

THE EDUCATION REQUIRED BY  
OUR FARMERS.

---

AN ADDRESS

DELIVERED AT THE ANNUAL MEETING OF THE

STATE GRANGE OF KENTUCKY,

DECEMBER 11, 1883,

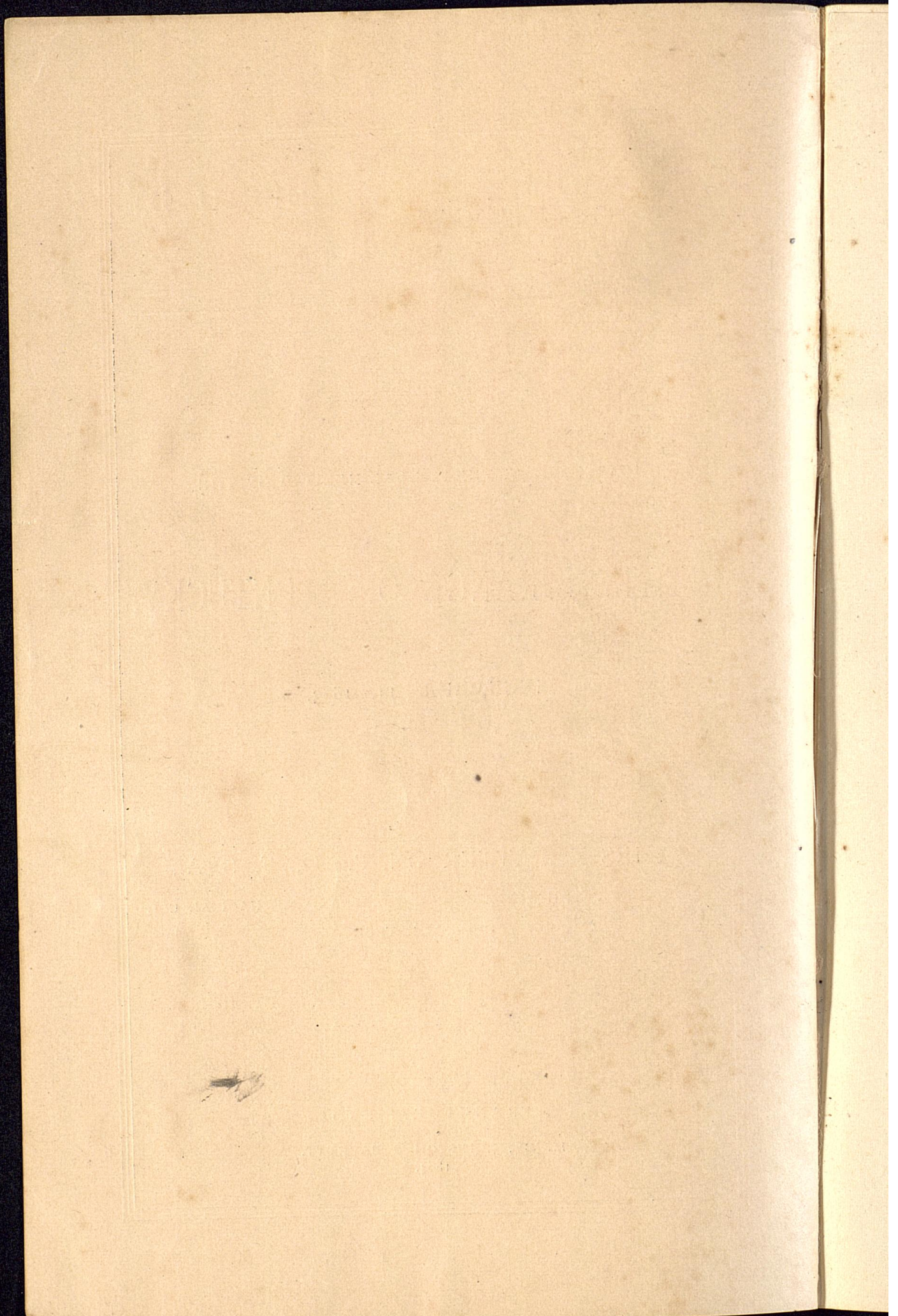
BY

JAMES K. PATTERSON, PH. D., F. S. A.,  
PRESIDENT OF THE STATE AGRICULTURAL AND MECHANICAL COL-  
LEGE OF KENTUCKY.

