the arrogance which would demand what God is, limits itself to the humble and reverential inquiry, "What hath God wrought?" The very statement of the case is sufficient to show the relative tendencies of these studies. Philosophy may no doubt be pursued in a Christian spirit; but it has had, in point of fact, too often the fatal effect to undermine, subvert, and destroy in its devotees all belief in the personality of God, and so to obliterate every sentiment of fear or reverence for Him in the human heart. Physics, on the other hand, by constantly presenting new and ever-varying examples of power and forethought and

design in the adaptation of means to ends, fosters and cherishes into ever-increasing strength the conviction that God is, that God reigns, that He works perpetually before us now, that by Him all things were made, and without Him was nothing made that was made. Now what if there has been here and there a physicist who disowned revelation? How many, unfortunately, are there who are not physicists nor philosophers who have done the same! This latter fact proves that men may be perverse without any obvious perverting influence; the former that they may be so in spite of influences positively salutary.

Assuming now that there is nothing in the discovery of truth, which is the only object of science, to disquiet any sincere believer in the truth of revelation, Dr. Barnard next maintained that the same remark might be extended to the results to which scientific investigation leads. The supreme merit of science is that it leads to the recognition of law. Through all the domain of physical research, the discovery of law had been the student's reward, so that it is now accepted as an axiom in physics that law is everywhere present, and "law in nature is one of the most conclusive evidences of the presence and power of God." "Law in nature is neither more nor less than God in nature; and natural phenomena are the direct manifestation of divine power."

The recognition of law in nature is not destructive of belief in miracle to the mind of any man who believes in God.

I know that it is often said that this idea of the invariability and universality of law tends to bring into discredit those narratives of events in which law has been manifestly suspended. This is another of the grounds on which science and the Bible have been brought into conflict. But in the view just taken of law, the reproach thus brought against science is without any substantial foundation. For if law is but the manifestation of God's power, the suspension of law is just as much

so. There is, however, undoubtedly, a speculative theology which teaches a doctrine widely different from this: which beholds in law an energy irresistible, inexorable, unalterable; which makes, that is to say, law itself God. This, at least if I understand it, is essentially and ultimately the meaning of pantheism. If such be the view which we take of the divine nature, *miraculous* occurrences are, I admit, quite impossible; for the God of pantheism is without personality, without consciousness, without will. But it must be remembered that pantheism is born not of Physics, but of Metaphysics; that it is radically at variance with the religion of the Scriptures; and that, after we have consented to receive its more general teachings, the particular point here in question loses whatever importance or interest it might previously have possessed. To the Christian, however, or even to the Deist who admits that God is anything more than an impersonal figment, the universality of law in nature must bring a grateful confirmation to his faith.

Dr. Barnard next observed that while science is favorable to sound religion, it is destructive of idle superstitions by which religion is marred. For science is an intelligent acquaintance with the causes of things, and while those causes are not known, a phenomenon which is not understood is apt to be attributed to causes above nature. Incidents of which the causes are obscure or unperceived are ascribed to agencies and influences which are supposed to control events and affect human happiness, and which are supposed to be at the same time intelligent or malign. Particular times are set down as lucky or unlucky; particular places are supposed to be haunted; particular acts or utterances are supposed to exert a mysterious power; occult virtues are ascribed to amulets and charms; all the extravagances of sorcery, magic, and witchcraft are devoutly believed; and in an unscientific age, that is to say, in an age of ignorance, the study of the Bible alone does not dispel those idle imaginations nor redeem men

from the dominion of superstitious fears. As Milman has said,

> Christianity may exist in a certain form in a nation of savages, as well as in a nation of philosophers; yet its specific character will almost entirely depend upon the character of the people who are its votaries. It must be considered, therefore, in constant connection with that character; it will darken with the darkness and brighten with the light of each succeeding century; in an uncongenial time it will recede so far from its essential nature as scarcely to retain any sign of its divine original; it will advance with the advancement of human nature, and keep up the moral to the height of the intellectual culture of man.

Milman here ascribes the emancipation of mankind from the slavery of superstition to the progress of intellectual enlightenment in general; but history gives abundant evidence that mere learning does not accomplish that result.

The age which, in England, produced a Milton, a Bacon, a Dryden, and a Pope, was certainly not an age deficient in literary culture of the highest order. Yet the legislation of that age and its judicial history are deeply tinged with the errors I have signalized; and it surely cannot be said of these that they received their character from the men the least enlightened of their time. In this country the extravagances of the Salem persecution were encouraged, if not originally instigated, by the educated clergy, including among their number the president of the only seminary of higher learning then existing on the continent. The fault of the education of that time was its neglect of the study of the phenomena of nature. Physical science had indeed made some progress, but it had attained to no diffusion beyond the narrow circle of its immediate votaries. Scientific men were generally learned, but there were very few learned men who were scientific.

It is to science, then, in the sense of physical science, and not to the learning of the schools of philosophy, that we

owe our deliverance from many superstitions, and since superstition is essentially hostile to true religion, the service of science to religion has already been enormous. But that is not all.

I need not argue that the Christianity which, according to Milman, may exist among a nation of savages, and the Christianity which sheds its benign influence over the civilization of our own continent to-day, cannot be both of them equally the Christianity of the New Testament. The spirit and the power of Christianity manifest themselves in doing good, in pity toward the erring, in the unremitting endeavor to soften for all men the inevitable miseries of this lower life. But the spirit which is fanned by superstition makes of religion a terror rather than a blessing. It divests Christianity of those features of mildness and benignity by which it is adapted to the wants of our weak and imperfect nature, and converts it into a source of perpetual anxiety and apprehension. Consider, for example, the asceticism which came in with the corruption of Christianity, and which has not even yet entirely disappeared, the gloomy isolation to which it led numbers to subject themselves, and the extraordinary forms of self-torture to which it impelled them to submit, and say in what respect these things are less melancholy subjects of contemplation than the more recent suttee of India, the exposure of infants on the Ganges, or the self-immolation of frenzied fanatics beneath the wheels of Juggernaut. If the philosophic study of nature has contributed in any degree, as I believe it has greatly, to disenthrall the human imagination from that slavery to error in religious beliefs which has so painfully in every age embittered human life, it has rendered an inappreciable service at the same time to the cause of enlightened Christianity.

Dr. Barnard next addressed himself briefly but powerfully to the actual present relations of physical science to revealed religion. It may be asked (he said) what we have to say of such startling speculations as the nebular hypothesis in astronomy, the teaching of geology in regard

to the age of our planet, the asserted discoveries relating to the antiquity of man, the doctrine of progressive development and other similar matters in which science is in direct conflict with impressions which are generally supposed to be legitimately derived from Bible history. To these questions he did not attempt to make a detailed reply; but only to state the general principles on which a reply might be made.

First, that the Bible is not a book of science, and that to expect it to contain an accurate scientific view of the universe would be nothing less than absurd. The argument on this point was exceedingly cogent.

To have given professedly a philosophic exposition of the principles of natural things [said Dr. Barnard] would have been inconsistent with the objects for which the Bible itself was given. Such an exposition must either have presented truth as it will be when (should that ever happen) the process of discovery is exhausted — truth, therefore, which would in many points conflict with our present convictions, and which must always have been in conflict with the convictions of the ages which have gone before us; or it must have embodied the imperfect, and, in most things, erroneous philosophy of its own day, and so have been brought into permanent discredit by the earliest steps of advancement. On either supposition, it would have been out of harmony with the actual state of scientific opinion at any given period, and would have lost, or have failed from the beginning to secure, the confidence of men in its divine origin. In the fact, therefore, that the science of nature is, to beings of limited powers, like the human race, a science of necessary progress, in which truths which seem to be most assuredly established are ever liable to be superseded by profounder truths, we find a satisfactory reason why we might expect it to be excluded from a revelation relating only to the interests of man's nature.

In the second place, without undertaking to deny that the conclusions gathered from the study of the book of nature may sometimes seem at variance with impressions derived from the

pages of the Bible, it must be remembered that these impressions are themselves liable to be determined by the preconceived notions of the reader, and that they are not of necessity the only interpretations which the language will bear. On the occurrence of any such apparent disagreement, the proper and reasonable course is to use discovery as an aid to interpretation; and not to insist, as is so often and so unwisely done, that the discordance is irreconcilable.

In the third place, avoiding the use of the word "evolution," Dr. Barnard endeavored to quiet Christian apprehensions by stating that the evolutionary theory was still a mere hypothesis. This part of his argument was less satisfactory than the rest, for the mathematical definition of parallel straight lines implies an hypothesis which can never be verified and which is possibly untrue; the existence of the ether is likewise a mere hypothesis which, though of the highest probability, has never yet been verified; and indeed, the existence of matter, which no man doubts, is nothing more than an unverifiable hypothesis from which no man can practically escape. Consequently, since an hypothesis may be held with a certitude hardly less than that of knowledge, it could not have been fully satisfactory to Dr. Barnard's own mind to reduce the evolutionary theory to the rank of an hypothesis; yet it was doubtless soothing to the minds of some of his hearers to be told that the truth of the doctrine which they dreaded was incapable of demonstration; and to his own mind, as well as others, it was equally satisfactory to know that nothing which is true can be dangerous, and that the evolutionary theory could obtain no permanent place in science unless it should attain to the certainty of truth. His brief remarks on this great subject were as follows:

Another observation may here be fitly made. Of the more recent theories which, in their discussion, have excited among

the friends of religion the greatest uneasiness, it can hardly be said of one that it is an accepted theory of science. The speculators who show the least respect for the religious convictions of men are often quite as regardless of the ordinary principles of common sense. Take, for example, the doctrine of progressive development. It is only the ingenuity displayed by its advocates which has secured for it more than a momentary attention. The strength of the scientific world has always been enlisted against it. Though repeatedly revived, it has been just as often trodden out of life. And so it must be with all mere hypothesis. Nothing can claim a permanent place in science which fails to attain the certainty of truth. And nothing which is true can be dangerous.

Dr. Barnard urged that two things were needed in order that the scientific and the religious world might be led to lay aside their mutual distrust and work harmoniously in the cause of truth, which is the cause of both. It was necessary that religious men should study science and refrain from pronouncing upon its tendencies until they understood it. If they did so, they might discover that the conclusions of science are not irreconcilable with the language of the Bible when rightly interpreted; they would learn the danger of assuming that demonstrable truths of science are in conflict with the Word of God; and they would learn the indispensable necessity of reading Scripture by the light of science, instead of attempting to control the conclusions of science by an exegesis which may be full of possibilities of error. Even if they should be unconvinced, and if they should feel themselves obliged still to oppose scientific conclusions, they would at least be able to discuss the subject with intelligence, and they would be less liable to fall into the fatal error of attempting, with incredible labor, to disprove facts rather than to invalidate inferences. In Dr. Barnard's opinion, there was

no more urgent need of the time than that pious men and earnest Christians should be also cultivators of scientific study. By becoming such, they might purify science from the reproach of irreligion which they were accustomed to bring against it; and if there was a semblance of justice in that reproach, he asked to what it could be owing but to the fact that the field of science had been voluntarily abandoned by religious men. The wonder, to his mind, was that in some departments of science there should be any religion left. After geology had been put under the ban of modern Christianity almost as resolutely as astronomy in the Middle Ages, it might be supposed that a devout Christian geologist would be impossible; and yet such examples as those of Hugh Miller, Adam Sedgwick, Edward Hitchcock, Benjamin Silliman, and many others, had proved that a firm belief in the facts of geology is in no way inconsistent with fervent piety or with Christian conviction.

It is men like these who are qualified to pronounce upon the tendencies of the sciences which they cultivate; and if they find in them nothing to disturb their Christian faith, how can we doubt that other men equally pious, whom the course of science seems to fill with continual anxiety, would attain a similar tranquillity if they would consent to be better informed. In short, the true position, the strong position, the only impregnable position against the assaults of sceptical physicists, is in the field occupied by the assailants themselves.

On the other hand, Dr. Barnard observed that a certain spirit was prevalent among scientific men which ought to be corrected.

If they have sometimes been held up to undeserved opprobrium, they have repaid the injury with too manifest contempt; and if their best-established conclusions have not been

respected, they have possibly maintained too positive a tone in regard to those whose claims to respect were more questionable. While the object of science is truth, there is much in the scientific teaching of any given period of which the proof is only a high degree of probability. Every such portion of doctrine holds its place only provisionally, and is liable to be displaced or subverted by a truth more assured. Now, just in proportion to the obstinacy with which the highest evidence is resisted, a disposition seems to manifest itself to insist unwarrantably on positions sustained by feebler evidence, and the controversialist who assumes to speak in the name of science displays a spirit of self-satisfied superiority, and indulges a tone of confident assertion, which confirms opposition instead of conciliating favor.

The conclusion of the whole matter was this :

If, then, religious men, on the one side, should acquaint themselves better with science, scientific men who are not professedly religious, on the other, should cultivate a more modest tone in presenting views which are still open to doubt. Let neither party bring against the other railing accusations; but let each use toward the other the language of Christian charity, and act in the spirit of Christian forbearance. Both are in the pursuit of the same avowed object; let them harmoniously pursue it together.

Something like this must take place, and must take place soon, or the most deplorable consequences are in store for the world. The progress of science cannot be arrested. It has an inherent vitality which acquires new vigor with each succeeding year. It is, moreover, day by day and hour by hour, securing a stronger hold upon men's consideration and regard, by intertwining itself more and more with all their earthly interests. Estranged from religion, it may exert a fatal power in dragging men after it. It may become in fact the baleful influence which it is now only suspected of being capable of becoming.

Let science and religion be harmonized, let their devotees unite lovingly their efforts in one common search after truth, and nobler triumphs than have ever yet been realized may

crown their alliance. Their labors will be fruitful, for God's blessing will be upon them. Year by year, in constantly increasing profusion, the hand of science shall scatter benefits over every land. But infinitely more valuable than all she has ever done or can do to promote the comfort of mankind, will be the lesson she will bring, "Seek ye first the kingdom of God and His righteousness, and all these things shall be added unto you."

The effect of Dr. Barnard's Inaugural Address was immediate and emphatic. Portions of it were widely copied in the periodicals of the time. Men of science felt that in him they had a champion worthy of their cause, and the leaders of religious thought were reassured by the conviction that with him they might safely take "the true position, the strong position, the only impregnable position against the assaults of sceptical physicists, in the field occupied by the assailants themselves."

CHAPTER XIV

A lack of incident in Dr. Barnard's later life — Discouragements of the earlier years of his presidency — Discipline — The responsibility of students — Freedom of attendance — The marking system — Oral and written examinations — Grading — Honors — Decrease in attendance in the collegiate department — Admissions without examination — Visitation of affiliated schools.

THE life of Dr. Barnard, after his election to the Presidency of Columbia College, was devoid of incident. Apart from his literary labors, which will be mentioned later on, there is little to be recorded except the gradual modification and ultimate change of some of his views, and the development of his plans for the expansion of the college into a university. In the twenty-four years of his service, he was absent from his post for only a single year, when he was appointed by the President of the United States one of the ten government commissioners to the Exposition of the Industries of All Nations at Paris, which was opened to the public on April 1st, 1867. He sailed from New York early in February, with the intention of observing the great solar eclipse which occurred on March 6 of that year, and which was central and annular in the south of Italy. Salerno was selected as the point of observation, and on his arrival there, he found a party of astronomers who had been sent from the Paris Observatory. Unfortunately, their purpose was thwarted, for, as in Labrador in 1860, the sky was completely overcast with clouds during the whole time of the eclipse, and he returned to Paris by way of Naples, Rome, Pisa, and other places of interest.

Until the close of the Exposition in the month of November, he remained at Paris in discharge of his official duties; and on his return to New York on December 9, after an absence of ten months, he was occupied during the winter in the preparation of a report on the Machinery and Processes of the Industrial Arts and of the Apparatus of the Exact Sciences exhibited in the Exposition. This report forms the third volume of the series of Official Reports of the Commission.

Again, in the summer of 1869, and afterwards in 1873, 1878, and 1881, Dr. Barnard travelled in Europe, visiting England, Scotland, Germany, Austria, the Tyrol, northeastern Italy, Switzerland, Holland, and Belgium. During the International Exposition at Vienna in 1873, he was one of the few foreigners who were invited to be present at the grand reception given at Schoenbrunn by the Emperor of Austria to the Shah of Persia. In 1876, he was appointed Assistant Commissioner-General from the United States to the International Exposition of that year in Paris, and after the Exposition he received from the French Government the decoration of an Officer of the Legion of Honor.

In the foregoing paragraphs there is contained a sufficient summary of the principal events in Dr. Barnard's external life. His true life, the life which is of permanent interest, was his life as an educator and as a man of letters. His course was not always smooth. His views were not immediately accepted by the Faculty, and the measures which he most earnestly advocated were adopted far more slowly than he desired and expected. In grappling with difficulties and in removing obstructions, it may be supposed that he did not always remember how recently and how strenuously he had opposed the very reforms which he had now come to consider necessary;

and it may also be imagined that a certain intolerance of opposition and a certain imperiousness of manner may have failed to secure for his plans an acceptance which might perhaps have been sooner and more easily gained. Another cause of discouragement presented itself in the steady decline of the number of students which began in the first year of his presidency, and which continued for seven successive years. In 1865 there were 150 undergraduates; in 1872 there were only 116, — 19 less than in 1810, — and it was not until 1875 that the College recovered its lost ground. It was during these years, as it will presently appear, that Dr. Barnard changed, and in one important particular seemed to have completely reversed, his former views of the proper scope and arrangement of the curriculum of a college education.

In Dr. Barnard's report to the Board of Trustees for 1865, he referred only to the collegiate department which was under his immediate charge. In 1866, he made a brief report of the School of Mines which had then just been established; in 1867, Professor Drisler, the acting President during Dr. Barnard's absence in Europe, confined his report to the College proper; in 1868, Dr. Barnard devoted a large part of his report to the School of Mines, and added the statistics of the School of Medicine and the School of Law; and from that year his annual reports invariably included "the College and its Associated Schools," including the School of Medicine, the graduates of which received their degrees from Columbia, although the school itself was under separate management.

Naturally, his first care was the discipline of the College. He found the undergraduates to be much more boyish in demeanor than in other colleges. For the most part, they were merely boys who had been pursuing their education at local schools and academies, and who con-

tinued to live at home on entering Columbia. There was little of what is known in other institutions as "college life." The Freshmen, and even the Sophomores, still continued to be school-boys in feeling and demeanor. Dr. Barnard felt that there ought to be greater seriousness of character and dignity of behavior, and he considered that these characteristics would best be cultivated by releasing the students from the restraints of boyhood. He therefore urged that all rules should be abolished, except the single broad rule that every student should be expected and required to behave like a gentleman. He insisted that the charge of the students which had been contemplated in English colleges and which had been attempted in American colleges, could not rightly be required in an institution like Columbia, the students of which were not living under the direct observation of the Faculty. All the arguments which he had formerly set forth on this subject in the University of Alabama were applied with greater cogency to Columbia. They did not at first commend themselves to general acceptance, but they gradually prevailed, and their good effect was speedily apparent. In 1872, President Barnard reported that the minutes of the Faculty recorded "scarcely a trace of censure upon any student," and he added that this gratifying effect was due "not to the failure to detect offenders, but to the absence of offences to be detected." In 1879, he had the satisfaction to report as follows:

> It has been the unceasing effort of the undersigned, ever since his connection with the College began, to impress the students with a feeling that it is unworthy of young men of good breeding to require the pressure of a superior authority in order to compel them to observe the ordinary rules of propriety. . . . The rules of order prescribed for the regulation of individual conduct have been few and small, and such as

recommend themselves as being obviously indispensable. . . . In all things innocent or indifferent, the largest freedom has been allowed. The instructors, by an unreserved cordiality of intercourse with the members of their classes, have endeavored to efface the feeling of constraint which is so often the result of a consciousness of authority on the one side, and of subordination on the other. The students also have been encouraged to communicate freely with the members of the governing body in regard to all matters concerning their convenience or affecting their contentment with college life, and have been assured that if they have any grievances, it will only be necessary to make them known in order to secure relief, so far as it is practicable to give it, and that if they require any gratification which can be consistently granted, they have only to ask in a proper spirit in order to secure it. This policy, if it has not been the exclusive cause of the high *morale* at present prevailing in the College, has at least done much to foster and sustain it; and the result is that, for a number of years past, and never more remarkably than in the present year, there has been in Columbia College a complete absence of the chronic anxiety for the permanence of good order which is felt in so many smaller institutions where quiet is often only a condition of unstable equilibrium.

At a later period, Dr. Barnard made an advance even upon this high plane by advocating an admission of the students themselves to participation in the government of the College. The whole difficulty of college government would disappear, he said,

if the students themselves were made responsible for the preservation of good order. The academic community would then assume the character of a voluntary association for mutual improvement or for social enjoyment, of which many examples exist in every college, illustrating the entire practicability of the principle. Or a college under such a régime may be compared to a city club, governed by rules in the framing of which the entire membership has a voice. The possible success of such a scheme is not merely a matter of opinion. It has been

actually put into practice in at least two colleges in the United States. When the subject was first referred to by the undersigned, in his annual report for 1881, it was mentioned that the plan of self-government by the students had been in uninterrupted operation for a period of ten years in the State University of Illinois at Urbana, and that the success of the experiment had been all that was anticipated. More recently Amherst College has adopted the same plan, and a communication received within the last month from the President of that institution expresses his entire satisfaction with it.

These examples will probably have imitators; and though there is nothing in the condition of our own College to induce us to interest ourselves particularly in the question, it is impossible that on general principles we should not be disposed to favor this form of government here as well as elsewhere.

So far did Dr. Barnard go in his desire to recognize the personal responsibility of students, that he began at a very early time to advocate the dropping of all rules concerning their attendance on college exercises. He held that attendance on the classes should be regarded as a privilege by which the student was to profit, and not as a necessity to which he was to be compelled to submit. If he failed to attend regularly, his punishment would be his subsequent failure to pass his examinations; the reward of punctuality would be an assurance of success. This proposal was adopted with a reasonable modification, namely, that if a student should absent himself without sufficient cause from more than one-fourth of the total number of exercises in any department, he should be debarred from the privilege of examination in that department; and as the statutes required satisfactory examinations in all departments, this provision operated as an exclusion of the negligent student from his degree. The operation of the rule showed that the larger number of students continued to attend no less regularly than before,

while irregularity of attendance on the part of a small minority was sensibly increased; and in view of this ascertained result, Dr. Barnard expressed his readiness to amend the rule, so as to exclude a student from examination who should be absent without cause from one-sixth of the exercises of his classes. The change suggested does not appear to have been adopted, and in 1873, the system, after a trial of five years, was found to have been justified by experience. In his report to the Board of Trustees, Dr. Barnard said:

> The attendance of the larger portion of the students is as regular as it ever was under the system of coercion. None are excessively irregular whom the system of penalties would be likely to restrain. If, under the present system, any become so negligent of duty as to make their further progress impossible, their course is arrested by means which spare them the publicity and the mortification which would attend on the operation of penal laws. It seems probable that an experiment which has been attended with so happy results in this institution, cannot fail sooner or later to make its way elsewhere; and there can be little doubt that, wherever it shall be introduced, the difficulties which from time to time have been experienced in the government of colleges, will in great measure disappear.

Dr. Barnard began at a very early date to agitate an abolition of the "marking system" which existed in the College. He pronounced it to be essentially unsatisfactory. He maintained that it was injurious to good scholarship, and that a single written examination at the close of the year would not only give a better evidence of the attainments of the student, but would constrain him to keep the whole studies of his classes continually in mind and memory throughout the year. After a time, he recommended the adoption of the distinction, well known in English universities, between pass examinations for a

simple degree, and class examinations for honors, so that students applying for a simple pass should be reported only as "proficient" or "deficient." Still later, he favored the plan of the allowing the students in each class to vote upon the honor standing of its members. The whole subject was discussed in his annual report for 1887, from which an extract is accordingly given here, with some abbreviations:

The marking system has been going on in this college for years, without having reached any definite conclusion. The phrase itself, without definition, would seem to indicate some universally understood method of estimating according to a numerical scale the relative values of scholastic performances. This, however, is hardly true. There are marking systems and marking systems. In fact, the use of some sort of marking system can hardly be avoided while gradation in merit is attempted at all, even though it should be simplified to a mere arrangement of names in a certain order. In this case the "mark" is the place of the name in the numerical list. This is, in principle, the marking system practised at West Point; but so far as the knowledge of the undersigned extends, it is not in use in any American or British college. The systems in actual use are various. It may be worth while to indicate their distinctive features.

That which was in operation in Columbia College when the connection of the undersigned with the institution began, consisted in a daily marking of every exercise at a valuation proportioned to a given maximum according to the judgment of the instructor. The summation of all these valuations for an entire session gave what was called a *term-mark*. To this was added another value derived from the closing examination, having an effect on the final standing equal to that of the term-mark, and the sum of the two constituted the credit side of the account. But there was also a counter-system of demerit marks for misdemeanors or peccadilloes, the sum of which was required to be deducted from the credit; and the balance remaining determined the position of the individual in the

order of merit in his class. The working of this system was attended with inconvenience. It assumed that every student should actually perform and receive a mark for every exercise prescribed to his class; otherwise the aggregate results could afford no fair basis for comparison. But in classes or sections of from thirty to fifty individuals it is impossible to give each person an opportunity to be heard in the brief space of a single hour — the time usually devoted to a college exercise. Hence it will happen that a student may fail to be "called up" oftener than once out of three or four times. His record will therefore present a series of blanks, and the number of his actual performances will rarely be the same as that of others of his class. As the simplest way of correcting the consequent inequalities, the practice used to be to fill the blanks by allowing to each a mark deduced from the sum of those actually given, divided by their number, which was called "giving a man his average." But this did not meet the whole difficulty. The average was given only for blanks occurring when the student was actually present and (ostensibly at least) prepared to perform. Other blanks, however, would from time to time occur, in consequence of *absences*, excusable or inexcusable. If the absences were excusable by illness or other cause beyond control, the blanks might be filled by "making up" the exercise (as it was called) to the instructor out of class hours. This imposed a tax upon the teacher's time, which was occasionally very heavy. But if the absences were not excusable, each blank counted for a zero.

The faults in this system are obvious. It was a capital fault that it mixed up marks for scholarship with marks for conduct; so that the results furnished no criterion of character, either intellectual or moral. On this account alone, the undersigned did not hesitate to condemn it at once, and this feature of it was immediately abolished. The system, so modified, continued to be maintained for several years; but it worked very heavily, and became after a time so unsatisfactory to both officers and students that it was finally, in March, 1869, abandoned altogether.

As a substitute it was resolved that, from that time forward, standing in scholarship should be made dependent exclusively

on the results of periodical examinations, to be held semi-annually. It was further ordered that these examinations should be conducted, wherever possible, in writing. Also, that in the examination papers periodically prepared, a valuation should be attached to each question or requisition set forth for solution; imperfect performances receiving lower valuations according to the estimate of their merit by the examiner. This was a marking system of a simpler kind, and the only system used in the British universities; with this difference, that while those institutions mark once for all, at the conclusion of the course, the marks here were given semi-annually, and the aggregate of all the semi-annual markings were taken at the close.

A little later this system received a still further simplification. Marks for particular performances ceased to be given; but every instructor was required to make a monthly report, arranging his students in each of his classes in five groups, distinguished by numbers. Group I. embraced the students manifesting the highest degree of excellence; the other groups consisted of grades successively inferior, Grade V. being intended for the unsatisfactory or deficient. Here personal distinction between the members of the same group were ignored; and at the close of the year, or of the course, the numbers opposite the several names were summed up. The smallest sum indicated the highest standing; the largest sum, the lowest. Names having equal sums against them were bracketed together as of equal rank in the order of merit.

The officers in their monthly reports were to be guided in their groupings by the judgment they had been able to form of the comparative ability or proficiency of the students, aided by any memoranda they might be disposed to keep of actual performances to assist their recollections; but they were to report no valuations of particular performances. To the undersigned this method of grading seemed to be less open to objection than any other which he had ever seen in operation; yet, for some reason never distinctly avowed, but supposed to be the omission to distinguish differences of merit between the individual members of the several groups, it began, after a limited period of experiment, to breed discontent; and in

October, 1870, there was introduced a final modification of the system, giving it the form which it has since maintained, and which seems to be as little satisfactory as any which has gone before. According to the present plan, the monthly reports of the instructors continue as under that which was abolished, but their form is changed, the classification by groups being replaced by a general list of names in the order of merit; and the basis on which the arrangement is made being no longer the general judgment of the instructors, but the valuation given to the actual performances of the student in an examination held for this express purpose every month. The final order of merit for the year or for the course is obtained by combining the results of all the monthly examinations with those of the more general semi-annual examinations, giving to these latter a weight equal to that of all the preceding monthly examinations of the half-year. Under this system, if a student is absent from any monthly or semi-monthly examination he suffers a serious loss, which, however, in case the absence is excusable, he is privileged to make good by a special examination separately held.

The method here described works certainly with much less friction than the daily marking system formerly in use; but it is open to some serious objections. The first of these is that the scheme stimulates the ambition to secure favorable marks without awakening a corresponding desire to become possessed of the knowledge by which such marks may be fairly won. To produce a performance which may meet the approval of the examiner is the object of the student's highest endeavor, without regard to the means by which this object is accomplished. Hence the resort to dishonest practices, the use of which has recently been charged to be general in other institutions as well as in this; and which, there can be no doubt, is often attempted, whatever may be the extent of its success. There are those who have watched the operations of this system for many years, who are ready to declare it is a failure altogether; and that even under it the highest academic honors have not seldom been secured by fraud. If the undersigned does not fully partake of these convictions, he has at least reason to believe that they are not wholly without

foundation; and he therefore regards the objection to the system well taken, that it does not accomplish the object proposed.

But a greatly more serious objection to it than its failure, is its demoralizing effect. Whether the fraudulent practices are successful or not, they exert a deadening influence upon the moral sense. So pernicious an influence steadily acting upon a susceptible youth at the period when character is forming can hardly fail to undermine his principles and destroy his sense of obligation in all the relations of life. It destroys, moreover, his sense of shame; for while in its own nature cheating in an examination-room is as essentially disgraceful, and is always so felt to be by an unsophisticated youth, as cheating at cards, yet a little familiarity with the practices which young men tolerate among themselves so completely dulls their sensibility on the subject that they cease even to affect concealment of their dishonesty, and rather plume themselves publicly among their fellows on their success.

The evils here spoken of owe their existence to the fact that examinations are in writing. Oral examinations afford small opportunities for imposing upon the examiner a show of knowledge where the reality does not exist. Even though the letter of a text may be correctly repeated, a few well-directed questions will quickly discover how far intelligence enters into the performance. If it be inquired, then, why examinations should not be made entirely oral, the reply must be that they were so half a century ago, and that the method was abandoned for what were then esteemed to be reasons of weight. Among these were the large amount of time necessary to make an oral examination thorough when each individual of a class has to be separately taken up. The method is quite feasible for a single person or for a squad of two or three; but with classes numbering from fifty to an hundred or upwards, it becomes intolerably laborious. Another reason is that, in oral examinations, where all the students are examined in each other's presence, the tests cannot be identical to all; and this, considering that the object of the examination is professedly to settle the question of comparative merit, is a fatal objection. It may indeed happen, and it is in fact an occurrence which often did happen, that the least proficient man in a class, through the

lucky chance which caused the most elementary matters to fall to his share, was enabled to appear to better advantage than the most thoroughgoing of his competitors.

Neither the oral nor the written examination seems, therefore, to be well adapted to secure the arrangement of the members of a class in a just order of merit. The question may then be very properly asked, whether this object is important enough to justify the trouble it costs. The educational effect upon young minds of a course of study would be much more beneficial, if the incitement to effort could be the love of knowledge for its own sake rather than the ambition to be publicly proclaimed as outranking their fellows. Why should there be any publication made as to scholastic merit except the distinction of the *proficient* and the *deficient?* This distinction is the only one made in professional schools, and it is the only one needed. In schools of the liberal arts, the order-of-merit plan seems to have been adopted in the belief that the spirit of emulation induced by it might stimulate diligence in study. Perhaps it does to a certain extent, and among the ambitious and the limited number to whom high distinction is a possibility; but it is doubtful whether, among the great majority, this stimulus is felt at all, and it is not at all doubtful that, among a large proportion, the influence of the system is discouraging rather than animating.

Should it be deemed advisable, however, to continue to maintain the traditional practice of grading classes in a regular order of merit, it would seem to the undersigned most judicious to entrust this arrangement either to the judgment of the officers having charge of the instruction of each class, to be made according to the impression produced upon their minds by the performances of individuals throughout the whole course of study, and not upon the basis of any system of numerical record; or, better than this, to leave this determination to the free suffrages of all the members of the class concerned; each student to form for himself independently an order of merit embracing the names of all his classmates, and a result or authoritative list to be deduced from the combination of these in the ordinary way of counting the ballots in an election. During all the earlier part of this century, and down to some

time later than 1830, no other method of determining academic rank was practised in Yale College than this. The ballot was resorted to only twice during the four-years course: once just previous to the Junior exhibition, and again in anticipation of the final graduation; but it might be employed more frequently if thought advisable. In the mean time, no record was kept of the relative standing of different individuals, and men were esteemed according to the reputation they established among their classmates, who were the observers of their diligence and of the character of their scholastic performances. This system was abandoned at New Haven, not because of any distrust of its fundamental principles, but for the belief that the plan of giving a daily mark for every exercise would have the effect to keep the student more closely up to his work; and hence the marking system was adopted. The two could not work together, and consequently the practice of voting was discontinued.

Two obvious advantages recommend the plan here proposed. It leads young men to prize the good opinion of their fellows, and to seek to be esteemed for real and not for fictitious scholarship, represented by marks obtained often by methods of equivocal character; and it trains young men in their early years to the use of those methods for securing success, on which they will be compelled to depend throughout all their future life.

Two objections have been made to the plan. First, it is said that young men will be biassed, in giving their voices, by feelings of personal friendship or aversion; so that the vote will not be expressive of an honest judgment. Secondly, there are, at this time, so many distracting interests among college students, the offspring of their numerous petty associations, that class feeling is to a large extent subordinated to ambitions of a less comprehensive character; in consequence of which the vote will be partisan, and not an expression of conscientious conviction. Both these objections are hypothetical. Long-continued experiment has proved that the first is baseless. The disturbing cause assumed in the second to be so dangerous did not exist, or did not exist to the same degree, early in the century; and what might be its influence can only be matter

of opinion. A new experiment might very probably prove it to be quite inefficacious for harm. Such an experiment is certainly worth trying.

It has been already remarked, that from 1865 to 1872 there was a gradual but steady decrease of the number of students in attendance on the collegiate department; but after 1872 there was a much more rapid increase, so that in 1878 the number of undergraduates was just one more than twice as many as in 1872. The number of applicants for admission in 1877 exceeded one hundred, of whom seventy-five were admitted to the Freshman class. The labor of examining these candidates was very great, and the prospect was that it would become greater from year to year. It was not at all certain that the examinations were a satisfactory test of the fitness of the candidates to enter upon a course of collegiate study. In some cases, the nervous anxiety of the student made it impossible for him to do himself justice; in other cases, a lucky chance might put before an indolent or ill-prepared candidate questions which he happened to be able to answer, but which did not test his ability to proceed with studies which lay before him; in many cases, students of real ability might be rejected on account of deficiencies which they might easily make up by earnestness and industry; and in cases still more numerous, students of far less merit might be allowed to pass simply because they had been thoroughly coached and crammed for the entrance examination. In 1878, therefore, Dr. Barnard recommended that candidates for admission to the College should be admitted to a probationary trial without preliminary examination. Such a trial, he urged, would be in fact "nothing more than a protracted examination." Whatever the student's previous advantages or disadvantages might have been, his continuance as a member of

the Freshman class would depend largely upon his own diligence and determination to succeed. Dr. Barnard fairly stated the objection that the abolition of entrance examinations would encourage some to present themselves who would not dare to encounter the test of an examination, and whose presence in a class might tend to depress the general standard of scholarship; but to this objection he replied that the real effect of the probationary trial which he recommended would be to detect and exclude that very class of candidates, and to do it far more surely than a single examination either did or could.

As an alternative to the proposed system of indiscriminate admissions, Dr. Barnard strongly recommended a system of school visitations under which committees from the Faculty might be sent to schools of reputation to examine their Senior classes, with the understanding that the alumni of such schools should be admitted to the College without further examination. The occasional visits of members of the Faculty to the schools of New York City had been received with expressions of gratification on the part of scholars as well as teachers; and Dr. Barnard expressed the hope that Columbia College might in this way be drawn into closer relations with the greater schools of the city and the State, with great advantage both to the schools and to the College.

In 1881, he returned to the subject, urging that the high schools and academies where boys and even young men were now studying at an age at which they would formerly have been in college, ought in a large measure to furnish that systematic intellectual training which was once expected of the College. The practical difficulty with which the College was beset was that students who entered the Junior classes were frequently found not to have received the necessary preliminary training, and that they

entered college after they had passed the age in which such training can be successfully given. Thus it came to pass that the College must necessarily fail in the discipline of the mental faculties, without which training the student could profit but little from the special studies of the college course. Dr. Barnard, therefore, urged a revival of the Grammar School which had once existed in connection with the college; but as an alternative plan which, in his opinion, would be even more effectual, he renewed his recommendation of the establishment of close relations with the upper schools of the city and State, and the institution of a system resembling that of the English University Examination Board, which extends its examinations to schools in every part of the kingdom. If this plan were adopted, every school of reputation would be obliged in its own interest to adopt the system, and the effect both upon the school and upon the College would be unquestionably good. The relief which it would afford to the Faculty in the examination of students for matriculation would be very great, as the alumni of schools and academies which coöperated in the system would be matriculated without examination; and others, in accordance with his former recommendation, might be admitted on probation. It does not appear that Dr. Barnard's views of this subject were ever changed, and it may be hoped that his desire for a closer relation between colleges and the upper schools of the city and State may yet be realized.

CHAPTER XV

A change of views on the subject of elective studies — Modern languages — Defects of the American college system — Popular dissatisfaction with it proved by statistics — Increase of interest in scientific studies — The beginning of an elective system advocated — The elective system again pressed — The old theory of the college curriculum exclusively for mental discipline rejected — The revival of the "double course" recommended — Success of the elective system reported, and its extension suggested — The elective principle advanced as the key which solves all difficulties of the college problem — The elective system adopted for the Junior and Senior years.

THE subject on which Dr. Barnard's views underwent the greatest change was that of the studies which ought to have a place in a regular college course. It will be remembered that in Alabama he had insisted upon the necessity and advantages of a rigid course of the old fashion, the exclusive object of which should be the discipline of the mental faculties, as distinguished from the acquisition of knowledge for the sake of its prospective utility. On this subject he was then the most conservative of conservatives, maintaining that the concessions which had been made by American colleges to the general demand for "useful" knowledge had been attended only with a diminution of their usefulness in mental discipline, without any compensating advantage in the imparting of knowledge of practical utility. He did not deny the need of professional schools; but he insisted that when they were required, they ought to be established and maintained apart from the college, and that the only relation that the college could rightly sustain to them would be to supply them with students whose previous training would

enable them to pursue their professional studies to the best advantage. When he went to Mississippi, he greatly enlarged his conception of the function of a university as a school of all learning, both theoretical and practical, but there is no evidence that his views of the college proper as a school simply of mental discipline were at all relaxed; and when he reached Columbia, his first thought seems to have been only to relieve the college course of studies which, in his opinion, could not be pursued with advantage, and which tended to thwart its true and only right purpose. In his first report to the Trustees, he approached that subject somewhat tentatively by expressing the opinion that "it is quite doubtful whether modern history, in the proper sense of the word, ought to occupy any considerable space in the teaching of our colleges"; and by hinting that "political economy, while it might have a place in an institution having the character of a proper university in which the student is presumed to have been already educated," is less appropriate in the curriculum of a simple college. In consequence of these suggestions, the history of philosophy and the philosophy and history of the mathematics were dropped from the curriculum of undergraduate studies, but it is noteworthy that the time which was thus saved was at once devoted to physical science.

During his visit to Europe, in 1867, Dr. Barnard availed himself of every opportunity to examine the plans and arrangements for teaching practical science in the mining schools of London and Paris. In the course of these investigations, he became deeply impressed with the defectiveness of the Columbia School of Mines in failing to provide proper instruction in the modern languages of continental Europe, without which many of the greatest works of science must be inaccessible to the student. It

was manifest, however, that the study of these languages, if it were to be of any real service, must be undertaken before the student's entrance at the School of Mines. It ought, therefore, he thought, to be admitted as a part of the regular college curriculum ; and he was confirmed in his belief when he learned that this plan had just been adopted at Harvard, where French and German were to be introduced into the regular course, French being required throughout the Freshman and the first half of the Sophomore year, German during the second half of the Sophomore year, and both of these languages, together with Spanish and Italian, being admitted as elective studies throughout the Junior and Senior years. At Harvard, after the Freshman year, no Latin or Greek was to be required, but the student was to be permitted to elect these studies, to the exclusion of the modern languages, mathematics, physics, or chemistry. At this date, the Harvard scheme commended itself to the judgment of Dr. Barnard. He denied that it was "an unconditional surrender of the claims of the ancient learning, alike as to its intrinsic and its educational importance," on the somewhat illogical ground that the surrender had really been made long ago.

> The scheme [he said] is only a frank confession that the American college system has been attempting for the last quarter of a century to accomplish what it cannot perform. The addition of one subject after another to the curriculum of instruction has so increased the task proposed as to render thorough instruction in anything all but impossible. The effect upon scholarship in Latin and Greek has been visibly in a high degree injurious. If it has not prevented the formation of accomplished scholars in particular instances, it has certainly diminished the amount of general attainment; for by the encroachment of the studies more recently superadded, the time once devoted to this has been greatly reduced, until the learning which was once the pride of our educational system

is menaced with the danger of being completely smothered. The process has been gradual and insidious. When chemistry, physics, mineralogy, geology, and other natural sciences were first introduced, they were taught by lecture, at hours not occupied by the regular studies of the course, and without reducing the number of hours devoted to those subjects. Subsequently, however, the new subjects demanded and obtained a fuller recognition, secured to themselves an allotment of a certain number of regular hours, and a lodgement having been thus effected, the intruding studies have gradually gained ground. The consequence is that the quantity of Latin and Greek which is now read in colleges has diminished fully one-half; and yet it is notorious that the time given to chemistry or physical science is insufficient to give the student more than the most superficial knowledge of either of these subjects.

In Dr. Barnard's opinion, the scheme adopted by Harvard University was nothing more than was required by a frank recognition of the fact "that a college cannot expect to teach every individual student everything which it is prepared to teach; and that in offering to each a choice of studies, it was simply making it possible for him to make himself proficient in those which he could pursue with profit." It would still be open to any and every man to make himself a classical scholar, without having his progress checked by the compulsory study of half a dozen sciences in which he could not become proficient if he would, and would not if he could. In the movement of Harvard, the oldest college institution of the country, he did not hesitate to say that there was an indication of the course which all colleges would be compelled to pursue sooner or later; and he urged that, so far as the modern languages were concerned, it should be taken into immediate consideration at Columbia.