---

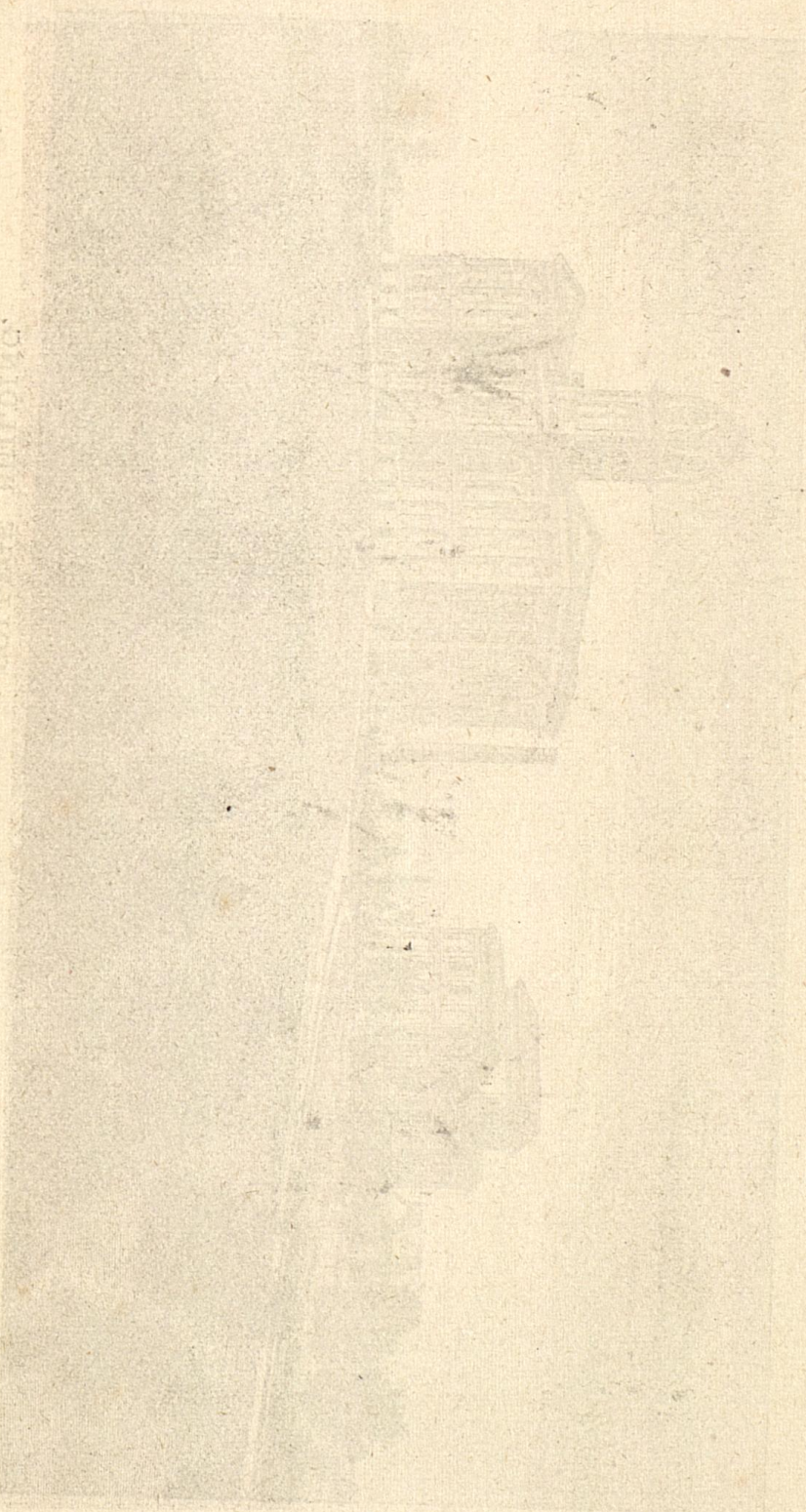
FRANKFORT, KY.:  
PRINTED AT THE KENTUCKY YEOMAN OFFICE.  
MAJOR, JOHNSTON & BARRETT.  
1884.



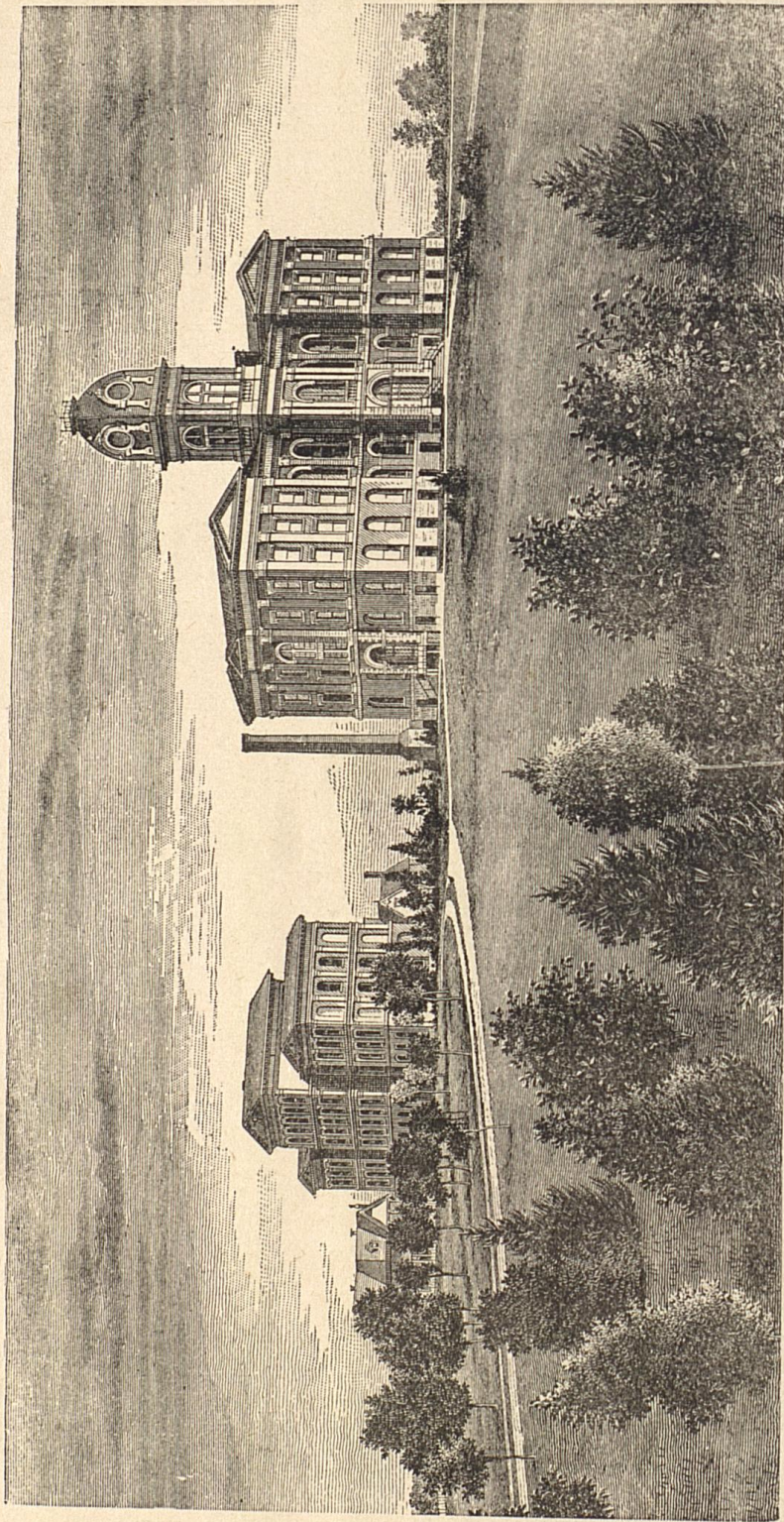




САНКТ-ПЕТЕРБУРГСКАЯ ГОСУДАРСТВЕННАЯ АКАДЕМИЯ НАУК  
ИМПЕРАТОРСКОЕ УЧЕБНО-НАУЧНОЕ ЦЕНТРАЛЬНОЕ УЧЕБНО-МЕТОДИЧЕСКОЕ  
ОТДЕЛЕНИЕ







PRESIDENT'S HOUSE. DORMITORY.

COLLEGE BUILDING.



## ADDRESS OF PRESIDENT J. K. PATTERSON

Delivered before the State Grange,  
December 11, 1883.

---

In the United States, as in all countries possessing so extended a geographical area, and embracing such a variety of soil and climate, agricultural interests must always be paramount. Second, but only second in importance, is and will be the mechanical industry of the country. Not only are these the most important occupations, but they furnish employment to much the largest part of our population. The professions styled liberal, the merchants and bankers, the dealers in stocks and bonds, the gentlemen of literature, and the gentlemen of leisure, are all possible only through the existence and the activity of the agriculturist and the artisan. They are the producers and manufacturers of the raw material, the creators of our wealth, the basis of all our material prosperity, and supply the indispensable condition of all intellectual, political, and moral power.