In 1870, he returned to the subject. He expressed his conviction that the demand for educational culture of a

high order was not diminishing, and that the number of young men who were seeking it was not less in proportion to the population than it had been. Some kind of intellectual eminence was as much desired as ever, but the preference was no longer exclusively given to the polite and academic learning furnished by the established college course. A knowledge of modern languages had come to be considered necessary, and scientific studies had at once a practical utility and, to many students, an inherent attraction, beyond that of literary and classical culture. This was a fact which might be shown by statistics; for the fact was that the number of college students, relatively to the total number of the population of the country, was steadily decreasing. Taking New England alone as an example, he showed that in 1826 the number of college students was 1 in 1513; in 1838, it had risen to 1 in 1294; in 1855, it had fallen to 1 in 1689; and in 1869, it had fallen still further to 1 in 1927. In fact, the total number of college students in the New England States had remained stationary for a period of fourteen years from 1855 to 1869, since the total number of students in the former year was 1745, and in the latter it was only 1754, while the population had increased during the same period by more than fifty per cent.

The inference which Dr. Barnard drew from these statistics was, that from 1826 to 1838 collegiate education had been gaining in favor, and that the number of liberally educated men in proportion to the population had become larger and larger; but that from 1838 onward, the tendency had been decidedly the other way. It was evident that some cause must have begun about 1838 to affect the public mind and to produce a tendency to diminish the relative demand for college education, while it increased the demand for educational culture of a dif-

ferent character. That cause, he said, was the growing interest in physical science which began to assert itself somewhere about the year 1830. About that time

the numerous splendid triumphs of modern science began to a marked degree to arrest the public attention. That was the era of the invention of the oxyhydrogen blowpipe, of the construction of the electro-magnet, of the creation of permanent galvanic batteries, of the invention of the magnetic telegraph, of rapidly multiplying applications of chemistry to the industrial arts, and of the introduction of steam as a motive power upon the ocean. It was also the era which presented directly under the eyes of every man, woman, and child in the land one of the most magnificent of the creations of science applied to industry, the railroad, with its necessary concomitant, the locomotive. And it is within the clear recollection of every man whose own personal history goes back to that period, that that was the era in which first arose in our country that clamor against the value of classical studies of which we have since heard so much, and of which the principal burden seems to be that the classics produce no telegraphs, create no engines, lay down no railways, and turn the wheels of no mills.

Dr. Barnard did not recommend that collegiate institutions should surrender to the "clamor" against classical studies.

The literature of Rome and Greece cannot be put aside or made to be forgotten of men; because it is not the literature of a people or of an age, but it is the literature of the world and of all time. Nor can the languages of Rome and Greece be thrust out of our halls of learning, or excluded from the course of our superior education, because they are not the extinct languages of a limited spot of the world's surface; they are, in an important sense, the languages of all southern Europe, of England, and of America. It is a perversion of terms to speak of them as dead languages, and to call upon us to bury them because they are dead. They are not dead but living, and we cannot bury them, endeavor as we may.

They live in our own tongue, they live in our literature, they live in our philosophy, they live in our history, they live in our jurisprudence. When they shall be actually dead, we too shall be dead like them, and other races yet unknown to history shall come here to live among the ruins we have left.

Nevertheless, while still maintaining these views, and indignantly refusing to permit himself to be "considered unfaithful to the cause of good letters," Dr. Barnard avowed "the belief that literary colleges should, in justice to a large and increasing class of learners, throw open their doors more widely than they have done heretofore to students whose aspirations are rather scientific than literary." He asked for nothing more than a beginning, and he informed the Board of Trustees that an exceedingly modest beginning had already been made by permitting the Senior class, during the second term of the year, and only then, to exercise a certain freedom in the selection of their studies. In consequence of that change, he said, a greater degree of diligence and a larger contentment had been secured than had previously prevailed in the same period of the academic course.

In 1871, he renewed his agitation of the subject, claiming that a further and more thorough investigation of the statistics of American colleges had proved his assertion that the number of students pursuing a strictly collegiate course was steadily diminishing throughout the whole country, while the demand for scientific education was everywhere increasing. In the long run, he observed, the popular judgment of systems of education must prevail. If any system, however good in theory, or however admirable in its results, should cease to be adapted to the exigencies of life, its failure would surely be detected by the people, and unless it were amended, it would fall into disrepute and neglect. The popular verdict, when clearly

rendered, must be accepted. No theory could stand against it. It would be idle to prove to a people that they ought to prefer a system which they had deliberately made up their minds not to prefer; and of the present judgment of the people of this country there could be no question. The statistics of colleges in the State of New York showed a state of facts essentially the same as that which he had previously shown to exist in New England. Taking up, for instance, at random, the American Almanac for 1848, it appeared that the six colleges then existing in the State reported in that year 940 undergraduate students, while in 1870, though the number of colleges had been actually doubled, the number of their undergraduates was only 1034, showing an increase in twelve years of only ten per cent, while the population had increased not less than fifty per cent.

Such a fact as this, he maintained to be as significant as it was startling; and he held that its significance was shown by the success of Cornell University. That institution had been established on the elective principle, and from its first opening, its halls had been so thronged with students that in the third year of its existence the number of its undergraduates was greater than that of any three of the colleges of the State which had been in existence for half a century. Elsewhere a similar indication had been manifest. The University of Michigan had pursued the same plan with similar results for a much longer period; and a remarkable illustration of the general tendency of the public mind was to be found by a comparison of Harvard University with her most prominent competitor, Yale College. For many years these two institutions had nearly equally shared in popular favor, but while the average undergraduate attendance at Yale had remained nearly stationary for the last ten years,

Harvard, under the elective system, had increased the roll of its undergraduates by nearly two hundred. These facts were too suggestive to be put aside ; and Dr. Barnard, having now unequivocally placed himself on the side of the new system, proceeded with characteristic vigor to assail the old.

The strongest argument in favor of an invariable curriculum of study extending through the college course, was its effectiveness as an exclusively mental discipline ; but the assumption that it ought to be nothing else he declared to be only an assumption which could no longer be admitted. There is a period of life during which the mind, like the body, is in a state of development, and it is during that period that the discipline of the mental faculties can be most successfully prosecuted. There comes a time at which the body has attained its full growth, and there is a time at which the mind has likewise attained such maturity as to be no longer susceptible of the plastic influences of earlier years. In infancy, education is almost omnipotent. In early boyhood, the educator may force the faculties into almost any mould. But the time comes at which the teacher must be content to give fair play to the faculties as they are, and when a youth has reached that stage of development, the discipline of earlier years must be frankly abandoned. Now, it was a singular fact that in the earlier part of the century, the age at which boys entered college was very much earlier than in later years, and the discipline which was appropriate to young boys could not be equally appropriate to young men because a youth of seventeen or eighteen years of age is not susceptible to the influences, and is not capable of the discipline, which may rightly be applied to boys of thirteen or fourteen. For the latter, "there might be reason to demand that the entire course should be shaped with a

view to mental discipline only. As respects the former, there is no less reason for requiring that a principal object should be to impart knowledge for the sake of knowledge itself; and though this should not be the governing object throughout the whole course, it ought at least to give character to the later years."

The second reason that the old college curriculum, designed exclusively for mental discipline, was no longer expedient, was that it was no longer practicable. It had already in fact been abandoned. Originally, the subjects of instruction had been few, and, with the exception of the pure mathematics, they had been literary; but this was no longer the case. The curriculum had been overloaded by gradual additions which were utilitarian and not disciplinary, and the effect was that neither mental discipline nor the utilitarian purpose was attained. It would clearly be better to allow either the one or the other, instead of pursuing a policy which defeated the object of both.

A third reason for ceasing to insist upon an invariable curriculum was that the colleges were the only institutions in America which could supply the training demanded by the public and by the necessities of the age. Just as the matter stood, colleges professed to teach nearly everything, and yet they were hardly able to pursue a single subject beyond its rudiments. The majority of students did not become sufficiently proficient even in the classics to be able to read the works of classical authors which they had not read before, and it could not be pretended that the colleges were adequately fulfilling the function of scientific schools. He therefore concluded that since the colleges ought not to abandon the classical field, and since their present arrangements made it impossible to supply satisfactory instruction on other subjects

without interfering with the classical course, there remained no other alternative than to allow undergraduates to select the studies in which they desired to become proficient. Unless that wise policy were adopted they must expect the disfavor under which they were laboring to increase rather than diminish.

In 1872, Dr. Barnard reported the successful operation of the very moderate and purely tentative elective system which had been thus far adopted in the Senior class, and he noted with great satisfaction that the studies which had been freely chosen by the students had not been "easy" studies, but rather the reverse.

In 1874, he advocated the revival of the "double course," which had once been permitted in Columbia and which had afterwards been abandoned because it did not then recommend itself to the public mind. Dr. Barnard said:

> About forty years ago Columbia College made the experiment of establishing a double course; but this experiment, after a trial of some years, was finally abandoned, as not at that time seeming to meet a real want of the community. The want nevertheless has in these later years made itself very manifest; and while there is still a very large demand for the highest literary culture, and while this department of education is that which it is doubtless the first duty of Columbia College to promote, it is still true that there are many youthful aspirants to learning who would pursue with pleasure a scientific course in college if it were presented to them, yet who are turned away from the highest walks of education when they have no alternative but to pursue a course severely literary. It is therefore probable that the institution of a double course in the college would at this time be attended with greater success than was experienced in 1830. What makes this seem more probable is the fact that at the present time, the students attending the other two colleges of the city are very largely pursuing what is called the scientific

course, or the course in which the sciences of nature occupy the principal attention, the modern languages to a great extent, or entirely, take the place of the ancient, and the degree conferred is that of Bachelor of Science. In the University of the City of New York, the number of students in the scientific course is three-fifths of the whole; and in the College of the City the proportion is the same. These facts would seem to indicate that, by the institution of a double course in the College, the undergraduate department would be made materially more attractive; while there would not be likely to occur any sensible diminution of the numbers who pursue the regular course in the Arts.

In 1876, Dr. Barnard again reported the satisfactory working of the limited application of the elective system which had been introduced into Columbia, and recommended its extension to the Junior year. He said:

The elective system of study has now been to a moderate extent in operation in our College for four or five years. The anticipations of favorable results from its introduction, originally entertained, have been more than verified by the actual experiment. The students pursue with increased alacrity the studies which they themselves elect, and the instructors find their task made more agreeable by the interested attention of the classes. As yet it has been impracticable to give a large development to the system. It has been extended only to the Senior class, and to that class only by offering an alternative choice between a limited number of studies arranged in pairs. What is now most needed for the improvement of the undergraduate course is, after the reservation of a certain number of subjects indispensable in any system of liberal education as subjects to which all shall be required to attend, to throw open wide freedom of choice as to all the rest. This might with propriety be done with the studies of every year after the first, but should by all means be done with those of the Junior and Senior years. The misadventure of a close curriculum of study, enforced equally upon all, is that it confines the teaching of the college within an exceedingly narrow

scope and makes it impossible that the institution shall become what the university in its theory is designed to be — a *studium generale*. The range of the teaching of Harvard University in its department of Arts at present, as compared with that of any college maintaining a close curriculum, may be inferred from the fact that, while the latter teach only so much as any single student can learn during the period allotted to the course, the former offers a choice among studies which in the aggregate amount to fourteen times as much as any single student could accomplish.

With most American colleges, a close curriculum of study is a necessity forced upon them by their financial feebleness. To enlarge the scope of their teaching and to increase studies, is to multiply classes or subdivisions, and to necessitate an increase in the corps of instruction with correspondingly increased expenditure. The elective system will, therefore, probably never be universally adopted, and perhaps not generally. It will even be opposed doubtless, in the future, as it has been in the past, for reasons drawn from a theory of education suited to a period when college students were generally younger in years than at present, and when the circle of human knowledge was much narrower. But it is sure to make its way with those institutions whose resources are such as to allow its introduction. And it is only upon the foundations afforded by this limited number that we can hope to see in this country universities grow up, in which, as in those of the continent of Europe, educational culture shall receive its highest and fullest development. Among our older collegiate institutions, there is no one which has hitherto adhered more persistently to the theory of a close curriculum than Yale. When, nearly fifty years ago, the agitation in favor of what has since been called the new education began, the Faculty of Yale College were earnest in resisting the threatened encroachment of the time-honored system which had so long held peaceful possession of all our schools of higher learning. Their argument in favor of the actual system with its close curriculum of study was one of the earliest contributions to the literature of the subject in this country. But this same institution has now within the past few weeks announced an entire

change of her whole plan; and henceforth her course of teaching will be nearly or quite as largely elective as that of Harvard has been for the past ten or fifteen years.

In Columbia College it seems to the undersigned that a similar change must soon be recognized as a duty. This institution is one of the few which may really be able to make themselves universities in the highest sense; schools in which the seeker after knowledge in any form may find what he wants. The development must, of course, be progressive, but there can be no progress without a beginning. The first step should be to utilize the means we have of enlarging the scope of our teaching without necessarily increasing the number of our teachers.

Nothing is wanting to its realization but the enlargement of the accommodations provided for the department of Arts. With apartments in which students could profitably employ themselves when not under instruction, and corresponding provision for the teachers that may pursue their studies and investigations when not employed in teaching, the efficiency of our College as a school of instruction could be made greater than at present manifold.

In 1879, Dr. Barnard said:

Many complaints have reached the undersigned in regard to our omissions and the insufficiency of our teaching in what we undertake. It has been inquired why French, and Spanish, and German, and Anglo-Saxon, and botany, and physiology, do not form parts of our regular course; and why Sanskrit, and Hebrew, and Arabic, and quaternions, and the calculus of variations, are not offered to students whose tastes lie in the direction of those studies. These are a few of our omissions. As to our insufficient teaching, one critic asserts that we have driven chemistry into a corner; another, that we have turned history out of doors; a third, that mineralogy and geology are almost denied a hearing; a fourth, that the English language and English composition are hardly taught at all. And so it goes on. No subject, in the opinion of those who esteem themselves the best qualified to judge, is properly provided for in our programme of study. Nor is it possible to make such pro-

vision as shall be universally satisfactory, except by indefinitely extending the duration of the course on the one hand, or by ceasing to require the candidate for graduation to include in his special range of study every subject which the college undertakes to teach, on the other.

The principle of elective study is the key which solves the whole difficulty. By limiting the student to a certain number of subjects, sufficient time may be allowed him to perfect himself in each, and sufficient time may be allowed the teacher to do his subject justice. The college may at the same time enlarge the scope of its teaching, and embrace in its general scheme of instruction every subject of literary or scientific interest, without in any degree diminishing the thoroughness with which each branch is taught. And it is only in this way that, in the present age, any college can hope to secure and maintain a really high character as an institution of learning. Its teachers may be learned, and personally may be able; but the character of the institution as an institution depends less upon what they are than upon how much they teach. The amount of their teaching is limited by the time allowed them to accomplish it in; and that time will be reduced to a minimum when every subject must have its place in a close curriculum limited to four years.

In 1880, he again urged the extension of the elective system of study throughout the Junior and Senior years, as "a logical necessity of the condition in which the College was placed," and he urged its adoption as the only proper preparation for a system of post-graduate instruction which the Board of Trustees was then considering. That, he said, "is the direction in which our institution is destined to make its usefulness principally felt. It is so because, in this principal city of the continent, which is yet perhaps to be the greatest city of the world, there is a need of an institution which shall stand forth as the expositor and the representative of the highest learning. This institution and no other is capable of taking that high position, and

must, by force of circumstances, be compelled to take it." He denied that there would be any necessity for the College to abandon its present field. The undergraduate department need not fall into neglect, nor would it be lost in the shadow of the superior development. The very contrary was probable, for as the institution grew in any direction, the impression of its importance and magnitude must necessarily grow upon the public mind and must necessarily react beneficially upon all departments.

In consequence of Dr. Barnard's long-continued urgency, the elective system was extended to the Junior as well as to the Senior class, and, so far as modern languages were concerned, it was extended to all classes of the College. In 1882, he made a full report on the working of the system, and expressed his great satisfaction with its results; but he already began to see that it might be attended with certain disadvantages. As a general rule, it had been experimentally found that students applied themselves with the greatest profit to studies in which they took the greatest pleasure; yet it was undoubtedly true that there were some whose selection was controlled by a desire to acquit themselves of their academic obligations with a minimum of labor, and selections made with that motive could not be desirable. The great body of young men were really interested in their studies, but it might be necessary for them to be required to consult with their instructors in making their selections. This view he presented with even greater fulness in the following year, when he showed as the result of the elective system, so far as it had been adopted, that there had been a progressive advance in scholarship which was really remarkable. Nevertheless, he recurred to the recommendation which he had made in the previous year, that the student should be required to submit his list of studies to the approval of the

members of the Faculties under whose instruction he had been in the previous portion of his course. Many of the undergraduates had voluntarily done so; and in other cases members of the Faculty had offered their advice with good effect. Yet, on the whole, it was Dr. Barnard's judgment that it would be wise to modify the system so as to offer to the choice of the student, not single studies which might be injudiciously combined, but parallel courses which should be arranged with a view to the natural interdependence of their topics and with due regard to the logical order of their sequence, so as to maintain the disciplinary purpose of college education to the end of the course. It was a satisfaction to Dr. Barnard to be able to say that the Faculty were then engaged in the preparation of a scheme intended to embrace two, or perhaps three, parallel courses properly introductory to the higher studies leading to the several degrees which were to be open to students in the post-graduate department.

This is his last recorded communication to the Board on the subject of elective studies, and represents the conclusions which he had reached after fourteen years of discussion and an experience of several years of the elective system in operation.

CHAPTER XVI

Dr. Barnard's change of view on the elective system — A real consistency underlying it — Change of the age at which young men enter college — The college of the future — Graduate fellows as instructors — Expansion of the college into a university — The graduate department — The abandonment of the undergraduate department suggested — Opening of the college to women proposed — Reasons urged in behalf of the measure — Movements for the higher education of women in England and America — Objections to it answered — The measure again urged — The Faculty of Columbia ready either to receive young women as students or to teach them in an annex — The Harvard Annex — Barnard College established in connection with Columbia — Table of attendance in Columbia College, and its associated schools from 1865 to the close of President Barnard's administration in 1888.

In the change of Dr. Barnard's views of the elective system, there was far less inconsistency than appears upon the surface. Indeed, there was hardly any change of his fundamental principles of education, only a recognition of the need of some change in their application. He never ceased to insist upon the necessity of systematic mental training as a preparation for the serious studies of professional life. That training had been the exclusive purpose of college education until the pressure of a popular demand for "useful" knowledge had induced the colleges of this country to add to their curriculum a large number of studies of supposed utility, with the inevitable consequence that the value of the college course as a system of mental training was impaired, while the amount of useful knowledge which the student could acquire was merely elementary. Year by year it grew clearer to Barnard's mind that the existing system was wholly

unsatisfactory, that the original simplicity of the college course could not be restored, and consequently, that some other change was imperatively required.

Another fact was obvious; the age at which youths entered college was considerably later than it had been in former years. When colleges were intended simply to train the mental and intellectual faculties, students were matriculated while they were mere boys, and it was not unusual for them to complete their college course at the age of sixteen or seventeen, and often much earlier. Thus they enjoyed the advantages of mental training precisely at the time when their minds were most susceptible of discipline, and they entered on their professional studies at the very age at which the student of the present time is entering on his college course. The mental discipline which had been well adapted to young boys at the most plastic period of human life, was obviously less suitable to young men, and hence it seemed to President Barnard to be necessary in the circumstances that the college course should now be designed to furnish something more than the mental training which in different circumstances had been properly regarded as its only purpose. In this view he was confirmed by observing that academies and high schools, below the grade of colleges, were now, professedly and often successfully, furnishing the mental training which was the original purpose of the college, so that colleges not only might but ought now to adapt their curriculum to the requirements of students who were no longer mere boys and whose minds had been already prepared for serious studies.

Another consideration presented itself. At the age at which young men now enter college, they and their parents or guardians have usually formed some idea

of their future occupation in life, and it is natural that they should desire their college studies to be more or less directly serviceable in the life which lies before them. To the future clergyman, classical studies will always be of prime importance, and the study of Greek will be as important as that of Latin; to the future lawyer, historical studies will be invaluable, and Latin will be of more importance than Greek; a student who intends to devote himself to a scientific profession will prefer mathematics, chemistry, or some department of natural history, as the case may be, and he will nearly always prefer the modern to the ancient languages. No student can possibly make himself equally proficient in all these subjects, nor is it desirable that he should attempt it; therefore, a wisely advised elective system of some kind seems to be indispensable if colleges are to meet the necessities of education in the present age. The original purpose of continuous mental discipline need not, and never ought to be, forgotten; and therefore it was Dr. Barnard's final belief that under a well-regulated elective system, the student should be permitted to choose between carefully arranged courses of study rather than to make an arbitrary selection among all the studies for which the college makes provision.

In 1873, he described the college of the future as follows:

The college of the future is destined to fulfil a higher function in the work of education than it has done heretofore; it will no longer be restricted to the business of developing the germs of intellect in immature minds, by an indiscriminating system of study and drill enforced equally upon all, a task which must now, to a great extent, be borne by the inferior schools during that portion of the young learner's time which is most favorable to this process; but it will perform a service no less important for which hitherto no proper provision has

been made, that of giving the differential culture which is required to bring out the full strength of minds approaching maturity, and manifesting as they do so the salient characteristics which distinguish each individuality. . . . The advantages of such an intermediate special culture are too obvious to be questioned. In the discussions which have been recently going on in England as to the desirability of a reform of the fellowship system of the great universities, and a modification of the conditions upon which fellowships may be held, and an abridgment of the terms for which they shall be granted, and the educational value of the fellowships themselves, has been defended on the ground that "before throwing himself for good and all into whatever is to be the principal business of his life, the student still wants an interval to complete the furniture of his mind, by study of a freer, larger, and more independent sort." But fellowships cannot be provided for all, and in this country we have as yet but few. The devotion of the later years of college life to that kind of teaching which makes the increase of knowledge the principal object, and selects also its subjects with special adaptation to the mental characteristics of the learner, furnishes for us the best means, and the only means which is likely ever to be universally available, for supplying that defect in our educational system which must always exist if the transition is to be abruptly made from the strictly disciplinary school to the study of a profession.

At the very best, however, the studies of a college must be elementary, and a college will be most successful which inspires its students to enter upon some higher course of post-graduate research. Hence Dr. Barnard endeavored from the first to prepare the way for courses of post-graduate instruction on which students should be encouraged to enter by the endowment of fellowships, and for technical schools in which they might prepare themselves for any and all professions. At a very early time in his administration, he began to sketch the outline of a plan under which Columbia College should become a great university. In 1866, he recommended the immedi-

ate establishment of a School of Civil Engineering to be attached to the School of Mines, and ultimately Schools of Practical Astronomy; of Commerce; of Architecture; of Mechanics, Physics, and Chemistry, applied to the Arts, Agriculture, and Machinery; of Political and Civil History; of Philosophy and of Philology. At a later time he added to these the Schools of Comparative Philology, Archæology and Ancient Art, the Fine Arts, Ethnology, Anthropology, Bibliography, Library Economics, and the Science of Education. In 1871, two prize fellowships of the annual value of $500 were established, to be awarded to the most meritorious students of letters and science in the graduating class of each year; and after an experience of fifteen years, it appeared in 1886 that nineteen prize fellows had been appointed whose career had amply justified the wisdom of the system. In 1880, it was announced that post-graduate instruction would be given in the classics, mathematics, astronomy, chemistry, geology, mineralogy, history and political science, philosophy, the English language and literature and the language and literature of France, Germany, Spain, and Italy. In the same year was established the School of Political Science, which has certain obvious affinities with the School of Law, but is not a professional school. The subjects of instruction in the first year of the School of Political Science were placed among the elective studies of the Senior year in the undergraduate department, but the remainder of the course was properly restricted to the graduate department. In order to encourage the graduate fellows of the College, Dr. Barnard earnestly recommended that they should be employed as assistant teachers in the undergraduate department; and he urged his recommendation both on the ground that such assistance was necessary to the relief of professors in the instruc-

tion of large classes of undergraduates, and also on the ground that a student who has himself but recently emerged from the position of an undergraduate is peculiarly well qualified to assist his juniors in the studies which he himself has recently passed through. On this point he quoted the following passage from a report of the Faculty of Yale College which had been made nearly half a century before:

There is wanted, on the one hand [says the report], the experience of those who have been long resident at the institution, and on the other, the fresh and minute information of those who, having more recently mingled with the students, have a distinct recollection of their peculiar feelings, prejudices, and habits of thinking. At the head of each great division of science, it is necessary that there should be a professor to superintend the department, to arrange the plan of instruction, to regulate the mode of conducting it, and to teach the more important and difficult parts of the subject. But students in a college who have just entered on the first elements of science, are not principally occupied with the more abstruse and disputable points. Their attention ought not to be solely or mainly directed to the latest discoveries. They have first to learn the principles which have been in course of investigation through successive ages and have now become simplified and settled. Before arriving at regions hitherto unexplored they must pass over the intervening cultivated ground. The professor at the head of the department may therefore be greatly aided, in some parts of the course of instruction, by those who are not so deeply versed as himself in all the intricacies of the science. Indeed, we doubt whether elementary principles are always taught to the best advantage by those whose researches have carried them so far beyond these simpler truths that they come back to them with reluctance and distaste. Would Sir Isaac Newton have excelled all others of his day in teaching the common rules of arithmetic? Young men have often the most ardor in communicating familiar principles, and in removing those lighter difficulties of the

pupil which, not long since, were found lying across their own path.

"No argument," said Dr. Barnard, "could apparently be more convincing in favor of the system which we have recently adopted here."

Throughout the whole period of his administration as President of Columbia College, Dr. Barnard steadily looked forward to the expansion of the College into an university; but the American university of the future, as he had come to conceive it, was not to be merely an association of schools for students of the so-called learned professions. He insisted that the exclusion of scientific schools from the university organization would be unnatural and irrational, because the distinction is founded on tradition and not on culture. He maintained also that it would be at once a practical and an economic error which must be wholly avoided; in 1882, he had the satisfaction to congratulate the Trustees that the College had already assumed the character and functions of an university, while its university expansion had not in any manner impaired its usefulness or diminished its attractiveness as a school for undergraduates. Nevertheless, as the ideal of the university was gradually realized, he began to entertain a doubt whether it might not be advisable to abandon the undergraduate department. In his last two reports to the Board, he discussed that question, without at first committing himself to the opinion that the abandonment of the School of Arts was necessary, but rather suggesting certain advantages in its continuance. Thus in 1887, after stating the progress which had been made in the graduate department, he proceeded to say:

That this superior department of instruction must constitute hereafter the main business of the College, becomes every day

more obvious. The field is one which is not as yet in this city, or even in this country, adequately occupied. It is a field in which the importance of judiciously applied effort is every day growingly felt. Each year a constantly increasing number of young men are looking round for aids in the pursuit of knowledge superior to those which our colleges afford; and each year sees a larger and larger proportion of them, dissatisfied with the imperfect facilities which they find at home, resorting to the great universities of Germany to obtain what they need. The students of the University of Berlin alone number at present more than five thousand; and of these several hundred are temporarily expatriated Americans. Leipzig, Vienna, Göttingen, Heidelberg, Tübingen, Bonn, and many others, draw also their considerable quotas of our youthful countrymen. This deplorable exodus can only be arrested by providing here the attractions which are so abundantly offered in foreign lands. These attractions will unquestionably be provided here at home, and in this city will be provided by Columbia College. It is a noble and magnificent task which our institution has before her, and it is one which will hereafter throw into shadow all that she has accomplished in her past honorable history.

An indication that our Trustees are beginning to be awake to the urgency and the importance of this task, is made manifest by the fact that there is now pending before the Standing Committee on the Course of Instruction, a resolution which suggests the immediate adoption of energetic measures to lift the whole plane of instruction here to the level of the university standard. The resolution even suggests, inferentially at least, the expediency of abandoning the undergraduate School of Arts entirely, and devoting the whole strength of the institution to its superior work. This, however, would be by no means a necessity. The maintenance of the inferior school would not in any manner interfere with the university system; while it might rather aid the latter by serving to it as a valuable feeder. It might aid it also in another way. Since to discontinue the undergraduate department would cut off the revenue now derived from it, the Trustees, in adopting such a measure, must be prepared to relinquish a corresponding amount

of their present annual income. A better plan would be to retain this income, but to devote it to the maintenance of fellowships to be bestowed on promising young men pursuing university studies. It is by some such measure as this that the success of the university system can be most certainly and most expeditiously secured. The Trustees of the Johns Hopkins University have recognized this truth, and have acted accordingly. The gratifying success which has attended the efforts of that corporation to encourage university study in this country, has been unquestionably attained by the creation of twenty fellowships of the value of five hundred dollars each per annum, to be freely offered to graduates of all colleges equally, and bestowed on the most meritorious among the competitors.

The undergraduate department of Columbia College yields a revenue of thirty thousand dollars per annum. Were that wholly devoted to the support of fellowships, it would maintain no fewer than sixty; and the consequence would be the creation here of a nucleus which would draw around it in a very few years a student body rivalling in numbers some of the great universities of the European continent.

It is to be hoped that the committee who have in charge the resolution above referred to may see their way towards recommending, as the first and most efficacious step toward advancing this institution to the grade of a true university, the establishment of a fellowship system like this; a system which, if not embracing at once so large a number as sixty, may at least be sufficient to compare favorably with the example set at Baltimore.

In his last report (for the year ending in June, 1888), in referring to a resolution pending before the Board, he took higher ground by urging that it would be of advantage to the educational interests of the country if a large proportion of the existing colleges could be suppressed; that it would be no misfortune if Columbia College should cease to exist as a school for undergraduate students; and that the future work of Columbia must

be more and more that of a proper university. The passage is as follows:

There is, in the inevitable drift of things, a tendency to concentrate our energies upon the Graduate Department.[1] This has been so distinctly perceived by the Trustees that there has been a distinct effort made from time to time to convert Columbia College altogether into a school of post-graduate instruction. About thirty years ago this effort assumed the form of a publicly declared purpose, and after a very elaborate investigation resulted in the constitution of a definite university organization. The time was not ripe, however, for so large a step of progress, and the effort failed to prove a success. Out of it, however, grew the Law School, which, meeting a well-ascertained public want, proved immediately successful and has been permanently maintained. Some years later the School of Mines appealed to a public want similarly ascertained, and was accordingly in like manner

[1] The table of attendance in Columbia College and its Associated Schools from 1865 to 1888, which is appended to this chapter, shows the remarkable relative change in the number of undergraduate collegians compared with that of the professional and post-graduate students which occurred during President Barnard's administration. It is noteworthy that for three years after his presidency began, Dr. Barnard confined his report to the College proper and gave no detailed account of the Schools of Medicine, Law, or Mines. From 1868, when he began to report all departments, to 1888, in which his last report was rendered, the number of students in the College increased from 140 to 233 — a gain of 66 per cent, while the total attendance in the professional and post-graduate schools rose from 625 to 1630 — a gain of 161 per cent; or, omitting the Medical School, from 306 to 821 — a gain of 168 per cent. To put the comparison in another way: If we omit the Medical School, the undergraduate students in 1868 were 31.4 per cent of the whole number, and in 1888 they were only 22.1 per cent; or, if we include the Medical School, the proportion of undergraduates fell from 18.3 per cent in 1868 to 12.5 in 1888. Nor will it escape observation that the actual as well as the relative number of undergraduates fell steadily every successive year from 298 in 1882 to the close of President Barnard's Presidency in 1888, when the number was 233. With facts like these before him, President Barnard might well say that, "in the inevitable drift of things," there was "a tendency to concentrate their energies on the Graduate Department." It is not so clear, however, that he desired to change the drift.

successful. The operations of the institution have in recent years extended over so wide a field that the original college has been entirely overshadowed, and a doubt has been raised whether its usefulness has not ceased. A resolution is now pending before the Board, inquiring whether it is not advisable that the whole scheme of education in Columbia College should be raised to a higher plane, and this involves the further question whether it is not advisable to discontinue the department of Arts. So long as this question remains under discussion before the governing board, it would not be becoming in the undersigned to pronounce an opinion upon it here. He may be permitted, however, to say in this place that, if the question were merely as to the sufficiency and importance of the work proposed, there could be no doubt that our Faculties could find ample and adequate occupation if they were confined to giving instruction exclusively to graduate students. On the other hand, such has been the excessive multiplication of undergraduate colleges in our country in recent years, that the business of those colleges is greatly overdone, and it would certainly be a material benefit to the educational interests of our country, if a large proportion of the existing colleges could be suppressed. From statistics gathered by the undersigned in former years with great labor, it was made manifest that while in the last half century the proportion of students in Arts in American colleges has been gradually but steadily diminishing, the number of colleges has, on the other hand, more than correspondingly increased. Since about 1837 the population of the country has increased fourfold, and the number of colleges threefold, while the number of students in Arts has in the mean time only doubled. In the country generally the number of students under instruction at any given time is in a proportion of about 1 to 2000 or 2500. In 1830, the average attendance on the existing colleges was sixty-seven each, and in 1880, about forty each. There is not a State in the Union in which the number of colleges is not greatly in excess of the educational needs of the population. This city itself may be taken as an illustration. New York has about a million and a half of inhabitants. It should be capable of furnishing, therefore, at the ratio of 1

to 2500, six hundred undergraduate students in Arts. This is not a number greater than could be comfortably provided for in a single college. Nevertheless, we have three, not counting the minor colleges under the care of the fathers of the Roman Catholic Church. It would not be therefore educationally a misfortune if Columbia College should cease to exist as a school for undergraduate students. The city would still be fully supplied with educational advantages, while there could be no doubt that this institution could be more profitably employed by confining itself to the field of superior education. Whatever be the policy pursued in this matter, nevertheless it is the unavoidable tendency of things to press upon Columbia College more and more constantly from year to year the duty of providing for the wants of the superior class of students, that is to say, the business of proper university instruction. The location of the institution in the greatest city of the continent is peculiarly favorable to such an undertaking, and though the College is not possessed of funds sufficient to enable it to carry out this complete design, it is hardly to be doubted that provision may sooner or later become sufficient to accomplish this object.

While Dr. Barnard's views of the readjustment of the College course to the necessities of the age were steadily expanding, and while his conception of the development of the institution into a school of universal learning was growing steadily clearer and more practical, he began to ask himself why the benefits of such an education as Columbia was endeavoring to afford should be confined to one-half of the youth of the country. After long reflection, he reached a settled and unalterable conviction that colleges ought to be freely opened to women as well as to men, and from 1879 to 1881, he urgently pressed upon the Board of Trustees the expediency of admitting women to all the departments of Columbia. In this movement he was heartily sustained by the Faculty, and although his success did not correspond either with his

desire or with his expectation, his agitation of the subject was not unfruitful.

Until 1879, though the admission of women as students in Columbia had been warmly advocated, the lack of sufficient space in the College buildings had made it impossible to entertain the suggestion. In 1879, that difficulty was removed and Dr. Barnard promptly submitted to the Board of Trustees the question whether a measure which had now become practicable ought not likewise to be deemed expedient. He said:

> The condition of the College is now such as to justify the suggestion of the question whether its advantages should not be opened to young women as well as to young men. This question has been brought to the attention of the Trustees heretofore by outside parties, and the reception which it met has been such as to indicate that the minds of the Board are not favorably prepossessed in regard to it. There has been hitherto, however, no room for considering it upon its merits; for, whether regarded favorably or not, so long as the College was confined within its recent narrow accommodations, the measure has been impracticable. Not that the admission of young women requires any considerable provision of space greater than that which is necessary for young men only; but that, in arriving at and leaving the building, they need their separate retiring-rooms and cloak-rooms, and no apartments could be found in the old building suitable for this purpose. That difficulty no longer exists. The measure has become practicable. There can be no harm in inquiring whether it is not also expedient.

In favor of the proposed measure, Dr. Barnard's main contention was that, "in the interests of society, the mental culture of women should not be inferior in character to that of men." Competent persons universally condemned the prevalent education of women in which the useful was subordinated to the ornamental, and what were called accomplishments took the place of solid acquisitions.

"The demand had been made, and its reasonableness had been generally conceded, that the same educational advantages should be offered to young women which young men enjoyed." So far there was agreement, but in the answers to the question, how the demand should be met, there was less unanimity.

One obvious method of reform would be to improve the female schools, of which there was a sufficient number; but the radical fault of the existing schools was that they furnished merely a superficial and ornamental education, and, since their instructors could not be expected to rise above their own level, the schools could not be improved except by reconstruction.

Another method of meeting the demand was to create colleges like Vassar College and Rutgers Female College, of the same form, giving the same instruction and conferring the same degrees as colleges for young men. The objection to this method was that such colleges could not be expected to give instruction of equal value with that which might be obtained in the longer established and well endowed institutions which had been provided for men; and if it were admitted that women had a right to a liberal education, it was illogical not to admit them to the best.

In England the reasonableness of his view had been tacitly, though only partially, admitted by the creation of Girton College in the vicinity of Cambridge, in which the studies of the women were the same, and were prosecuted under the same teachers, as in other Cambridge colleges. The results of this experiment had been so successful that funds had been raised for the endowment of a similar college for young women in the city of Oxford; and in our own country Harvard University had "instituted a regular course of college instruction for women on the same plan as Girton College."

This solution of the problem, while it conceded that women ought to enjoy equal educational advantages with men, likewise assumed that students of different sexes ought not to attend the same classes. In this country, however, this opinion was not by any means universally prevalent. As a matter of fact, more than half the colleges of the United States admitted young women on the same terms as young men, and allowed them to attend the same classes. The usage was more general at the West than at the East; but even at the East, it had been successfully adopted in the universities of Cornell and Syracuse in the State of New York, in the Boston University, Massachusetts, and in the Wesleyan University, Connecticut; and even Yale College admitted young women to its School of Fine Arts. Excluding the educational institutions of the Roman Catholic Church, there were 355 colleges in the country; and of these, 183 were open to students of both sexes.

In many of these colleges [said Dr. Barnard] the students are permanently resident, separate buildings being provided for the female students. The Sage College at the Cornell University, founded by the liberal friend of education whose name it bears, is a splendid edifice erected for this purpose. In others, as at Syracuse, the students of both sexes, with few exceptions, attend at the college only during the day, and out of class hours reside at home or in private families. This arrangement relieves the instructors of responsibility for general supervision, and leaves no room for the occurrence of troublesome questions of discipline.

As to the practicability of adopting this plan in our college, no question will be raised; but doubts may be entertained as to its expediency. It would be difficult, nevertheless, to suggest any reason which will bear very close examination, why it should not be adopted. The admission of young women into the classes would not in any manner interfere with or embarrass the processes of instruction as they are now conducted. No

modification of the arrangements of the class-rooms would be necessary. So many more units would simply be added to the number, and so many more names to the class roll. In every scholastic exercise the young women would be regarded as the young men are regarded — merely as students.

What objection could be urged against the measure? First, and chiefly, that it would be an innovation upon immemorial usage; but this objection represented a mere prejudice of conservatism, which "never fails to rise up against novelties, no matter how cogent the arguments by which they may be recommended."

A more plausible objection was raised upon the ground that the average female intellect is inferior to that of the other sex, and that the association of men and women in the same classes must therefore have a tendency to depress the standard of scholarship. To this Dr. Barnard replied that experience had proved the contrary, since the practical effect of the system where it had been adopted had invariably been rather to raise than to depress the general average of scholarship. At Cornell University, for example, where the system had been in operation for seven years, the requirements of admission had been twice raised and the term examinations had been made steadily more and more rigorous; yet the number of undergraduates who dropped out of the course had been diminished from 26 to 16 per cent per annum of the whole number of students; no young woman had been dropped from the rolls through failure at an examination; and, according to a statement recently printed, the last seven years "had witnessed a marked improvement in the quality of the whole institution."

Another objection to the plan was that the regular course of college study was too severe for the delicate constitutions of young women. That might be true, but

it was likewise true that the course of college study is too severe for some young men, and it was very doubtful whether the studies of a regular college course were more exacting or more exhausting than those which the "finishing" school for young women usually heaped upon its victims. It was "inconceivable that the exercise of the mind upon the solution of an algebraic problem or the interpretation of a passage in Homer could be more exhausting than a similar exercise through French irregular verbs, or even so much so as the confinement of hours daily in bending wearily over the drawing-table, or drumming on an ill-tuned piano." Of course, excessive study is injurious to young persons of either sex; but the assumption that the study required of a young woman by a regular college course would be excessive, was a mere assumption which experiment had nowhere verified.

In favor of the proposed plan, Dr. Barnard urged that "the presence of young women in colleges is distinctively conducive to good order. The complete isolation of young men from all society except their own tends to the formation of habits of rudeness and to disregard of all the ordinary proprieties of life." The presence of women in colleges counteracts this evil tendency, as Dr. Barnard's own observation and experience had proved. The elder Silliman, during the entire period of his career as a professor in Yale College, had admitted young women to his lecture courses; Dr. Barnard himself had invited women to attend his lectures in the University of Alabama, and in both cases the results had made it evident that the presence of young women exerted a salutary moral influence. If it were feared that, although the association of young women with young men might be beneficial to the ruder sex, it might be less advantageous or even prejudicial to the gentler sex, that the delicacy and re-

serve which are so great a charm in the female character would be worn off in the unceremonious intercourse of academic life, and that a girl who entered college with shrinking modesty, would be likely to come out a romping hoyden or a self-asserting dogmatist, the apprehension had not been justified by experience either in the high schools of the country or in the numerous colleges in which students of both sexes are admitted.

Another and final objection, which was very real though seldom mentioned, was the probability of sentimental entanglements. It was supposed that young people of both sexes, if associated in the same institution and permitted to meet frequently and familiarly, would be more occupied with each other than with their books. But here again an appeal to experience would show that the danger is exaggerated, and that "the comparative freedom of school intercourse tends far less to excite the imagination of youth than the more constrained and less frequent opportunities of converse afforded in general society." Be that, however, as it might, the argument would not apply to Columbia College, where there would be no opportunity of intimate association. The students would attend only during a limited number of hours which would be entirely occupied by the exercises of the day; there would be no common halls of assembly; the young women would pass directly from their tiring-rooms to the lecture-rooms; at the close of their recitations they would retire in the same way, and throughout the college course they would be resident in their own homes, and surrounded by every protecting safeguard that parental solicitude could provide.

The question which Dr. Barnard thus propounded to the Board seemed to him to be simply this: Whether it was really desirable that the educational advantages offered to young women should be equal to those which

are offered to young men. If it was, young women ought not to be excluded from the institutions where such advantages are to be had; if it was not, the whole proposal must be abandoned. If the measure should be approved, he did not expect it to be followed by an immediate influx of female students, because, for years to come, very few women would be prepared to avail themselves of the opportunity; but he expressed the conviction that, after a time, "a very considerable attendance might be anticipated, and thus the College would enter upon a new and important field of usefulness."