The members of the liberal professions, the lawyer, the physician, the minister, the teacher, those engaged in the distribution of the wealth which these create, those who apply themselves to discovery and invention, those who aspire to manage affairs of the township, the county, the municipality, the State and the Nation, all these are, and of right ought to be, their servants. These relations are often reversed; but this is not the order of nature. These relations are not only reversed, but oftentimes ignored, and that has been made first which is last, and that last which by right is and ought to be first. With the progress of intelligence and



the growth of freedom, the rights and necessities of the agriculturist and the artisan have been recognized. Now, I hold that this recognition implies and necessitates an education for the industrial classes, for the farmer and the mechanic, equal to that of any, whether professional or liberal. I do not hold that this education should be of the same kind as that given to the clergy, or the physician, or the lawyer, or the man of letters. The character of education provided for these is determined by the special kind of activity to which each desires to apply his intellectual endowments; in other words, by the end which each has in view. The intending clergyman applies himself to Greek, to exegetic and dogmatic theology; the physician to anatomy, materia medica, and therapeutics; the lawyer to abstract discussions of right, and to the study of statute law. But before each of these begins to study the special departments of science which form the distinctive features of the profession which he is supposed to have in view, he is subjected to a course of preliminary training and discipline. His intellectual powers must be awakened, his latent and dormant faculties evoked into healthful and vigorous activity. He must be taught to think, to think vigorously, to think correctly. His education is directly proportioned to his capacity for prolonged and spontaneous activity; and the main purpose in view by all those who have in charge the education of youth is to cultivate and develop the intellectual endowments so as best to attain this end.

The preliminary training which young men undergo who intend to become lawyers and physicians, ministers and teachers, artists and engineers, inventors and discoverers, all tend to this end. This education is given not so much for the amount of knowledge which it conveys as for the mental activity and vigor which it assures, for the ability which it confers to think vigorously and to think correctly. The boy who toils through proportion and square root may see little practical utility in the long examples devised, so far as he can



see, to perplex and puzzle, but when he has gotten through his task and understands his work, whether he is aware of it or not, he is better prepared to grapple with and to solve problems which he could not have touched before. And when he has advanced into geometry and algebra, though he may see little practical utility in the demonstration of a formula for logarithms or the development of the complex relations of sine and cosine, tangent and cotangent; yet when he gets through these and understands them he is prepared to advance to higher and higher reaches of reasoning thought.

So it is with the discipline and strength acquired through the study of language, the study of the laws of thought, the study of the rights of man and the duties of man, the study of the Creator in His works, and the study of man in relation to himself, in relation to his kind and in relation to his God. All mental discipline expands, invigorates, and ennobles, and this, after all, is the prime object of all education and of all existence.

Upon the discipline and habits thus acquired the professional man builds. His powers of observation are sharpened, his reason strengthened, his acquisitions multiplied, his sense of right invigorated, his powers of expression enlarged. When these are accomplished, the mere professional acquirements which enable the professional man to enter upon his profession are easy enough of attainment. But, up to a certain point, whatever the intended profession of the student may be, the course of preliminary education is or ought to be very much the same. A course of study ought to be prescribed and entered upon, prosecuted and completed, which will provide the necessary kind of training to all the powers of the mind, not cultivating one faculty while others are left uncared for—but cultivating each and all in proper proportion, so that the mind shall be trained and developed as a symmetrical whole. At one stage of growth the powers of observation and memory ought to be sharpened and strengthened; at another the faculty of connected thought,



the faculty of reasoning, and the conditions which legitimate conclusions. Concurrently with these the sense of duty, our obligations to the Creator, to mankind and to ourselves, should be developed and strengthened in such way that what we owe to others, as well as what others owe to us, should be understood. Who shall be made the beneficiaries of this sort of education? Is it necessary for the future lawyer and physician and clergyman only? Shall the necessity also be admitted for the civil engineer, the teacher, the man of letters, and, in addition to these, for the sons of the wealthy? When all these have been included, shall all others be virtually excluded? Shall it be said that after provision has been made for the intended professional classes, that the duty of the municipality, the State and the Nation, is fulfilled? I answer no.

The men and women who create and transform the wealth of mankind, by whose labor the wealth of the municipality and the State is rendered possible, who constitute the bone and sinew of a nation, who are its guardians in time of peace, its safeguard and bulwark in times of peril, these men and these women deserve an education, so far as preliminary training goes, equal to that provided for any of the professions. They are, and, in the nature of things, always must be, by far the most numerous part of the population. They make the men who legislate, they make the men who interpret the law, they make the men who execute the law. When they have made these, does their duty and their right end there? Nay, verily. The masses who are the ultimate depositories of power need to know the principles on which civil government is constituted; the mutual limitations of liberty and authority; the right and the wrong of questions of home and foreign policy; the expediency of this line of political conduct and the in expediency of that; the limitations under which corporations may be allowed to exist; the powers which may be delegated to the governing bodies for the good of those who



are governed. Now, all this cannot be accomplished intelligently unless the education given them embraces such training and such instruction as will qualify them to understand these rights and these duties. And, passing from the rights and obligations of citizenship, why, I ask, should a liberal, elementary education, deemed necessary for the rich and for the members of the learned professions, be denied to the agriculturist and the mechanic? It must be for one of two reasons—either that they do not need it, or that they are not worthy of it.