In conclusion he said:

> Whatever may be the fate of the present suggestion, the undersigned cannot permit himself to doubt that the time will yet come when the propriety and the wisdom of this measure will be fully recognized; and as he believes that Columbia College is destined in the coming centuries to become so comprehensive in the scope of her teaching as to be able to furnish to inquirers after truth the instruction they may desire in whatever branch of human knowledge, he believes also that she will become so catholic in her liberality as to open widely her doors to all inquirers, without distinction either of class or of sex.

In 1880, Dr. Barnard renewed his discussion of the subject in an elaborate account of Queen's College, London, the alumni of which are admitted to examination and take their degrees in the London University on equal terms with the students of King's College; of Newnham Hall, Cambridge, the students of which were allowed to attend the public lectures of university professors and to take the same honor examinations as students of other colleges; of Lady Margaret Hall and Somerville Hall, Oxford, whose students pass through the same course, though without any university privileges, as the male students; of Boston University in this country, "which admits young women as freely as Oberlin or Antioch or

Berea"; of the University of Michigan, which had yielded unwillingly to a popular demand, and which, since the admission of women, had been more prosperous than ever before; and finally, of the new experiment of the same sort which had been recently begun at Harvard.

In 1881, he again pressed upon the Trustees the importance of admitting women to the privileges of the College. From many quarters, he said, the anxious inquiry had been addressed to him, Will not Columbia College do something for the higher education of our girls? The interest in the question had become deep and extensive, and it was constantly growing. The logic of events had been operating slowly but with irresistible force. The objections to the admission of women to the colleges had one by one been abandoned, and it had been clearly seen that in order to make adequate provision for the education of women, it was not necessary that new institutions should be founded at an enormous cost, but only that the existing institutions should be wisely and judiciously used. The progress of public opinion had been exhibited in the tentative experiment of the so-called Harvard "Annex"; and it was a remarkable fact that, in England, Newnham Hall had been admitted by the Senatus Academicus of the University of Cambridge to every privilege for which it had applied. The substantial triumph of Newnham and Girton had made a sensible impression upon the public mind in this country as well as in England, and the leading American journals, without exception, had expressed their satisfaction at the event. In short, the drift of public sentiment was steadily towards the opening of all institutions of learning to female students, and Dr. Barnard strenuously urged that Columbia College should at once comply with what he deemed to be a just and reasonable popular demand. In concluding, he said:

The time seems to have fully come when Columbia College should feel herself urged by every motive of expediency or duty to do her part in carrying forward this noble and beneficent work. The public mind is prepared for it; a large number — it is believed a majority — of our most enlightened fellow-citizens eagerly demand it; the members of our Faculty without exception favor it; our circumstances are such as to make it easily practicable. If in any minds there are still objections to the system which elsewhere exists, under which young women are withdrawn from their homes to be gathered together in numbers in academic boarding-houses, such objections can have no application here, since the young women received as students at Columbia College will still reside, as the young men do now, under their parents' roof, and will continue to be surrounded by all the beneficial influences of domestic society. If there are any who except to the arrangement under which, as at University College, London, and at the Boston, Cornell, and Michigan universities in this country, young men and young women assemble to receive instruction in the same class-rooms and at the same hours, their scruples may be removed by adopting here the plan of the Harvard "Annex," and holding the exercises for the two classes of students separately. The Faculty of the College are ready for either plan, although the second would impose upon them a very unnecessary increase of labor. Indeed, they are more than ready, for there can be no doubt that they are prepared, and are quite disposed, if necessary, to organize a scheme for the instruction of women in all the subjects of the College course, independently altogether of the Board of Trustees; and that they would do so, could a committee of citizens be found here as at Cambridge, willing to attend to the necessary business arrangements, and to provide rooms for the exercises near the College, if the use of the College class-rooms should be denied them for the purpose. Such a scheme has been a subject of conversation among members of the Faculty on many occasions during the past year; and it may probably be carried into effect at no distant day, unless the occasion for it shall cease to exist in consequence of the admission of women as students to the College itself.

When this subject was first brought to the notice of the Trustees, in 1879, it failed to be taken into serious consideration; yet it is known that the proposition was not unfavorably regarded by some members of the Board, and it is not believed that any were unalterably opposed to it on principle. Whatever objections may have been entertained in regard to it are believed to have related to matters of detail, such as the construction of our buildings, and the capacity of our lecture-rooms, rather than to considerations of a more serious nature. It is believed, however, and it can be easily proved, that all such supposed difficulties are imaginary, and that the proposed measure can be carried into effect without the slightest inconvenience.

In the first mention of the subject, in the report of the year above named, the opinion was expressed that, even in case of an immediately favorable action by the Trustees, some years must elapse before any considerable number of young women would be prepared to take advantage of the opportunities thus opened to them. Such an opinion would not be justified by the state of things existing at the present time. The undersigned has reason to believe that within the past two years the number of young women who have turned their attention to classical studies has greatly increased; and that there are now not a few of suitable age in our city who are so well up in their Latin and Greek, that they could probably pass without difficulty the entrance examinations. It is believed, therefore, that the consequence of opening the College to the admission of women would be an early and very material increase in the number of our students, which would be attended with an augmentation of the revenue from tuition fees, amounting in the course of about four years to not less than ten, and probably more than fifteen, thousand dollars per annum.

The measure proposed is therefore recommended not only by the consideration that it is right in itself and that it will greatly increase the usefulness of the College, but also because it will be advantageous financially. And it has the further recommendation that, being in the direction of manifest destiny, to accept it promptly would be a graceful act; while to lag behind the spirit of the age in regard to it, would be only to be coerced after all into accepting it at last, ungracefully.

In conclusion on this subject, the undersigned can only repeat the conviction expressed in his former report, that the question here considered is in this institution only a question of time; and that, whatever may happen this year or the next, Columbia College will yet open her doors widely enough to receive all earnest and honest seekers after knowledge, without any distinction of class or sex.

In 1882, though Dr. Barnard had abandoned the hope of living to see women admitted on an equal footing with men to all the departments of Columbia College, he once more put on record his unalterable conviction that it ought to be done.

In former annual reports, the undersigned has expressed to the Trustees his views of the wisdom and the justice of extending the educational privileges of the College to young women as well as to young men. It is not his intention to reopen the argument at this time; but it is due to consistency to say that his convictions on this subject remain unchanged, or rather that they have been confirmed and strengthened by observation of the results of the experience of other institutions in our own country and abroad which have opened their doors impartially to students of both sexes, and of the rapid and extraordinary change of sentiment in regard to this question which has been going on in recent years among our fellow-citizens. This has been noticeable, not in New York only, but throughout the country. Those of the colleges of our country, and of our own section of the country, which have been for some years engaged in testing by experiment the feasibility of this plan of education, though some of them, like the University of Michigan, accepted it reluctantly and with serious misgivings, express themselves, from year to year, more and more content with the results — results which they have found to be not only reassuring but gratifying. Reports from England inform us that the plan is meeting the best expectations of its friends at Cambridge and in London. The fifteen universities of Italy are accessible to men and women equally, and the same thing is said to be true of the universities of Russia.

The Executive Committee of the University Convocation, a gathering annually held at Albany under the auspices of the Regents of the University of the State, have placed the question of the opening of the colleges to women among the topics to be discussed at the ensuing meeting of the Convocation in July next, and have extended to the undersigned an invitation to be present and to participate in the discussion. The Secretary of the Board of Regents, Dr. David Murray, himself an educator of large experience, and a recognized authority on all educational questions, in communicating the invitation, remarks that "this is a subject in which all the colleges of New York are deeply interested"; showing that it has been agitating opinions extensively among those who direct our system of superior education.

In the city of New York no one can have failed to remark the growth of interest in the subject during the past year. The conviction of the justice and expediency of offering equal educational advantages — and more than that, the same identical educational advantages — to the youth of both sexes, has been rapidly diffusing itself among all classes of our fellow-citizens, and has penetrated at length profoundly the most highly cultivated and refined circles of New York society. A conviction so widely extended and entertained by so many among the thoughtful and judicious who, in any community, are the recognized leaders of public opinion, cannot, whatever may be the subject to which it relates, but have a substantial foundation in reason. And such an opinion prevalent among persons so worthy of consideration for character and social position cannot fail to command respect, and when it relates to a matter of public policy cannot fail in the end to accomplish some practical results. Columbia College may not in our own day be opened to the admission of women; but that it will be so in that better coming time which awaits another generation, appears to the undersigned to be as certain as anything yet beneath the veil of the future can be.

Dr. Barnard's effort to have the privileges of Columbia College thrown freely open to women, unsuccessful though it seemed to be, was by no means fruitless. In accordance

with his recommendations, women were permitted, with the consent of the professors, to attend the lectures, but were not admitted to matriculation or examination. It was found, however, that even this privilege was contrary to the statutes, which forbade attendance on the College course to all but matriculated students. The Trustees were therefore under the necessity of taking some decisive action. They were not yet prepared to accept Dr. Barnard's views of "co-education," nor were they willing to refuse their countenance and assistance to the advocates of the higher education for women. They therefore resolved on June 8, 1883, that a course of collegiate study, equivalent to the course given to young men in Columbia College, should be offered to such women as might desire to avail themselves of it. This course was to be pursued outside the College, but under the direction of the Faculty. Though women were not to be admitted to any of the College classes, they were to be allowed to take the regular examinations, and when they should have successfully passed all examinations during a period of four years, they were to receive the Bachelor's Degree. During the next five years twenty-eight women were enrolled under these conditions; but the system, if it could be called a system, was a signal failure. It could hardly have been otherwise. The women were admitted to the same examinations as the men, while they had none of the privileges of instruction which the men enjoyed, and the examinations were naturally and necessarily prepared with reference to class instructions from which women were excluded. The professors did what they could to assist the women by announcing the general topics of examination and directing them to books of reference. Dr. Barnard also frequently intervened with advice and encouragement; but the arrangement was a mere makeshift

and had no success. After five years it was found that, although one woman was admitted to a special degree of L.H.B., not one had been able to take the regular degree of Bachelor of Arts.

In March, 1888, a memorial was presented to the Trustees, proposing the establishment of an institution in connection with the College and on the same general plan as the "Annex" at Harvard University. The memorial was carefully and favorably considered, and the request of the memorialists was granted, substantially on the following conditions: The students of the Annex were to pursue their collegiate studies in a building, near the College, to be provided by the friends of the movement at their own expense and to be used exclusively for purposes of instruction, not for the boarding or lodging of students. The property of the institution was to be held, its affairs were to be managed, and the funds to meet its entire expenses were to be provided, by an incorporated association, the trustees of which, as well as the name of the institution, its constitution and its regulations, were to be subject to the approval of the Trustees of Columbia. The women were to pursue the same academic course, and to enjoy the same advantages of tuition by the same professors and other instructors as the undergraduates of Columbia, under such arrangements as to prevent interference with the men's classes.[1] The examinations for entrance and all term examinations were to be conducted by persons appointed by the Trustees of Columbia, and

[1] At the present time (1895) the professors are not necessarily instructors in Columbia, but they must be approved by the President of Columbia. Under this arrangement, one woman has been appointed Dean and another woman has been appointed Professor. Barnard College, as the Annex is now called, has recently assumed the support of three professorships at Columbia College, the College Faculty rendering equivalent service in the classes of Barnard.

all degrees were to be conferred by Columbia. Finally, if the experiment should not be found to work satisfactorily, the Trustees reserved the right to terminate their connection with it on giving proper notice.

Through some strange misadventure this action of the Board of Trustees was not communicated to the memorialists for several months, but as soon as it was made known to them they took active measures to carry their plans into effect. A provisional act of incorporation was obtained from the University Board of Regents, and in October, 1889, the Annex, as it had been called, was opened under the better name of Barnard College, with a Freshman class of seven members.

Dr. Barnard did not live to see the opening of the College which bears his name in grateful memory of his efforts in behalf of the admission of women to the highest privileges of education. The establishment of the new college in close connection with Columbia was exceedingly gratifying to him, though it did not realize his wishes. He regarded it as essentially a compromise, satisfactory in so far as it was a movement in the right direction, but of questionable advantage so far as it might prove in the future to be an obstruction in the way of what he deemed to be the better plan of permitting young men and young women to pursue their academic studies, not only under the same instructors, but in the same classes.[1] To a certain degree even this object has been practically attained in the connection of Barnard College with Columbia. In certain classes of the Senior year, especially in philosophy and letters, the students of Columbia and Barnard study together ; and many of the post-graduate

[1] The success of Barnard College has fully realized the expectations of its founders, and it is believed that they now (1895) prefer the plan of its organization to that which Dr. Barnard would have chosen.

classes of Columbia in the same subjects — not, of course, the scientific schools — are open to women, subject in each case to the approval of the President of Columbia, the Faculty, and the particular professor whose classes a graduate of Barnard may desire to attend.

TABLE OF ATTENDANCE IN THE COLLEGIATE DEPARTMENT AND ASSOCIATED SCHOOLS OF COLUMBIA COLLEGE FROM 1865 TO 1888 INCLUSIVE.

	College.	Law.	Mines.	Pol. Science.	Post-grad.	Women.	Library Econ.	Total.	Medicine.	Grand Total.
1865 . . .	150									
1866 . . .	149									
1867 . . .	139									
1868 . . .	140	182	126					446[1]	319	765[1]
1869 . . .	147	204	93					444	309	753
1870 . . .	129	230	79					438	338	776
1871 . . .	123	243	92					458	327	785
1872 . . .	116	291	114					521	332	853
1873 . . .	123	371	136					630	359	989
1874 . . .	129	438	171					738	387	1125
1875 . . .	152	522	209					874	452	1326
1876 . . .	173	573	230					976	410	1386
1877 . . .	196	526	227					949	439	1388
1878 . . .	233	462	255					950	413	1363
1879 . . .	251	436	264					951	485	1436
1880 . . .	277	451	291					1019	513	1532
1881 . . .	286	456	244	15				1003	555	1558
1882 . . .	298	471	272	22	6			1054	547	1601
1883 . . .	290	400	376	30	12			970	543	1513
1884 . . .	265	365	285	42	21	6		989	505	1494
1885 . . .	261	367	265	51	23	7		935	490	1425
1886 . . .	247	344	236	73	24	13		891	502	1393
1887 . . .	237	409	264	74	32	20	20	996	606	1602
1888 . . .	233	481	228	62	43	28	30	1054	809	1863

[1] In these totals an allowance is made for students enrolled in more than one department.

CHAPTER XVII

Barnard's early education and its defects — Education a science and teaching an art — Who should teach the teachers? — A department of the theory and practice of education proposed — European examples — General defects of the present system — What a true education would be — An ideal school.

It was not of choice, but because of a necessity which came to him in consequence of a great misfortune, that Dr. Barnard had adopted the profession of a teacher. He had entered upon it with no knowledge of its principles and with no instruction in its practice, taking it for granted that the dry and profitless routine to which he had himself been subjected, was the natural and normal course of education. The work of the teacher in preparatory schools, as he had learned it, was to set formal tasks and to hear mechanical recitations in which the memory alone was exercised, while the faculties of observation and understanding were neglected and the judgment was ignored. Like many other teachers, he might have continued to perform his duties in the same dry and perfunctory way, if, in the instruction of the deaf and dumb, he had not learned the better method of appealing directly to the intelligence of his pupils. From the beginning of his professorship in Alabama, he followed that method with consistency and success. He did not deny the necessity of class drill, though he thought that its advantages were greatly overestimated, and he considered it at best to be a mere preparation of the mind to receive the freer and more spontaneous instructions

of the lecturer. At a later time he looked back upon his own early education with amazement and disgust. Though he had been a boy of quick intelligence and of unusual quickness of observation, he had been subjected to a slavish drill from which he learned only words that he did not understand. Of the world around him he was taught nothing, and while nearly fifteen years of his life were devoted to a course of study of which the learned languages were by far the greater part, he had never really mastered any language. He had been compelled to study rules of Latin grammar before he had any knowledge of Latin words and sentences. He had then been made to translate Latin prose and poetry into such English as he had picked up in reading and conversation, and to "parse" the words which he translated very much as he might have put together the pieces of a mechanical puzzle. It does not appear that he was ever taught to write a single sentence of Latin prose; and although, in one school which he attended, and in which the pupils were required to communicate with their instructors in the Latin language, "there grew up," as he afterwards said, "an intelligible conversational dialect which improved in elegance as time went on," it may be doubted whether the scholastic "dialect," when most "improved in elegance," was anything better than a barbarous *lingua franca*. In Greek the same system was pursued, with only this difference, that there was less of it. English he was never taught at all. His study of other modern languages was begun after he had left college, and at a time of life when it was impossible for him to learn to speak them with idiomatic propriety. The net result of these years of laborious but misdirected study was this, that Barnard does not appear in his whole life to have read one line of Latin or Greek for his own satisfaction;

that his ordinary English style was loose and diffuse; and that his use of modern languages was confined to the reading of scientific treatises and was hardly at all available for any other purpose. Now, it is beyond all question that Barnard had a natural aptitude for the acquisition of languages, and that, if he had been properly taught, or even let alone, he might have formed an excellent English style. It is evident, therefore, that the senseless system of miscalled education to which he had been subjected had operated almost entirely to his disadvantage in the study of language. Meanwhile, until he became a student at Yale, the study of science had been wholly neglected. It was only a few months before he went up for examination as a candidate for admission to the Freshman class that he mastered the difficulties of arithmetical fractions and proportion; and it was only through a chance meeting with a peripatetic lecturer on natural science, that he was led to engage in the study of the phenomena of nature for which his whole subsequent life showed that he must, even as a boy, have had extraordinary abilities. In the account of his education which he published a few years before his death, he expressed the doubt whether he had ever been educated at all; but in private he spoke much more strongly, and in view of the facts, it may be doubted whether his early training could properly be called an education, or whether it did not rather suppress the free development of his extraordinary natural talents.

Looking back to his own experience, Barnard saw that education must be regarded as a science and teaching as an art; and that unless the principles of the science are clearly apprehended, there can be no true art of teaching. Therefore, since it is the function of an institution of the higher learning both to provide competent teachers and

to set an example of the best methods of educational training, he concluded that a great institution like Columbia College ought to have a department of the history, theory, and practice of education. This proposal he laid before the Trustees of the College in 1881, and he pressed it with still greater urgency in 1882. He did not ask that the department should at first be organized on any broad basis ; he did not even ask for the establishment of a professorship ; but he urged the introduction of a course of lectures to be delivered by distinguished teachers upon the particular topics of a prearranged programme. In introducing this subject, Dr. Barnard said :

It appears to the undersigned that the time has come when Columbia College may very properly make an attempt to supply the serious defect in the educational system of our country which has here been indicated. A department embracing the history, theory, and practice of education, though it might not contribute largely to the course of undergraduate instruction, would bring the College more directly, and to more effective purpose, into contact with the outside world than almost any other. It could not fail to enlist the interest, and, with a judicious arrangement of hours, to command the attendance, of every teacher in this great city and its vicinity; and it would soon become so attractive as to draw many more from a distance.

In order to insure to a scheme like this the highest degree of success, it would be advisable, in the beginning, not to create a chair to be filled by a single individual, though that has been the plan adopted in the Scottish universities; but to engage a number of distinguished educators to give lectures upon particular topics according to a prearranged scheme, holding these lectures at night, and only once or twice a week during the academic year. The history of education alone would afford material for a large number of such lectures which would be full of interest and instruction. The importance of an acquaintance with this history on the part of every man who enters this profession with a desire to be useful in

it, is strongly insisted on by the Hon. Henry Barnard, editor of the *American Journal of Education*, and formerly United States Commissioner of Education at Washington, who maintains that there is no department of human existence in which preliminary historical knowledge is so next to indispensable as in this. He says: "By just as much as young teachers are ardently interested, by just as much as their minds are full of their occupation and fruitful in suggestions of principles and methods for prosecuting it, by just so much are they the more liable to reinvent modes and ideas which have been tried and given up before, and thus to waste precious months, and years even, in pursuing and detecting errors which they would have entirely escaped, had they learned the lessons left them by their predecessors." The history of education has been admirably set forth in the comprehensive works of Von Raumer and Schmidt in German, and in that of Gabriel Compayré in French; but with the exception of the collections of Henry Barnard, embracing translations from Von Raumer and others, entitled "German Teachers and Educators," originally published in the *Journal of Education*, we have nothing of a corresponding character in the English language.

After giving an outline of the lectures of Professor Meiklejohn of the University of St. Andrew and of Professor Laurie of the University of Edinburgh, Dr. Barnard continued:

The theory of education as given in these university courses embraces an inquiry into the psychology of the growing mind, a summary of the knowledge gathered by observation in regard to this, an attempt to estimate the mode, rate, and kind of growth by experiment; and an inquiry into the relation of various kinds of knowledge to the mind, and the influence of certain thoughts, emotions, and sets of circumstances upon the character. The growth of the power of the senses, the memory, the understanding, the reason, the will, the imagination, the social feelings, are next made subjects of examination. The relation of the religious, moral, and intellectual sides of

human nature to each other are discussed, and the best means of building up a sound understanding and the formation of a just habit of action are inquired into.

The portion of these didactic courses which relates to practice is devoted to an examination of all the processes at present going on in the schools of the country or the world, the relation of these processes to the growth of the mind, and their value considered as means to an end. These processes are necessarily in great degree dependent upon the subject taught. Thus in regard to languages, the lecturer considers what are the most effectual means of enabling the learner to master them, what are the mental habits to be created, and what the difficulties to be overcome, whether these be inherent in the language itself, or whether they arise out of the circumstances under which the instruction is given; and how these difficulties may be reduced to a minimum. As the object aimed at in teaching the modern languages is not the same which is proposed when the ancient are the subject of instruction, due account is taken of this difference, with the modification it may suggest of the methods employed. In regard to science, and especially the sciences of observation, the methods which experience — in this department of education the best guide — has shown to be most advantageous, are explained and illustrated.

The conditions under which a love of elegant letters may be most effectually awakened are also inquired into. The different special subjects usually taught in schools — such as grammar, geography, history, composition — are finally considered in detail, and the order in which their several parts may be most judiciously presented to the learner is pointed out. The adaptation of particular subjects or parts of subjects to particular ages is discussed; and the important question, how much should be done by the teacher and how much must be done by the pupil in order that he may profit by the exercise, is carefully considered. The relations of the various subjects of study to the process of mental development are investigated, that is to say, it is inquired what faculties each particular subject is best fitted to call into exercise, stimulate, and strengthen. And finally, the characteristics of the best books

on the several subjects are distinguished, and the value of text-books as helps to the educational process is discussed and weighed.

Out of a field so extensive and so fruitful as this, it might be practicable to select the topics of twenty or thirty lectures to be given at Columbia College on certain evenings, at first not more frequently than once a week, to a class formed of graduates and undergraduates, but mainly of teachers belonging to the city of New York. The value and usefulness of the course would mainly depend on securing a considerable attendance of these last. In order to be ascertained of this, it would be advisable to circulate a programme showing the subjects of the successive lectures of the course, with the names of the lecturers; and to issue tickets at a merely nominal rate entitling the holders to attend the entire course, with others admitting to single lectures. The course only to be commenced after at least one hundred names have been subscribed.

The successful accomplishment of the scheme here proposed would naturally open the way to the establishment in our College of a permanent chair of education, and we should thus enter upon a new field of usefulness not inferior in importance to any we have heretofore occupied. In doing this we should, for a third time, have taken a new departure, and a step in advance of all our contemporaries and competitors. We have created the first and only successful School of Mines upon the continent; and we have established the only school in which a young man can obtain such a training as may properly fit him for the duties of political life. If into a great national industry, which has heretofore been prosecuted by ignorant and wasteful methods, we have introduced economy and intelligence, and if in a public service which has been worse than ignorant and wasteful, we have, by the instrumentalities we have created, laid the foundation for a coming substantial reform, we have in neither of these ways done more to advance the welfare of our own people, or to benefit the world, than we shall have done when we shall have made it possible that those to whose hands is to be entrusted the education of each rising generation, shall be themselves properly educated to their own responsible profession.

The idea of making the philosophy of education a part of our university teaching, and of properly educating men to the business of education, is not one of recent occurrence with the undersigned. It was among the objects particularly pointed out by him in the address in which, seventeen years ago, he inaugurated his connection with the College, as objects which in the future it would become the duty as it would be the privilege of Columbia College to accomplish. The time seems to be at length ripe for the discharge of that duty. Should the opportunity not be improved by us it will doubtless soon be seized by some competitor, and the honorable precedence which is now within our reach will be snatched from us.

We should make a great mistake if we should regard the inculcation, from a university chair, of the philosophical principles which ought to guide in the framing of educational systems, as a matter of merely speculative interest. It involves, on the other hand, consequences of the highest practical importance. The actual system universally prevalent in our country at the present time is marked by faults, not to say absurdities, of serious gravity, which a discussion of the true principles of educational philosophy could not fail to detect, and which need only to be exposed to be corrected. Unfortunately the most pernicious of these errors is one of which the injurious results are experienced by that portion of the young who, being destined from childhood to enjoy the benefits of what is called a liberal education, are undergoing what is called a preparation for college. For these there is laid down a stereotyped course of study, consisting mainly in a very thorough drill in the elements of the Latin and Greek grammars, and in the perusal of large portions of works of classical antiquity of high literary character. The process commences with most at the early age of eight or ten, and with many, as was the case with the undersigned, as early as six. It is hardly necessary to say that, at this period of mental and physical immaturity, the abstractions of grammar are entirely above the comprehension of the infantile intellect. The child who is told that "a substantive or noun is the name of anything that exists or of which we have any notion," or that "prepositions serve to connect words and to show the

relation between them," would vainly strive to gather a distinct concept from these bewildering propositions; and in point of fact he does not strive to do so. He merely, at the cost of severe and irksome effort, lays away these verbal jingles in his memory, along with cords of equally useless rubbish forced upon him in cruel disregard of his helplessness, or of the unfitness of such intellectual food for his feeble powers of digestion. The theory is, that the nice logical distinctions which are embodied in grammatical definitions, and the complicated relations of words and clauses which find expression in the intricacies of syntactical rule, constitute the material for a salutary and strengthening exercise of the reflective faculties, comparison, analysis, judgment, and the rest. The fact is that they do not exercise those faculties at all, since in failing to reach the understanding they fail of the first essential to such a result. Nor is the case much better when we pass from language considered only as an instrument, to the literature of which language is the form. The song of Virgil and the eloquence of Cicero are almost as far above the capacity of the juvenile reader, as the logical niceties of grammar are beyond his mental grasp. The consequence is that some three or four years of the most impressible, the most interesting, and the most valuable period in the life of a boy whose lot, in an educational point of view, is commonly supposed to be especially enviable, is filled up with an unbroken and dreary monotony of meaningless sounds, which leaves behind it no impression save that which may be produced upon his jaded memory.

Now, if we consider the case of this boy in the light thrown upon it by the study of psychology, we shall be presently aware that we have begun his education at the wrong end. It is at once illogical and unnatural to attempt to stimulate into activity the reflective faculties of his intellect before he is yet in possession of any considerable stock of knowledge on which to employ them. The comparison of qualities, the study of relations, the combination of different ideas, and the deducting of conclusions are processes which require as their indispensable antecedent condition a considerable acquaintance with the objects of thought themselves on which such processes must

necessarily be founded. Moreover, if we will observe the order in which the intellectual faculties spontaneously unfold themselves when their natural accomplishment is left undisturbed by influences from without, we shall discover that those are earliest awake whose function is to gather the knowledge of outward things. The powers of observation, or the perceptive faculties as they are called, are in the child in the highest state of activity from the earliest period of conscious existence. The restless curiosity of children is proverbial. Everything that is new is interesting to them, and they are never satisfied till they understand it. Since also, at their time of life, most things which they encounter are new, there is no end of the inquiries with which they constantly assail those who are older, and whom they presume to know more than themselves. The conclusion, therefore, which theory and observed facts equally justify and force upon us is that the educational process should commence with the culture of the perceptive powers, and that the earliest years of the child's life should be devoted to the business of storing him, or permitting him to store himself, with facts of useful knowledge. The studies assigned to him, if studies in the ordinary sense should be assigned to him at all, should be such as to minister to his insatiable desire for knowledge; that is, to keep alive and not to repress those eager faculties which are constantly reaching out to seize upon and assimilate all that is novel in the outward and visible world. A judicious course of culture of such a character pursued at this early period of life, whether with or without the aid of books, will impart to the subject of it, not only an immense fund of valuable and accurate knowledge which otherwise would be acquired later with labor infinitely greater, or perhaps not acquired at all, but also a habit and a power of exact observation which no amount of labor later in life would be adequate to secure, but which to their possessor are possessions of priceless value.

These acquisitions, the actual course of mental training usually pursued with boys in our preparatory schools does nothing whatever to cultivate. On the other hand, it tends to prevent their attainment. By immuring an unhappy lad within the four blank walls of a school-room, and constraining him to

fasten his thoughts upon a series of abstractions to which the power of his intelligence is unequal, we subject his perspective faculties to a long-continued and unnatural inaction, by which, if they are not completely paralyzed, they are certainly dwarfed, and prevented forever from attaining even that degree of development which nature alone, unassisted by educational helps, would have given them. The same lad in the out-door air, with his attention intelligently directed to the thousand imperfectly understood objects of interest surrounding him on every side, would rapidly gather an immense store of valuable facts of knowledge which would be serviceable to him all his life; and, better than that, would acquire those powers of quick discernment, accurate judgment, and prompt decision, which form the most important elements of the intellectual character.

But if the system commonly pursued in the mental training of our boys, during the period of their preparation for entrance upon the college course, were not condemned for its violation of every sound principle of educational philosophy, it could not escape condemnation when we come to consider its results. Young lads are usually kept in the preparatory schools for at least three years — many are there more than twice as long. They will by that time be found to have committed pretty thoroughly to memory the definitions and rules of their Latin and Greek grammars, without very clearly understanding the words in which they are expressed, and to have pretty well mastered the various inflections, regular and irregular, of nouns, adjectives, and verbs; and they will also have succeeded in reading, by dint of incessant resort to lexicons, a few hundred pages of some selected Latin and Greek authors. But none of them will have any proper knowledge of the Latin and Greek *languages*, or will be able to read with facility Latin or Greek books taken up at random, even the very books and the parts of the books which they have read before. Yet throughout all their school years, their time, their attention, and their almost intermittent labor are given to the study of those languages only. It is true that in the examinations for admission to college, some slight knowledge of a few other subjects is required, but it is universally known that the substantial

requisitions are Latin and Greek; and that when these are satisfactory, other matters are easily arranged. Now it is perfectly certain that no person of ordinary capacity and of tolerably mature intellect could devote his exclusive attention for four or five years to the study of any language whatever, without in the end being able to read it, if not to speak it, fluently. The fact that this never happens with a juvenile school-boy even after seven or eight years of the most careful tuition in the best preparatory schools, is sufficient evidence that there is a grave fault somewhere; and the fault is very clearly, as has just been shown, in the fact that the subject is presented prematurely, and therefore ineffectually, to a mind which demands an aliment of a very different nature.

But the evil does not end with the imperfect results of this species of preparatory study as tested by the amount of knowledge which it secures. The habits of study acquired in the school in which the memory is mainly depended on at the expense of the understanding, are carried into college, and operate throughout the educational course as a drag upon substantial progress. The consequence is, that it continues to be generally no less true of our graduates than it is of boys leaving school, that they are quite incapable of taking up and reading fluently books which they have not read before, in either of the learned languages, nor in many cases even books which have formed the subjects of their daily lessons in their latest college years. It is somewhat surprising that the singular inadequacy of the results obtained in the large majority of cases, after so great an expenditure of time and wearying labor, has not long since attracted attention and challenged inquiry into its cause. Its cause is unquestionably to be found in the fact that the study of the dead languages is usually forced upon lads at an age when their mental development is not sufficiently advanced to enable them to pursue it intelligently; and more than that, that it is made to crowd out other studies which the mind, in its immature state, finds congenial, and even requires, for the promotion of its healthful growth. No lad of less than fourteen or fifteen years of age is capable of taking up with advantage the study of a language so artificial in its structure as the Latin or the Greek; still less when the method of presentation,

as is the case in all our schools, inverts the natural order, and substitutes synthesis for analysis. And even an age so advanced as fourteen is too early, unless the previous years have been filled up with a judicious culture, in which the boy has been required to learn nothing which he could not understand, and has been thus led into forming habits of depending on his understanding and not on his memory alone for what he acquires. After an adequate period of such earlier culture, there is no sort of doubt that the average boy will be able to acquire, in two years at the outside, a far more satisfactory acquaintance with Latin and Greek than is at present the outcome of five or six, commencing from a point as many years earlier.

The subjects which are best adapted to form the material of this previous culture are those which concern the objects and phenomena of the natural world, beginning with plants, animals, and the materials of which the earth is composed — that is to say, with the sciences of botany, geology, and mineralogy. These, from the endless variety of beautiful and curious objects which they present, afford an inexhaustible source of gratification and surprise. They arouse curiosity and keep it constantly awake; they satisfy the eager desire to know; they stimulate the perceptive powers into constant activity, and sharpen the power of quick and accurate observation. As time goes on, they afford to the reflective faculties such gentle exercise as is suitable to their nascent condition; as when, for instance, distinctions of species are recognized by the comparison of individual objects as to their resemblances or differences; or when, from the study of the qualities of objects, the uses may be discovered to which they are applicable. That these things will interest children of very tender years has been tested abundantly by experiment, and is probably with most persons a certainty founded on their personal recollection. The fact that they do so interest them is nature's testimony to the truth that they constitute the intellectual aliment which the infant mind requires for its sustenance and healthy growth.

To the subjects here specified, which may be called the sciences of classification, may also very fitly be added those which depend on observation and experiment, such as chem-

istry and the various branches of physics, excluding, however, under this latter head all that transcends the power of direct observation. The first of these classes of sciences deals with visible objects in respect to form, the second to facts and phenomena in reference to law. Experimental illustration of the operation of the laws of nature affords the most fascinating description of entertainment which can be presented to the juvenile mind. And in addition to the world of novel truths, often startling in their interest, which it offers to the understanding, it affords material admirably suited to the healthful exercise of the reasoning powers, at the moment when they are beginning to awaken into life. Moreover, the multiplied examples which these sciences present of conclusions drawn from premises systematically arranged, accustom the mind to habits of correct inference from facts of observation, such as characterize those whom we call practical men, or men of sound judgment in the affairs of life.

It would also be highly advantageous if a child at this early period could acquire, by natural means, a familiar knowledge of some one or more of the modern languages of Europe. Not by the method of the schools — not by beginning with a weary drill on the abstractions of grammar, followed by a series of laborious text-book readings with the aid of a lexicon; but by oral lessons in actual speech, in which, from the beginning, the pupil learns to say something significant and to understand something said to him; in which, in short, he acquires a foreign tongue by the same inartificial means by which he acquired his own. This kind of linguistic exercise addresses the powers of observation no less than the natural sciences. The child chops no logic about his words, but picks up only what he hears, and he easily becomes interested in the acquisition on account of the large addition which it makes to his power of expression. This study, so pursued, is not only to be recommended for its uses as an instrument of early culture, but because the acquisition to which it leads is of priceless value, and because its attainment in later life is always more difficult and never so nearly perfect. In childhood the organs of speech are flexible and adapt themselves with facility to the peculiarities of pronunciation of foreign tongues. It is

quite possible, therefore, that an English child may grow up to speak French and German like a native, but this is never true of one whose acquaintance with those languages commences in adult life.

A boy who has been subjected from the age of ten or earlier up to the age of fifteen to a course of training like that here indicated, will, at the end of that time, have acquired an immense stock of ideas which, under our present system, he either never acquires at all, or acquires only as a part of that instruction which colleges are now compelled to give, and to give at the expense of something of a superior order for which they might otherwise have room. But this is not the principal advantage. The principal advantage is that he will have reached this point with a mind so harmoniously developed in all its powers, that it is prepared to take hold successfully of those studies which at present encumber so unprofitably the earlier years, and to master in a comparatively brief time the difficulties of the Latin and Greek. Two years after this period spent on these languages would bring the youth to the age of seventeen, more thoroughly versed in them than is the case with one out of a dozen at present; besides which his superior command over his faculties, a consequence of the salutary discipline to which they have been subjected, would give him an additional advantage of inappreciable importance.

It is to be hoped that, with the prevalence of better views of the philosophy of education, this great and long standing abuse may be corrected. It is to be hoped and expected that its reform may be one of the earliest consequences of the inauguration in our country of a systematic course of teaching, of which the science of education may itself be the object. In the mean time, it is somewhat surprising that as yet there has arisen no individual reformer with sagacity enough to see the evil, and with resolution enough to set himself up in defiance of the pernicious traditions of the centuries. Could such a one arise, and should he exhibit for a single year, in practical operation, a system of mental culture adapted to the period of childhood, and founded on truly philosophical principles, the results would be probably surprising, but could not fail to excite admiration and arouse a public opinion which would

speedily force the adoption of methods similarly rational in all the schools.

The success of such a system would depend not merely upon the subjects which should form the substance of its teaching, or the order in which these should be taken up, but still more possibly upon the manner in which they should be presented.

The "ideal school," as Dr. Barnard proceeded to describe it, was as nearly as possible all that the schools of his own childhood and early youth had not been.

Let us endeavor to draw an ideal picture of such a model school and of its plan of daily operation. Its site we will suppose to be chosen in the country, near to, but not within the limits of, some pleasant village, in a region diversified with hill and dale, mountain, rock, stream, forest, and cultivated land. The building should command an extensive prospect, in which may be distinguished the windings of the streams, the lines of the thoroughfares, the divisions of the lands, the farm-dwellings dotted here and there through the landscape, and the clustered houses of the village in the distance. These features are not suggested as desirable merely because they may add to the attractiveness of the place, though that, of course, will be their natural effect; but their presence is of some importance because they constitute useful auxiliaries in the educational plan. The boys on entering the school will require no outfit except plenty of good rough clothing and stout shoes, suitable for outdoor exercise and work. It goes without saying that they are to be supplied with abundance of heathful food, and that satisfactory provision is to be made for their physical comfort in every respect. The school-room, which will become rather a hall for conversation, or a resort where the boys may occupy themselves according to their own pleasure, than a place for teaching in the ordinary sense, will be spacious and airy. Every boy will have his place in it, and will be furnished with a desk of ample dimensions and with abundant materials for drawing, as well as with a capacious cabinet, for the arrangement and preservation of the speci-

mens in natural history or other interesting objects which he may collect. The boys should be divided into sections of not more than twelve each, and every section should have its instructor permanently attached to it, who will need to be a pretty thorough proficient in every branch of natural science. There should be a large workshop for working chiefly in wood, with competent mechanics in charge, and each boy should have his bench here, with a simple set of the necessary tools. There should also be a laboratory for physics, and one for chemistry, with the same provisions. The institution should be amply supplied with books, but none should be put into the hands of the boys except at their own request, and upon good evidence that they desire to employ them as helps to learning.

The boys who enter this school are presumed to be able already to read and write. The purpose of the school itself is to acquaint them intimately with the various objects which make up the world in which they live. Let us suppose the first subject which occupies attention to be the vegetable kingdom. Of this the most conspicuous members and the most easily studied are the trees, and it will therefore be best to begin with them; and here, as elsewhere always, the methods of study will be entirely practical. No time will be spent in talking about trees — that is to say, describing them — or in reading about trees, or in looking at pictures of trees. The boys will go out together into the fields and woods to find the trees, and to study them where they stand. A large part of every fair day will accordingly be spent in the open air. The boys will go out with their teacher, each being provided with pencils and tablets, and with a tin case suspended from the neck, such as is used by botanists for collecting plants. There should be a hatchet or two in the party, and a workman with an axe should be in attendance.

When the party is once afield, the first question asked by the teacher should be: "Is there any boy here present who knows any particular tree when he sees it?" and if so, he should be allowed to look for it and to point it out. Most boys know the fruit trees, and if there are any orchards in the neighborhood, some one will presently discover an apple, a peach, a plum, or a pear. He should then be required to state

how he distinguishes it, whether by its size, its general form, its leaf, its blossom, — if in the season of bloom, — its peculiarities of ramification, or by all these things together. Of course if the fruit is present, that is conclusive; but the other characteristics ought not, therefore, to be neglected. If there are any in the party who have not remarked these particulars before, their attention will be thus drawn to them, and the boy becomes thus the instructor of his fellow-pupils. Each member of the party will then be called on to make with his tablets the best sketch he can of the general form and appearance of the tree. The drawings will probably be rude and inartistic, but they should not be condemned on that account. Improvement will come with time, and the ambition to draw well, which will soon be alive, will lead individuals to ask for instruction in the principles and practice of the art. But the immediate advantage of the exercise is that it fastens the attention of the pupil successively upon the details of the object, and fixes the picture of it in his mind with an exactness it would not otherwise acquire. Specimens will then be taken of the leaves of the tree, its bark, its flowers, or fruit, if in season, and its wood. These may be examined on the spot, but they must be preserved for future study at home, and in order to form parts of a permanent collection to be kept by each boy. The most interesting of these specimens will of course be the flowers, which, though, as to their general appearance, they are likely to be known to most boys, yet as to the peculiarities of their structure, will never probably have been the subject of particular observation. It will be the business of the teacher to explain this structure, pointing out the distinctive organs and describing their functions in the fecundation of the plant, but he will avoid all generalizations or attempts to classify, leaving such things to the time when the multiplication of examples shall lead the pupil himself to perceive the analogies which indicate unity of plan.

The study of one tree having been completed, the party will proceed to another, taking always by choice first any one which may be identified by a member of the class. The fruit trees, shade trees, and ornamental trees, being generally familiar, will thus one by one come under examination; after which,

in proceeding to the forest, it may become necessary for the teacher to name the subject. These tree studies will occupy many days. A single excursion of three or four hours may suffice for a day; and, in the beginning, a single subject may afford ample material to fill up the time of an excursion.

After the return to the school, the first attention should be paid to the specimens gathered. The barks should be laid away in trays on the shelves of the cabinets; the leaves and flowers should be pressed between folds of bibulous paper, and after being sufficiently dried, should be secured in portfolios for future examination and comparison. Specimens of the woods should also be prepared by the boys in the workshops, with the assistance, if necessary, of the carpenters; and for this purpose, as the wood in its green state is not easily wrought, a store of well-seasoned logs of each of the kinds of trees studied should be kept on hand. The boys should be shown the green and dried specimens side by side, that they may be familiarized with the effects of seasoning, and the specimens prepared for their cabinets should show the grain as it appears in sections through the heart, in the direction of the rings, or cut across. The workshop should contain, likewise, many specimens of sections taken from the trunks of trees, showing the rings of annual growth entire, and the boys may be practised in determining the age of the tree by counting these rings.