When it can be shown that the possessors of power always exercise it for the best advantage of the millions whom they govern, that legislators are invariably unselfish, that the judiciary is always above corruption, and that corporations are invariably merciful; then we may admit that, so far as the functions of government are concerned, the masses may abdicate the useless luxury of elections and delegate once for all the right of succession to those who govern them. But, granting all this, does it follow that the agriculturist and the mechanic can dispense with an education? Why should he be denied the light that irradiates the human soul? Why should he be condemned, son of toil though he be, to look with a less intelligent mind upon the mysteries and the glories of the skies that bend above him, or of the earth that stretches out beneath him? Why should the wonders of the organic and the inorganic world, the endless complexity of animal and vegetable existence around him, be to him as they are to the ox which he fattens for his table, or to the horse which draws his plow—shrouded under an impenetrable veil? Possessor of a mind whose faculties are godlike and whose capacities are all but infinite, why should all this exhaustless treasure be to him a storehouse sealed and bound? Why should the achievements of the past, the deeds of the men of old in science, in literature, in art and in arms, be to him as though they had never been?

The telescope, which brings immensity within the fields of his vision; the spectroscope, which by analysis affords



him the constitution of sun and moon, of planets and stars, whose distance he may compute but cannot adequately represent even in imagination; the microscope, which reveals all but the ultimate processes of existence and all but the ultimate atoms of which the universe is built up; the telephone and telegraph, the railway and the steamship; shall the knowledge of these and the knowledge which they reveal and the principles of their construction and the laws of nature by which they are made possible, be the heritage, the birthright of the rich few, but practically inaccessible to the millions? I would educate the son of the farmer and the son of the artisan as I would educate the sons of the banker and stock-broker, the sons of the merchant and lawyer, the sons of the minister and teacher. I would give them the opportunity of an education similar in kind up to a certain point, the point namely: where each should begin to specialize in order to prepare himself for a particular pursuit in life.

Now, what should this preliminary education necessary for all include? Every one, of course, will say reading and writing. Well, what does that mean? It means a good deal less now than it did when Christopher Columbus discovered America. Why? Knowledge then was comparatively limited. Few had gone beyond the merest rudiments, and the man who could read and write was on a par with the best of his fellows. There was then little geography, arithmetic was almost unknown, anatomy and physiology were non-existent, chemistry and astronomy had not advanced beyond alchemy and astrology. The natural sciences, as we understand them, had not come into being. Reading and writing, then, made their possessors participants in the meager knowledge of the times. But now a man may know how to read and write, and if he knows no more, be an intellectual barbarian. We must go beyond mere reading and writing, then, to bring our men and women into actual participancy in the knowledge of our time. There is arithmetic in its largest



sense, the science of numbers, which carries us on to algebra and geometry, enabling its possessor to measure earth and sea and heaven. There is geography and geology, informing us of the present and past condition of the globe which we inhabit. There is chemistry and physics, making us acquainted with the constituent elements of matter, whether in the inert lifeless mass or in the organized animal and vegetable, with the laws which determine their constitution and relations. There is animal and vegetable anatomy and physiology, revealing the principles of structure and the processes of growth and nutrition. And there is the wonderful human mind with all its godlike powers, reflecting the image of its maker, transcending the bounds of time and space, grappling with the problems of existence, penetrating all things in earth and air and sky, and aspiring to union and communion with the Divine, whence it sprang. Its laws, its operations, its limitations, are there for contemplation and study. Now, which of these departments of knowledge and research should be closed to the future farmer and artisan? From which of these fields waving with golden harvest would you exclude him? Born to know, is not all knowledge his legitimate domain? Enriched by the possession of knowledge in an equal degree with others, and enriched beyond any powers of numbers to express, why should any human being the end of whose existence is to know himself and the universe around him, to create wealth out of the materials which God has given him, to devote himself to that occupation which the father of his country has dignified as the most honorable and useful to man—why, I ask, should not he be afforded the same opportunity for its acquisition and possession as those who create nothing, but live by the labor of others? He is, I hold, not only worthy of a good education, but worthy of the best.