The school-room exercises will be all of an equally practical kind. The boys may be called on in turn to draw upon the blackboard outlines of trees, leaves, flowers, or fruits for identification by the rest; or the teacher may present from his own store, specimens of wood, bark, leaves, or flowers for a similar purpose. As the taste for drawing will be sure to grow with exercise, individuals should be encouraged to prepare at their desks more elaborate sketches; and in this their inexperience may be aided by suggestions from the teacher, or from a practised drawing-master, of which they will gladly avail themselves.

It is intended in these hints only to indicate the kind of exercises which will fill up the indoor hours, and not to construct an exhaustive scheme. Moreover, confinement within

doors, except in inclement weather, should not be so protracted as to be wearisome. The school proper may be relegated mainly to the evening hours, and during the day the boys should have ample time to devote to athletic sports in the open air.

The description of the study of the trees above given is intended only as an example of the method. After this class of objects has been exhausted, the same method will of course be extended to the shrubs, the vines, the great variety of annual plants, the mosses, and the fungi. It will also be applied to the animal kingdom, beginning with the larger domestic quadrupeds, and extending to wild animals, birds, reptiles, insects, and the lower forms of life, including the infusoria, so far as specimens are accessible. And it will further be applied to the study of inorganic nature, excursions being planned for that purpose into regions abounding in minerals and fossils, where the boys may use their hammers and stone chisels, and gather great store of interesting specimens; or to ravines, river bluffs, or artificial deep cuts, where they can observe the outcrop of the strata, and mark their characteristic differences. It will be applied, also, to the study of the earth's surface, with its physical features and its artificial divisions, to the extent to which the observation of the pupils in their various excursions has reached; thus forming an intelligent introduction to the study of geography. Here will be found the advantage of occupying a position commanding an extended view. Map-drawing will be commenced with rough plots drawn by sight of the grounds belonging to the school itself, then of the adjacent fields, with the lines of fences, highways, watercourses, hill ridges, and forest borders, so far as they can be seen. These plots, which will probably be disproportioned, especially in the more distant parts, may afterwards be corrected by visiting the doubtful localities for the purpose; and they may possibly be reduced to something like exactitude, by regular surveys made with compass and chain, an operation which may be prosecuted at intervals through a period of some weeks or months.

In the meantime, as the knowledge of the pupils increases, they will become aware of the existence of objects analogous to

those which they have studied, but which are beyond the reach of their own observation; and they will desire to learn something about such, especially if there is anything abnormal or otherwise remarkable about them. Thus, when trees are the subject of study, they will hear with curious interest whatever is told them of the banyan, the sequoia, the olive, or the palm. The teacher's instructions on the subject may be pleasingly illustrated by pictures and lantern views. The result will be the growth of such a craving after larger sources of information as books only can satisfy; and books thus yielded to the demand of the learner, instead of being thrust upon him against his will, will be held by their possessor in an esteem of which the ordinary school-boy of our time, plodding and chiding the weary hours over his Greek grammar from day to day and from week to week, is in general quite incapable of forming a conception.

In conveying a knowledge of the elements of experimental science, though some modification of method would be necessary, the principle would remain the same. The work would be chiefly indoors, but the pupil would be required to experiment for himself. He would need to be told what to look for and what to expect, and might require some hints as to the mode of proceeding; but after his first success, he would get on with very little assistance. The problem of the centre of gravity, for example, or the principles governing the stability of structures, the various cases of equilibrium, and the phenomena of elasticity, would require but very simple apparatus to enable the pupil to investigate them to his entire contentment. And so of other things. Here the demand for books would soon be urgent. There is no department of human inquiry in which the youthful experimenter becomes more promptly and completely wrapped up than that which relates to the operation of the forces of nature. There is none in which he finds books more fascinating, or in which he feels a more eager ambition to add some discovery of his own to what he finds in books.

Thus the system of training of juvenile minds here described in outline, though it begins by discarding the use of printed aids of every kind, is sure to end in producing the most deeply

interested and earnest students of books. It constitutes a regular education to the love of books, while that which is at present in vogue too frequently results in creating an utter detestation of the same objects. When we have preparatory schools conducted upon principles so sensible as these — and it is to be hoped the time is not very far distant when we shall have them — we shall have a class of young men entering college, who are not only better prepared to profit by the severer course of study before them than those we have now, but also without doubt better versed in those very languages which at present occupy so exclusively all the earlier years; so that, with their greater activity of intellect and readiness of apprehension, they are likely to be able in the end, as so few of our graduates are at present, really to read the Latin and Greek fluently.

In the foregoing sketch of an ideal school, one point is omitted which ought not to pass without notice: it is the place of the modern languages in the plan, and the manner of teaching them. Their place is everywhere, and the manner of teaching wholly colloquial. The teacher will begin by giving names, in the foreign tongue which may be chosen for the time, to all the visible objects around, and requiring the pupils to give them back to him. This should be done not in the manner of a scholastic exercise, but in the course of ordinary conversation, as, for example, while the class are out on their daily excursions in search of knowledge. He will follow this up by asking simple questions or making simple statements about the objects, both in English and in the foreign tongue, which the pupils will repeat after him. He will return frequently to the same questions, till they are understood without the necessity of using the English equivalent. He will beware of pressing this exercise too fast. He will make it rather a matter of amusement, and will content himself if in the course of some weeks he is successful in fixing in the memory only a few of such questions with their responses. But progress in the natural process of learning languages is like the growth of a snow-ball rolled along the ground in winter. It increases at first slowly, but after a little time it takes up large additions to its bulk at every turn.

Some simple sentences of necessarily frequent use will soon become familiar, after which they should be used invariably, the corresponding forms in English being discarded. The number of these will rapidly grow, and the substitution of the foreign language for the vernacular altogether for ordinary conversation between pupil and teacher and between the pupils themselves will be only a question of time. The entire feasibility of this plan is made evident by the success of a much more difficult experiment of which the undersigned has been the witness, in a school in which all communication between pupil and teacher was proscribed, except that which was made in Latin. There was certainly for a time a good deal of study over forms of speech, and occasionally a good deal of use of lexicons before speaking; and, in addition to this, the Latin was not always the best; but there grew up, nevertheless, a very intelligible conversational dialect, which improved in elegance as time went on. In our schools as at present conducted, this mode of teaching the modern languages is impracticable, because so little opportunity is afforded in them for conversational intercourse. With modern and with ancient languages the plan is the same; and consists, first, of solitary study on the part of the student, and, secondly, of grammatical drill and text-book recitation in presence of the instructor. It is capable of improvement only by revolutionizing the whole system, and the system will not be revolutionized until educational methods shall cease to be tolerated which cannot be shown to be in harmony with the principles of a sound philosophy.

Dr. Barnard was one of those strenuous men whose professional engagements are only the nucleus, so to speak, of far larger activities. Before his election to the Presidency of Columbia College he had not only been extensively engaged in mathematical studies and original scientific research, but he had made substantial contributions to the literature of the time. As early as 1838, he contributed to Silliman's *Journal of Science* an ingenious and interesting paper on the Aurora Borealis, which was

followed by other contributions to the same journal; in 1842, on An Improvement in Photography; in 1853, on The Theory of the Hot Air Engine, and on a proposed Modification of Ericsson's Engine; in 1854, a series of papers on The Elastic Force of Heated Air; also articles on The Comparative Expenditure of Heat and Different Forms of the Air Engine, and on The Mechanical Theory of Heat; in 1856, An Examination of the Theory which Ascribes the Zodiacal Light to a Ring Surrounding the Earth; in 1860, on The Eclipse Expedition to Cape Chudleigh, Labrador; in 1863, on The Hydraulics of the Mississippi, and on The Explosive Force of Gunpowder.

During the same period he contributed the following valuable papers to the proceedings of the American Association for the Advancement of Science: in 1858, on The Pendulum, with a Description of an Electric Clock, with Pendulum perfectly Free; in 1859, on The Means of Preserving Electric Contacts from Vitiation by the Sparks, also an extended Report on The History, Methods and Results of the American Coast Survey; in 1862, on The Mathematical Principles of the Undulatory Theory of Light.

His publications on educational and other subjects, so far as can now be discovered, included the following: in 1828, an Elementary Arithmetic; in 1831, a Revision of Bridge's "Conic Sections"; in 1832–1837, numerous papers on Deaf-Mute Instruction; in 1841, an oration on The Claims of Masonry, which attracted much attention in Alabama and secured for him the recognition and support of influential friends; in 1849, a Defence of the "Sons of Temperance," which had a like effect; in 1851, an Oration in defence of the Union, of which a condensed report has been given in this volume; in 1854, a Report on Collegiate Education and an Essay on Art Culture;

in 1855, Letters on College Government and an Essay on Improvements Practicable in American Colleges; in 1858, University Education, Relation of University Education to Common Schools, and a Letter to the Board of Trustees of the University of Mississippi; in 1861, a paper on Histological Research at Home and Abroad; in 1863, a Letter to the President of the United States by a Refugee.

During the period of his Presidency of Columbia College, his Annual Reports to the Board of Trustees contained nearly every year a discourse on some topic of far-reaching educational interest, and in addition to this, his literary labors were enormous, consisting not only of contributions to the periodicals of the time, but also of important monographs and even of an immense work of a cyclopædic character. The list, so far as can now be discovered, is as follows: in 1868, an Address before the American Association for the Advancement of Science; in 1869, a similar Address on the Recent Progress of Science; in 1871, contributions to Mr. David Dudley Field's Outline of a Code of National Law on "Money, Weights and Measures, Longitude and Time, and Sea-Signals"; in 1872, a pamphlet on Modern Industrial Progress; in 1873, a bulletin of the American Metrological Society; in 1874, a pamphlet on International Coinage; in 1876, two articles in *Harper's Monthly* on The First Century of the Republic; in 1877, a brochure on a New Electoral System; in 1879, a paper on The Possibility of an Invariable Standard of Value, an Address at the Commencement of the University of the State of New York, Metrological Notes, contributed to the American Association for the Advancement of Science, and a paper on Monometallism, Bimetallism, and International Coinage; in 1880, two papers on Academic Degrees; in 1882, a paper on The World's Stock of Precious Metals, and

a pamphlet entitled "Should American Colleges be Open to Women as well as to Men"; in 1884, a monograph on the Metrology of the Great Pyramid in which he exploded many of the theories of Piazzi Smyth on that subject; in 1885, a paper on Reform Needed in the Manner of Conducting Presidential Elections; in 1886, a Letter to the Secretary of the Navy; in 1887, Warfare against Society; and last of all a posthumous article published in the April number of *The Forum*, 1890, on The Degradation of our Politics.

In 1872, Dr. Barnard undertook his *Magnum Opus* at the request of Mr. A. J. Johnson, a publisher of New York. It was nothing less than a new cyclopedia on a plan originally suggested by Horace Greeley. The editorship of this work had been first entrusted to Dr. Joseph Thomas of Philadelphia, but after some progress had been made, Dr. Thomas retired, and the publisher requested President Barnard to take his place. After some hesitation, he accepted the proposal, but only on condition that the work should be again taken up from the beginning, and that the plates already prepared, and amounting to more than eleven hundred in number, should be destroyed. Under Dr. Barnard's editorship, the first volume appeared in June, 1874, and the fourth and last in April, 1887. The four volumes included seven thousand pages imperial octavo, closely printed, and the labor which fell upon the editor was heavy indeed. Though the various departments were committed to associate editors, and every title of importance was treated by some writer of known authority, the supervision of the whole work still remained to the editor-in-chief. The correspondence with writers and sub-editors was enormous; he himself contributed many important articles to every volume; and he was constantly engaged in the

collation and condensation of facts which had been collected by his subordinates; but although the four years from 1873 to 1877 were years of exhausting toil, he had the great satisfaction to know that his work was appreciated, not less than fifty thousand copies of the cyclopedia having been sold.

Meanwhile, his attention was never for a moment withdrawn from the institution of which he was the head and which was constantly gaining in reputation by the acknowledged distinction of its President. The honors which had been bestowed upon him were numerous. Earlier in his career he had received the degree of Ph.D.; he was admitted to the degree of S.T.D. by the University of Mississippi, to that of LL.D. by his Alma Mater and also by Jefferson College, Mississippi; to that of L.H.D. by the University Regents of the State of New York; to that of D.C.L. by King's College, Canada; and the last-mentioned degree was offered to him and would have been conferred upon him by the University of Oxford, England, if he had not been hindered from arriving in time to receive it. He was a member of the Connecticut Academy, New Haven, of the American Philosophical Society of Philadelphia, of the Lyceum of Natural History, New York, and of the American Geographical Society. He succeeded Professor Agassiz as corresponding secretary of the National Academy of Sciences; he was an associate member of the American Academy of Arts and Sciences; he was an honorary member of the Sociedade Auxiliadora da Industria Nacional of Brazil; he was a corresponding member of the Royal Society of Liège, Belgium; he was President at different times of the American Association for the Advancement of Science, of the Microscopical Society, of the Board of Experts of the American Bureau of Mines, and of the

American Institute, New York. By appointment of the President of the United States, he had been a Commissioner to the Paris Exposition in 1867, and served as chairman of the Committees on Machinery and on the Apparatus of the Exact Sciences, also as a juror on Instruments of Precision and as a member of the Advisory Committee. His services in these capacities were handsomely acknowledged by the French Government, which conferred upon him the high honor of an Officer of the Legion of Honor. In 1873, he was again appointed by the President of the United States as a Commissioner to the International Exposition at Vienna, where he served as a member of the Advisory Committee and as Chairman of a sub-committee on Instruments of Precision. He was fortunate enough to live to join in the celebration of the Centenary of the re-establishment of King's College as Columbia College in 1887, and as his labors ended in the following year, it may be convenient here to compare the departments of instruction in the College as they were in 1865, with the larger and broader development recorded by the reports of 1887.

In 1885, the Academic Departments appear from the published catalogue to have been these:

1. The Evidences of Natural and Revealed Religion.
2. The Greek Language and Literature.
3. The Latin Language and Literature.
4. The German Language and Literature (optional).
5. Chemistry.
6. History and Political Science.
7. The Higher Mathematics.
8. Mathematics and Astronomy.
9. Philosophy and Belles-Lettres.
10. Mechanics and Physics.
11. Botany.

The Medical School and Law School were entirely separate and distinct from the College, and the School of Mines had merely been projected.

In 1887, there were the following departments:

SCHOOL OF ARTS.

1. Greek, including both an undergraduate and graduate course.

2. Latin, with undergraduate and graduate courses.

3. Mathematics, Mechanics, and Astronomy, with elective courses for undergraduates in Descriptive Astronomy, Differential and Integral Calculus, Analytical Geometry and Mechanics, and with graduate instruction in the Higher Mathematics, Determinants, and Modern Co-ordinate Geometry.

4. Mathematics, undergraduate and graduate classes.

5. Physics, partly elective.

6. History and Political Science, for undergraduates.

7. Philosophy, Ethics, and Psychology, undergraduate and graduate courses, also a graduate seminar.

8. Political Economy and Social Science, partly elective.

9. English Language and Literature, for graduates and undergraduates, with special studies in Anglo-Saxon.

10. Modern Languages and Foreign Literature, for undergraduates and graduates.

11. Geodesy and Practical Astronomy, chiefly for graduates, but partially optional to the senior class.

12. Chemistry, undergraduate and graduate classes.

13. Geology (in the School of Mines).

14. Botany.

15. Sanskrit (optional to seniors and graduates).

16. Semitic Languages, for graduates (optional to seniors).

17. Iranian Languages, for graduates (optional to seniors).

School of Mines.

1. Mineralogy and Metallurgy.
2. Chemistry.
3. Analytical Chemistry.
4. Assaying.
5. Qualitative Analysis.
6. Organic Chemistry.
7. Chemical Physics and Chemical Philosophy.
8. Mechanics.
9. Mathematics.
10. Physics.
11. Engineering.
12. Architecture.
13. Biology and Hygiene.
14. Microscopy and Biology.
15. Geodesy and Practical Astronomy.

School of Political Science.

1. Political Economy and Social Science.
2. European Law.
3. Philosophy, including political theories from Plato to Bentham.

School of Law.

Fully organized in all departments.

School of Medicine.

Fully organized in all departments.

School of Library Economy.

In addition to these regular schools and courses, there were Summer Schools as follows:

1. In Practical Mining.
2. In Surveying.
3. In Mechanical Engineering.
4. In Practical Geodesy.

In view of these facts, it is hardly too much to say that where Dr. Barnard found a college with 150 undergraduates, he left an university of more than 1000 students, or, if the Medical School be included, of nearly 2000 students. His warmest admirers do not pretend that the expansion of the institution over which he presided was exclusively the result of his personal influence, or that the lines of expansion were all laid on plans of his devising. It was his good fortune to be called to Columbia at the very time when a venerable institution was entering upon a period of growth which the Board of Trustees had patiently awaited, and for which the Faculty and the Trustees had long and earnestly labored. It was Barnard's great merit that he appreciated the opportunity of the time and intelligently fostered a development for which the time was ripe. In a man so positive in his convictions as Barnard was, it was a rare merit to be able and willing to abandon any and all theories, however earnestly he might have advocated them, which were not practically applicable to the circumstances of the institution to which the remainder of his life was to be devoted. In his earlier years he had thought of the college curriculum merely as a preparation for serious study. He now saw that it must be made in some worthy degree a preparation for the duties of life. He had regarded the college as an institution separate and apart from all other schools of learning; he now saw that unless the college could be brought into sympathetic coöperation with a far larger scheme of instruction, the college must lose its place in popular esteem. For the narrow rigidity of the college curriculum which he had once approved, he came to see that breadth and flexibility must be substituted. Considering the college as the normal foundation of a truly liberal education, and finding, as he thought, that an

enthusiastic *esprit du corps* of the undergraduate body cannot be maintained without something of the community life of the mediæval college, he expressed his willingness to concur in the inauguration of a dormitory system which he had once so vehemently condemned. He never lost sight of the fact that the college is preparatory to the university; but he clearly saw that an American university in the nineteenth century, and still more in the twentieth, must be generically different from the European university of the Middle Ages. It could not be an university in the sense of a community (*universitas*) of teachers and scholars. It must be made a *universitas omnium scientiarum*, a school of all learning that the necessities of the age demand. In order to create such an institution, special schools must be successively founded as they seem to be required, for the instruction of graduates of the college, and in the growth of these schools he believed that the university of the future would be gradually but surely developed. As the graduate schools were successively established, he began at last to entertain the thought that it might even be desirable for Columbia to abandon the department of college instruction to the many new institutions which had come into existence, and to devote the entire resources and energies at the command of the Board to the fostering and enlargement of the university proper. But by the university proper Dr. Barnard no longer understood an institution of instruction in what have been called the learned professions. The necessities of the age and the logic of events require that a modern university, and especially an American university, shall include the broadest and most liberal courses of instruction in the physical arts and sciences, and it was the delight of his life to observe and assist in the development of that noble polytechnic school which,

somewhat unfortunately, is known by the name of one of its departments as the School of Mines. His earnest advocacy of the elective system, in opposition to all his earlier prejudices, was grounded in his desire that the college curriculum should be available in the preparation of students for scientific pursuits, as well as for students of the so-called learned professions. He warmly denounced the "overloading" of the college curriculum with a vast array of studies, the effect of which was to give the student a mere smattering of knowledge on many subjects, without adequate preparation for an advanced course either on the scientific or the intellectual side. It does not seem to have occurred to him that the elective system may overload the collegiate department in another way by endeavoring to make a single institution do the work which is done in Germany by the two separate institutions of the Gymnasium and the Real-Schule. That is a question which still remains to be practically worked out by American educators; and it is more than possible that experience may lead them to adopt the German system. To Dr. Barnard, however, that question, if he ever thought of it, was not a practical question. He had only the college to work with, and his endeavor was to make it answer the purpose both of the Gymnasium and of the Real-Schule, leaving problems which might arise in other times to be studied and solved by other men.

At last his long and laborious life drew to its close. In the year following the Centenary Celebration of 1887, his brief Report ended with a few remarks which he modestly described as "apologetic." He said:

> The conditions under which the present report has been prepared have been such as to make it impossible to bestow upon it the usual amount of labor and time. The health of

the undersigned has for two or three months been so fluctuating that he is conscious of having been able to give but a superficial survey of the work of the present year. The matters of most essential importance, however, have been brought to the attention of the Board; and if there has been any important omission, he will be happy to furnish any supplementary information which may be called for. The undersigned has held his office nearly quarter of a century and has served a term exceeding in length that of any of his predecessors. The period has been marked by a great development in the work of the institution. . . . Whatever his relations to the College may continue to be, he will never cease to cherish a deep interest in all that relates to it, nor to bestow his best efforts for the increase of its prosperity and usefulness.

The following transcript from the minutes of the Board of Trustees records the action taken upon Dr. Barnard's resignation in terms of generous justice which are not less honorable to the Board than to the distinguished man whose long-continued services they acknowledge :

At a meeting of the Trustees of Columbia College, held May 7th, 1888, the chairman presented the following communication from Dr. Barnard, tendering his resignation as President of the College :

COLUMBIA COLLEGE, NEW YORK.

President's Room, May 7th, 1888.

To the Trustees of Columbia College:

Advancing years and unstable health admonish me that the time has arrived when I may with propriety divest myself of the responsibilities which you did me the honor to entrust to me many years ago, and which I have uninterruptedly continued to discharge for almost a quarter of a century.

I beg leave, therefore, to resign into your hands the office of President of Columbia College, this resignation to take effect whenever you have elected a successor to relieve me of my burdens.

I do not conceal that this action is taken with reluctance and pain. Many circumstances conspire to dissuade me from it, and I am impelled to it only by a sense of duty. The work in which I have been so long engaged is congenial to me, and has constituted a pleasure rather than a task.