Your sons furnish the best blood of the country. They not only produce that which sustains life, but year by year they throw an infusion of fresh blood and fresh life into the



cities, whose populations would otherwise decline and ultimately die out. They thus directly and indirectly vitalize all the varied elements of population, provide the bone and sinew and nerve and brain of the nation, and supply material not only for the agriculturist and mechanic but for the merchant and manufacturer, the inventor and discoverer, the judiciary, the bar and the legislature. Every farmer's son is a possible Senator or Cabinet officer, Governor or President, and whether he attains the highest offices of honor and profit or not, in a hundred ways and on a hundred occasions he can turn to practical account the discipline and training for which I plead. In such assemblies as this, in the halls of legislation, in the political arena, he is called upon to scrutinize measures, to determine their justice, their policy, their expediency, to disentangle sophistry, to maintain right and denounce wrong. In all these relations the man of brains, of education, of vast and varied information, has immeasurably the advantage. Whatever the question at issue, he holds all the threads which make up the warp and woof of the web, however complicated, in his hands, and while his illiterate antagonist is fumbling and floundering he sees with intuitive glance right through the whole.

The farmer is the only true conservative in any community. His interests are immediately connected with the soil which he tills. Through all changes of government his lands remain. The capitalist with his stocks and his bonds has no such interest in the perpetuity and integrity of good government as has the agriculturist. He can transfer the contents of his vaults and money chests from continent to continent at ten days' notice. If revolution and anarchy impend, he discerns the coming storm and transfers his movables to happier shores. But the barns and granaries, the flocks and herds and lands of the husbandman cannot so be converted and transferred. These remain to be burned and plundered and despoiled. Hence, the husbandman has a stake in the existence of civil government which the mere capitalist and



broker has not; and if there be one debt, one obligation which you owe greater than all others, paramount to all others, it is that you educate your sons to maintain and conserve and transmit in their purity and in their integrity the institutions which you have inherited, the wealth which you have created, the heritage of freedom which you have defended. If this people are to remain free, the muscle and brain of those who till the soil must maintain this freedom. An educated, intelligent, and moral population, such as I hope the coming ages will find in these States, can never be enslaved. But you will have need of all that education and intelligence and morality can give. One hundred years will not pass before a population of 300,000,000 of souls will be found within the boundaries of these United States. In cities fourfold the population of New York, will be found tens of thousands of illiterates, the scum and dregs of society, a mass of irresponsible poverty, whom any Vanderbilt or Gould or Astor of the future can buy, whom corporations can control in order to control legislation and monopolize power. What is the only possible counterpoise to this explosive element, to this prostitution of the franchise, to this perpetual menace? I answer, the educated yeomanry of the country. If free institutions perish, they will perish not so much because of a corrupt municipal *proletariat*, as because of an uneducated, rural population who, because of their ignorance, were unable to counterwork the mischief wrought by the venality of the moneyless mob and the rapacity of the moneyed monopolist. This is the plea which I make for the broad, liberal, comprehensive education of the agriculturist and the mechanic—education which I insist ought to be as broad, as liberal, and as comprehensive as that provided for any other up to the point where each begins to specialize for his particular profession or avocation. To limit the further consideration of what should be done specially for the education of the agriculturist, I beg your attention to the following considerations:



"Agriculture is an art, not a science. There is no more a science of agriculture than there is a science of medicine. Men sometimes talk loosely about science and art, failing to make the distinction which should be made. Science is something more than a mass of information. It is a body, an organized system of established truths and principles. But, though medicine is not a science, there are many sciences relating to the healing art, throwing light upon it and guiding it on its difficult way; making it rational, not empiric; an intelligent apprehension of the relation of cause and effect, and not mere fortuitous guess-work. Botany, pharmacy, chemistry, anatomy, surgery, physiology, and pathology are all sciences, without which the healing art as a rational art could not exist. So far as the physician is concerned, all these exist for the sake of his art and make it possible. So agriculture, though not a science, is surrounded by sciences which throw light upon it. As the sciences advance which are related to it, the art becomes more rational. And if we might call an art liberal in proportion to its affiliation with science, then agriculture is the most liberal of all the arts." See what sciences it lays under contribution for its purpose: The chemistry of soils and the chemistry of animal and vegetable life; geology and physical geography, which determine the composition of soils and the temperature of latitudes; comparative anatomy, animal and vegetable physiology, animal and vegetable pathology, even mathematics and physics, all are related to the art of agriculture, and intimately so.

"Step out on your farm and pick up a handful of soil, and before you can answer all the questions which that soil puts to you, you will have need of sciences not a few. You must know something of physical geography, organic and inorganic chemistry, the geology of your own and contiguous sections of country, their water-sheds and water-courses. Pick up a piece of coal or limestone, this well rounded pebble or that fossil, and before you are prepared to answer all the ques-



tions connected with the origin of the one, or the physical conditions which have determined the other, you will have laid many sciences under contribution. Stoop down and detach a single blade of grass with its roots, and you will have in your hand all the essential data of the problem which one of the most wonderful of all the sciences is called upon to solve. Crawling under your feet, humming about your ears, infesting the plant which you have in your hand, disputing with you the possession of the air which you are about to take into your lungs, are living creatures whose structure, habits, and relations to other organic life forms but one division of the vast science which treats of all animated existence on the earth, in the air, and in the sea." The relations of these to the vegetable and animal kingdom with which the farmer has to deal, are now recognized with the recognition that the fertility or barrenness of his fields, and the health or disease of his cattle, often depends upon these minute organisms.

"Every plant that grows on your farm, every animal in your stockyard, every bird and insect that hovers in the air, every implement of husbandry, every road, fence, farm building, every running stream, swamp, forest, change of temperature, rain-storm, drought, every alluvial deposit left by the swollen stream, every upheaved rock, everything that the farmer's eye rests upon or his ear hears, or which gratifies or offends his sense of smell borne on the passing breeze, everything represents a science which is very close to his work or which it is his interest to know." The knowledge may, in some instances, not materially increase the contents of his storehouse, but it adds to his pleasure and gratifies his curiosity. Man was made to know—made a little lower than the angel—but endowed with faculties and capacities far above the horse which drags his plow, or the sheep which supplies the clothing for his family.

As his knowledge increases, how his plants grow, how the stock upon which he bestows his care and his thought develop from the rudimentary germ to the embryo, and



from the embryo to the beautifully proportioned thoroughbred which adorns his pastures, or the lamb which gambols before its dam upon the lawn, he feels a keener avidity for the acquisition of knowledge, a deeper sympathy with nature and the processes of nature; appreciates more fully his own dignity, his relation to the chain of animated existence of which he is the glory and the crown, and to the Creator who brought him and them into being.

"Here the question may be asked, what use has the practical farmer for all this? Cannot he raise corn, and carry his mules and hogs to market without a knowledge of botany and geology?" I answer he can, and if the end for which the Creator made the agriculturist, and the aim of his existence, be to grow corn and market mules and hogs, then I concede the question without argument.

But corn, hogs, and mules exist for the sake of man, and not man for the mules and hogs. The end and aim of human existence is something higher and nobler than this. His thoughts, if he rises to a proper conception of his dignity and of the nobility of his nature, are not altogether of the earth and earthy. They reach beyond the bounds of space and of time. His origin allies him to the Divine and not to the brute. His mission is not to live and vegetate, but to comprehend himself and all things out of himself; to comprehend all but the incomprehensible God.

"If the question be asked what use has the farmer for algebra and geometry, I answer, quite as much in his sphere as the physician or the lawyer or inventor can in his. They serve to develop his mind, to expand his conceptions, to discipline his faculties; and is not the mind of the farmer with its conceptions and faculties and far-reaching possibilities, of as much value to him, of as much service to society and the world, as that of the physician or lawyer, minister or philosopher? He is thereby brought into more intimate relation with universal progress, with the march of intellect; he can solve difficulties with more ease, think more clearly,



calculate probabilities with more certainty, adjust means to ends with better judgment, disentangle the web of sophistry with more certainty, and becomes prepared to be a leader of men instead of being made the follower and dupe of others. "If this be so, then every intelligent father, whatever heritage he may be able to leave his son in acres and stocks, will want to see his mind so trained, so disciplined, so instructed in the science and knowledge of the age, that he can receive instruction and pleasure and profit from every blade of grass, from every passing breeze, from the rill that bubbles at his feet," from the stars which sparkle in the heaven above him, from the bow which spans the arch of the sky. He becomes, then, the seer, the prophet, the interpreter of himself, of nature, of God. Superior to nature, modifying, directing, and controlling her powers, not for physical purposes only, not for the sordid accumulation of wealth only, but for high moral ends. This is the sort of education which I have in my mind, and this is the sort of education to the realization of which I ask your co-operation to-day.