The numerous colleagues with whom I have been associated have manifested toward me the most kindly feeling, and have greatly aided to relieve me of the sense of my responsibilities. The young men, in the various departments subject to my general control, have manifested a spirit of devotion to the objects for which they are here assembled, such as to render the care I have been obliged to bestow upon them a pleasurable occupation. And to the members of your honorable body I have been indebted for kind consideration of my shortcomings, and for a generous support in my efforts to serve you, which have contributed largely to make my post agreeable. Though disconnected from the College, I shall not cease to take an interest in its affairs, nor fail to use my best efforts, so long as life shall last, to advance in every manner in my power its prosperity and its usefulness.

I have the honor to be,

Very respectfully yours,

F. A. P. Barnard.

And it was

Resolved: That the communication be referred to a special committee of five to consider and report what action should be taken in the matter.

The Chair appointed as such special committee, — the Rev. Dr. Dix, Mr. W. C. Schermerhorn, Mr. Stephen P. Nash, Mr. Joseph W. Harper, and Mr. Gerard Beekman.

At a meeting of the Trustees of Columbia College, held June 4th, 1888, the special committee, to whom the President's resignation was referred, presented the following report, which was accepted, and the resolutions therein recommended were adopted:

The special committee, to whom was referred a letter from the President of the College, dated May 7th, and received by

the Board at the meeting held on that day, with instructions to consider the said communication and report what action should be taken by the Board in consequence, respectfully report as follows:

The letter referred to contains the President's resignation of his office, the said resignation to take effect on the election of his successor. The President states that he is constrained to take this step in consequence of failure of health, and the burden of advancing years, which render it desirable and necessary that he should obtain relief from the heavy cares and responsibilities of his office. Your Committee, with profound regret, find themselves compelled to admit the urgent necessity of the case as thus presented, and see no escape from the conclusion that the resignation of Dr. Barnard ought to be accepted, and that steps should be promptly taken to give him the relief requested by the election of a successor. They would, however, consider it a gratifying result if the difficulties attending that duty, and the President's improvement in health, should conduce to his continuing in office until the completion of the twenty-fifth year of his incumbency.

The Committee are of the opinion, that in view of the long and very able services of the President, and of the causes which now compel him, amid general expressions of regret, to take the preliminary steps towards laying down his office, this Board should not only do him honor in every suitable way, but also, when the proper time arrives, provide for him during the remainder of his life, and they have accordingly drafted a series of resolutions, expressive of their judgment as to the course proper to be pursued at this time, which resolutions they now respectfully submit for the consideration of the Board.

Whereas, at a meeting of the Board of Trustees of Columbia College, held May 7th, 1888, a letter was received from the Rev'd F. A. P. Barnard, S.T.D., LL.D., L.H.D., resigning into their hands the office of President of Columbia College, the said resignation to take effect whenever a successor shall have been elected; and

Whereas, the cause assigned by Dr. Barnard for his resignation is the heavy burden of advancing years and unstable health which renders it desirable and necessary for him to

divest himself of the responsibility and cares of his office; therefore, be it

Resolved: That the Trustees of Columbia College have received with deep emotion and inexpressible regret the resignation of the venerable and illustrious head of the College.

Resolved: That this Board offer to the respected and honored President of the College the expression of their sympathy with him in the impaired condition of his health referred to in his letter, and solely under essential constraint, and most reluctantly, accept the said resignation on the condition under which it is now placed in their hands.

Resolved: That this Board attest with pride and pleasure the widespread fame of the distinguished head of the College, and share in the general admiration for his extraordinary attainments, his ability as an educator, and the modesty, simplicity, and dignity which have uniformly characterized his manners and life, for all of which things he will be held in perpetual memory by the learned and the good of all time to come.

Resolved: That we recall with satisfaction the kindly and courteous relations which have always existed between ourselves and President Barnard as members of this Board of Trustees.

Resolved: That when the time comes to install his successor, the Board confer on the retiring President the rank and title of President Emeritus, and that his present salary be continued during the remainder of his life.

Resolved: That with a view of securing to the President a full measure of relief from his duties and responsibilities as President and Trustee, we hereby grant to him leave of absence for one year from this date, or until the election and installation of his successor, pending which event the duties of his office as President shall be performed by the senior Professor in the School of Arts who shall be in the regular performance of his duties.

Resolved: That a copy of this preamble and the appended resolutions be engrossed and presented to President Barnard by a select committee of three to be designated by the Chairman of this Board.

The Chair appointed as such Committee Dr. Dix, Mr. Nash, and Mr. Harper.

To a man of Dr. Barnard's temperament, the end of labor was the end of life. He lived less than one year after the acceptance of his resignation, and passed peacefully and painlessly away at his residence on the College grounds, April 27, 1889, at the full age of nearly four score years. During the brief time of his retirement from active work, he was cheered and strengthened by innumerable letters of loving gratitude and admiration from men with whom he had been associated or who had had the privilege of studying under him; but his delight was to spend his hours of quiet in conversing with his wife on the events of bygone years. It was at this time that, in writing of her, he said: "To the encouragement derived from her good sense, energy, and sanguine temperament I am largely indebted for whatever success may have attended me in life." It was at her suggestion that he then wrote or dictated the memoranda of his career from which a large part of the contents of this volume have been derived; and so, in pleasing recollections of a well-spent life and in constant converse with her whom he loved best in all the world, "with the testimony of a good conscience, in the communion of the Catholic Church, in the confidence of a certain faith, and in the comfort of a reasonable religious and holy hope," Frederick Augustus Porter Barnard "fell on sleep."

It was nearly fifty years since he had been confirmed in old St. Thomas' Church, and on May 2d, 1889, his funeral took place from the new and noble edifice of the same parish. The Presidents of Harvard, Yale, Princeton, the College of the City of New York, Rutgers, Dartmouth, Bates, Hobart, Trinity, and others, were

present to testify the respect of those great institutions. Deputations from many churches and organizations of learning, literature, and science were in attendance. The Trustees, Faculties, students, and many of the alumni of Columbia College went in a body from the President's dwelling to the church. President Dwight of Yale, President Patton of Princeton, President Potter of Hobart, President Webb of the College of the City of New York, Dean Hoffman of the General Theological Seminary, Dr. John Hall, the Hon. Hamilton Fish, William C. Schermerhorn, and Stephen P. Nash bore the pall. The services were conducted by the Rt. Rev. Bishop Potter, assisted by Dr. Dix, Dr. Duffie, Dr. Brown, and Dr. Starr. In the afternoon of the same day the remains were taken to Sheffield, Massachusetts, where, on the following day, they were committed to their final resting-place.

When Dr. Barnard's will was read, it was found that in death, as in life, his heart had been with Columbia College. The income of his estate was to be enjoyed by Mrs. Barnard during her lifetime, and at her death it was to pass to Columbia College, with the exception of certain small legacies to friends and dependents. The following provisions of his will may well be given entire :

1. One portion of the said fund, to the amount of ten thousand dollars, to be set apart and to constitute the foundation of a fellowship to be entitled "The Barnard Fellowship for Encouraging Scientific Research"; the annual income from the sum so set apart to be devoted to the support or partial support of some Alumnus of the School of Arts, or of the School of Science known as the School of Mines of Columbia College, who may be recommended to the Trustees by the joint vote of the Faculties of the said schools, as evincing decided aptness for physical investigation, and who may be disposed to devote himself to such investigation for some years continuously, such benefit to be allowed so long as the appointee shall

faithfully fulfil the conditions of his appointment, or during the pleasure of the Board, who may always annul the appointment for just cause, and who also, on the occurrence of a vacancy by removal, resignation, or death of the incumbent, shall proceed to make a new appointment so early as may be convenient, on nominations by the Faculties above specified; but the Trustees may make appointments under this provision of my will, for limited instead of unlimited periods, if, in their judgment, the object of the provision may, by such form of appointment, be likely to be most effectually secured.

2. All the remainder of my property invested as aforesaid, to constitute a fund, under the name of "The Barnard Fund for the Increase of the Library"; the income from the same to be devoted to the purchase, on account of the library of Columbia College, of such books as from time to time may be most needed, but especially relating to physical or astronomical science; selecting, in preference, those which may be likely to be most useful to persons engaged in scientific investigation. But of the income from this said fund I desire that so much as may be necessary shall be applied in the manner following: The Trustees of Columbia College shall cause to be struck, with suitable devices, a medal of gold, nine-tenths fine, of the bullion value of not less than two hundred dollars, to be styled "The Barnard Medal for Meritorious Service to Science," and shall publicly announce that a copy of the same shall be awarded, at the close of every quinquennial period, dating from the probate of this, my last will and testament, to such person, whether a citizen of the United States or of any other country, as shall, within the five years next proceeding, have made such discovery in physical or astronomical science, or such novel application of science to purposes beneficial to the human race, as, in the judgment of the National Academy of Sciences of the United States, shall be esteemed most worthy of such honor.

And I make it my request that the said National Academy of Sciences shall charge itself with the duty of declaring to the Trustees of Columbia College aforesaid, at the close of every term of five years, as above defined, the name of the

person whom they judge worthy to receive such medal, with a statement of the reasons on which their judgment is founded; and that, upon such declaration and nomination, the Trustees shall proceed to award the said medal, and shall transmit the same to the person entitled to receive it, accompanied by a diploma or certificate attesting the fact and the occasion of the award. But if the said National Academy of Sciences shall judge that, during the five years preceding the date at which, as above specified, this award shall become due, no discovery in physical or astronomical science, or no new application of scientific principles to useful purposes, has been made worthy of the distinction proposed, then it is my wish and request that the award shall be for that time omitted.

And I would further desire that the medal above described should bear, if it can be accomplished without interfering with the appropriate artistic devices, upon its obverse side the motto, *Magna est Veritas*, and upon its reverse the motto, *Deo Optimo Maximo, Gloria in Excelsis.*

Finally, it is my wish that in case the fund herein last named shall, at the time of its reversion to the Trustees of Columbia College, be less in amount than the sum of $50,000, the income from the same shall, for the time being, be not applied to the purchase of books, but shall be annually added to the principal until the total sum shall reach this said amount of $50,000; and so far as I may legally do so, I enjoin such accumulation upon the Trustees, but this restriction is not intended to prevent the employment of so much of said income as may be necessary to carry into effect the last foregoing provision of this, my last will, in regard to the preparation and quinquennial presentation of a medal for meritorious service to science to some suitable person nominated by the National Academy of Sciences.

Of the many tributes of affectionate admiration which were publicly paid to the memory of Dr. Barnard, it may suffice to insert in this place the two which he himself would have valued most highly. They are a Minute adopted by the Trustees of Columbia College, and a similar Minute of the Alumni.

EXTRACT FROM MINUTES OF MEETING OF THE TRUSTEES OF COLUMBIA COLLEGE HELD JUNE 3RD, 1889.

On motion of Dr. Dix and by unanimous consent the Rules of Order were suspended. Dr. Dix, on behalf of the Special Committee, appointed May 6th, 1889, presented the following Minute on the death of President Barnard, which was accepted. The Committee appointed at the last meeting of the Board of Trustees of Columbia College, to prepare a minute on the death of President Barnard, beg leave to submit the following, with the recommendation that an engrossed copy thereof be presented to Mrs. Barnard:

MINUTE.

At the last meeting of the Trustees of Columbia College, the Chairman of the Board announced the death of the venerable head of the College, the Rev. Frederick Augustus Porter Barnard, Ph.D., S.T.D., LL.D., L.H.D., D.C.L. It is just one year since the Trustees, with unfeigned regret, acceded to the request of our respected and honored President and Fellow Trustee, to be relieved from the cares and duties of the offices which he has filled so usefully and with such distinguished success for nearly a quarter of a century, during which period it was his privilege and ours to witness the unparalleled growth and development of the College.

The Board at that time recorded upon their minutes, their recognition of the high character and valuable services of President Barnard. Now, having received the announcement of his death, they desire reverently to renew the expression of their admiration and respect for the late distinguished Head of our College, and to reaffirm their pleasant memory of the kindly and courteous relations which have always existed between ourselves and President Barnard as members of this Board of Trustees.

He was a man of eminent ability and extensive attainments, and conspicuous in his generation for a life-long devotion to science and letters. He had a great and intelligent interest

in whatever related to education, and that interest grew with advancing years.

For a quarter of a century he was at the head of Columbia College, a position for which he was particularly well fitted, not only by his learning and acuteness, but also by his executive tact, his mastery of details, his insight into character, and his unfailing courtesy at all times and to all persons. His devotion to the welfare and advancement of the College was unsparing. During his presidency, the gradual increase of means at its command led to a wide expansion of its efforts and methods in the various schools now under the care of this Board. Dr. Barnard's capacious intellect and broad culture enabled him to superintend this development with wisdom and skill. His own *forte* lay in certain branches of the higher mathematics, but his unsurpassed eminence here in no wise lessened his interest in any other branch of a liberal education. His outlook took in the whole circle of human knowledge so far as that could be embraced in the curriculum of a single institution. He was equally a friend to the humanities, the exact sciences, philosophy, jurisprudence, and every department of physical research. This largeness of view and loftiness of aim have set a precedent which we trust will continue to the end.

Dr. Barnard has rendered a service not given to many of the sons of men to perform, and now that in a good old age he has terminated his useful life and is at rest from toil, his associates in the Board feel it alike a duty and a privilege to pay this tribute to his memory. June 3rd, 1889.

Morgan Dix,
Joseph W. Harper,
Talbot W. Chambers.

EXTRACT FROM THE MINUTES OF THE ALUMNI.

The Alumni of Columbia College, desirous of expressing their sense of the eminent services to their Alma Mater rendered by the late President Barnard and of the great loss sustained by her in his lamented death, direct the following entry to be made in the minutes of this meeting:

In 1864 at the date of Dr. Barnard's accession to the presidency, the College was at a critical period of its history. It was ready for development and had begun to develop. The Law School had been established a few years previously and was in successful operation. The School of Mines was in process of organization. The Trustees had for several years been considering the expansion of the undergraduate course, and in connection therewith a system of university education. At this critical period the College happily obtained as its chief counsellor and guide Dr. Barnard, a profound student of education, in sympathy with all the forms of higher development, literary as well as scientific, of quick perception, peculiarly open to new ideas and prolific of them, of learning deep, exact, and extensive in many fields, a classical and English scholar, a fine mathematician, physicist, chemist, and adding to his severer accomplishments that of being a poet and a musician of no mean quality, a prolific, elegant, and persuasive writer, a logical and convincing speaker, of sanguine enthusiastic temperament, bold and persistent in the advocacy of his opinions, and impervious to discouragement. He quickened into organic life the School of Mines, he gave vitalizing force to the extension and liberalization of the undergraduate course, to the founding of fellowships for the encouragement and assistance in their higher studies of earnest and able young men, to the extension of the library and the liberalization of its management, to the project of a course for the higher study of political and historical subjects, and to the scheme for a broad and liberal system of post-graduate or university instruction, which the College had long but vainly desired. In brief, he gave Columbia College a new life and a new significance, and by his commanding position in many learned societies, by the force and elegance of his published writings, scientific, literary, legal, political, educational, and by his wide acquaintance with the foremost men of his time, he attracted attention to the College, and did much to interest the community at large in it.

> Age could not wither nor custom stale
> His infinite variety.

He possessed, with such men as Gladstone and Bismarck (it is a very rare quality) the fervor in age that he had in youth,

and was as ready as he was before he had secured position and fame, to take up a new idea, a new project, and pursue it with as much vigor as if a long life were still before him, and all his reputation yet to make. It was this quality that made him a great president to the very last. With almost his latest breath, unable to write, and speaking with difficulty, he dictated letters of counsel upon what was ever nearest his great heart — Columbia College and her future.

The departure of such a man is a loss beyond adequate expression. But he is not wholly lost. During his long period of service, longer and more distinguished than that of any of his predecessors, he so impressed himself upon the College in many vital particulars, that though dead he shall yet speak for all time to come.

The life of which an imperfect record has been given in this volume might well be left to teach its own moral; but it may be seemly, though it is not necessary, to take some note of the most conspicuous features of the man whose long and arduous career was closed in well-earned "honor, love, obedience" from "troops of friends."

His rich and varied natural endowments and the versatility with which he applied them in every position to which he was called require no comment; they speak for themselves; but the courageous patience with which he overcame the difficulties caused by his loss of hearing is less likely to be thought of. Of an eminently genial disposition, he was deprived, while still a youth, of many privileges of social intercourse, and the rest of his life was passed in the loneliness to which the deaf are doomed. He was ambitious from his boyhood; and although his love of distinction was always rooted in a love of excellence, there can be no doubt that his original choice of the law as a profession was prompted to a large degree by a well-founded hope of achieving eminence both as a jurist

and as a statesman. The fortitude with which he submitted to the decree of providence was illustrated by the zeal with which he applied himself to the scientific instruction of deaf-mutes, the only occupation in which it seemed possible for him at that time to earn his bread; and it was characteristic of the man that he applied himself with such assiduity and with such amazing success to the study of his new profession, that within a few years he became not only an expert teacher, but an instructor of others in the difficult art of deaf-mute education. When he found that so much of his hearing still remained to him as to make it possible for him to accept a position as professor in the University of Alabama, he applied himself with the same devotion and the same success to the study of the science and art of education. He was not content to be a mere hearer of recitations; he became a fascinating lecturer who at once communicated knowledge and inspired his pupils with his own enthusiasm. He was not content to join in the routine of college government; he studied the history and the principles of the existing system, and presently became the expositor of a better system than had then been thought of. When he was called to take the chief charge of an university, he exhibited an open-mindedness which refused to be trammelled by considerations of consistency, and a patience which, while cherishing the loftiest ideals, could yet content itself with the best possibilities of the time and in doing small things from great motives. His patience was exemplary because

> "His faith was large in time,
> And that which works it to some perfect end."

As a college governor, he stood always for the freer rule and the larger trust, with a generous confidence in youth which could not have existed if his own youth had not justified it. Even so, he might have failed if he had

lacked sympathy. Bulwer somewhere says that every great man has "a dash of the boy in him to the last"; and to the last, Barnard had at least so much of the boy in him as to be able to understand and sympathize with the boy and to make his sympathy so felt that government was easy. One other characteristic, and only one, we have yet to mention, because it was inconspicuous. Barnard was a strenuous man, positive in his convictions, unfalteringly resolute in action, courageous in difficulty, sometimes intolerant of opposition; but with all this, there was an element of meekness in his character which might seldom be exhibited, but which strengthened him in many a trial and contributed no little to his ultimate success. Take him for all in all, we may say of him, as Johnson said of Goldsmith, "he was a very great man."

Of his religious character it is needless to speak. Barnard was one of those men whose religion was of the inward life; it was seldom on his lips, but it was felt, even when unexpressed. On this subject we may borrow the simple but eloquent words of the Bishop of New York in a Baccalaureate Sermon preached at the Commencement of Columbia College a few weeks after Dr. Barnard's death, on Phil. iii. 12: "Not as though I had already attained, or were already perfect, but I follow after, if that I may apprehend that for which also I am apprehended of Christ Jesus." In concluding his discourse, Bishop Potter addressed the graduating class as follows:

As you turn from the studies that thus far have engrossed you, I beseech you to take with you into the life that lies before you, an open mind, a hearkening ear. More truth than you have yet learned awaits to reward your search, if only you will continue to be a seeker. It will be a poor result of your collegiate course if it has not taught you that the aim of such education as you have thus far received is to fit you for a

larger and a deeper culture. That post-graduate course, which is the happy appendix to the *curriculum* of your *alma mater*, is but a parable of what all life was meant to be, — a larger learning, a deeper humility, a more eager discontent with present attainments, and so the open soul that welcomes whatever will greaten them.

It is impossible to speak such words in this presence without remembering one who was their splendid illustration, and whose rare gifts and attainments have lent enduring lustre to the College of which you are Sons. For twenty-five years its President, Frederick Barnard, revealed, in his great place, great gifts, which were unceasingly ennobled by their ever-widening vision and their never-resting exercise. No man in our generation has more grandly illustrated the words of the Apostle than he. Of rare attainments and ripe learning in more than one department, when he was called to the Presidency of Columbia College, no year passed that did not see him touching a larger circumference and possessing himself, not superficially but profoundly, of that which lay within it. Old in years when he passed away, he was still young in enthusiasm, young in his love of all genuine wisdom, young in his open-mindedness. *And all this he was — student, enquirer, watcher, listener for the fresh voice and the fresh truth, in the simple and childlike submission of a Christian disciple.*

Such an example may well kindle us whom he has left behind him. Take it with you, my young brothers, into the future that opens now before you. And that you may learn the spell that transformed and ennobled him, go to school to that Master whom he, with Saul of Tarsus, loved and followed, that you too may both apprehend and be apprehended by Christ Jesus.

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ATLAS

OF THE

FERTILIZATION AND KARYOKINESIS OF THE OVUM

By EDMUND B. WILSON, Ph.D.,

Professor of Invertebrate Zoölogy in Columbia College

WITH THE CO-OPERATION OF

EDWARD LEAMING, M.D., F.R.P.S.,

Instructor in Photography at the College of Physicians and Surgeons, Columbia College

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BY

M. ALLEN STARR, M.D., Ph.D.,

Professor of Diseases of the Mind and Nervous System, College of Physicians and Surgeons, Medical Department of Columbia College; Consulting Neurologist to the Presbyterian and Orthopædic Hospitals, and to the New York Eye and Ear Infirmary

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FRANKLIN HENRY GIDDINGS, M.A.,

Professor of Sociology in Columbia College

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