In addition to the means provided for class-room instruction, which for the present answer fairly well, there ought to be procured for the service of the College a farm sufficiently large for all the requirements of experimental agriculture. During the connection of the College with the Kentucky University, a farm was provided for its use, bought and paid for by the subscriptions of the citizens of Lexington and vicinity in order to induce the State to place its Agricultural College at Lexington. On this farm, consisting of the two estates of Ashland and Woodland, and embracing 430 acres of the best land in Central Kentucky, had also been erected a large building for a mechanical department, well equipped with machinery. The State of Kentucky had also advanced \$20,000 for the erection of buildings, all or most of which is alleged to have been expended on these two estates.

Upon the separation of the A. and M. College from the Kentucky University, this real estate which had been bought



for its use, was claimed and held by Kentucky University. Had the State College been the owner of this magnificent estate in fee, as it ought now to be, the necessity which I now bring before you would not exist. To conduct experimental farming with any degree of success, a tract of land is needed upon which permanent improvements can be made, and upon which a series of experiments, extending over a term of years, can be begun and carried forward. To do this upon a short lease, terminable under certain conditions at the option of the lessor, is quite impracticable.

A tract of land owned by the College, could in a short time be made what the organic law of Congress expected every Agricultural College to have—a model farm. Upon such a farm ought to be seen the representatives of the best breeds of beef and milk cattle, of the best varieties of sheep, and the best kinds of swine. Upon it should be erected model buildings for housing the employees, for storing grain and provender, and for providing shelter for those varieties of stock which require it. Facilities should be provided for testing the relative values of different kinds of food prepared under all conceivable conditions. Upon this farm experiments should be conducted in the growth and nourishment of all cereals, grasses, root crops, and other productions suitable to the latitude of the Commonwealth, under all possible variations of soil, planting and cultivation, the results of which should be carefully tabulated and given to the public. Every kind of machinery for preparing the soil, planting, cultivating, and reaping, should likewise be represented here—in short, the whole estate should be made an educational apparatus, whereon should be exemplified in practice and translated into action the instructions of the class-room. Here all the departments of study which I have shown make agriculture possible as an art, ought to find emphasis, illustration, and practice. To provide all this, however, requires money—requires legislation. I come here to-day to invite your co-



operation in procuring the funds to inaugurate a new era in industrial education in Kentucky. During the connection of the A. and M. College with Kentucky University, notwithstanding the possession of the estate to which I have referred, the idea of experimental farming was only fitfully attempted, and, on account of circumstances to which I need not recur—never realized. Since the separation in 1878, the College has had no opportunity even to attempt it, because of the absence of the indispensable condition—a farm. All the States around us, North, South, East, and West, have provided their Agricultural Colleges with farms handsomely equipped and stocked, ranging in area from 100 to 1,000 acres.

Kentucky is rich. The grounds on which the College stands are the gift of the city of Lexington. Most of the expenditure incurred in the erection of the magnificent buildings which crown the old city park was defrayed by the proceeds of the city and county bonds given to the State for this purpose. The accommodations are ample for the instruction of 500 pupils, and theoretical instruction is provided in all or nearly all the departments relating to agriculture. Only the farm is wanting, and that is indispensable. For procuring this I desire and claim your co-operation. I would urge you to take the initiative to procure the necessary legislation looking to this end, or at least your active co-operation towards its attainment. I will go farther. I think the agricultural interests of Kentucky ought to have an adequate representation on the Board of Trustees, by additional legislation, if this should be deemed necessary, and to this end I would pledge my hearty and loyal co-operation.

If the State of Kentucky, turning a deaf ear to the factious opposition of interested parties, will sustain your State College as it ought, cheapening education, widening its range, bringing it within the reach of the industrial classes, making it accessible to all, rich and poor, on equal terms, educating your teachers, your farmers, your mechanics, your



civil engineers, developing at home and under home influences the nerve and brain power which in time will develop the material resources of the Commonwealth, placing within the reach of every one an education equal to any that can be gotten anywhere within the limits of the Union, she will do a great and noble work.

On the education of your sons depends the perpetuity of your institutions. On this education depends the social and political morality, the leaven of which will leaven this people for righteousness. On this education depends the elevation of your children and children's children to a plane of far-reaching knowledge, such as you and I do not possess. Like the Hebrew law-giver, we have reached Pisgah's summit and can view the promised land: free institutions perpetuated, intelligence developed, morality deepened, culture widened, mankind living, not for bread alone nor by bread alone, but living by the conscious glow of the Divine Spirit, and living for his race and for his God.

The outskirts of this land of promise we are now treading, but into the full possession and fruition we may not go. But our children may—our children will, if we do our duty.

The great work of the day is to educate those who have no means to educate themselves. "It is not because of his toils, that I lament for the poor. We must all toil, and no faithful workman, whatever be his sphere or kind of toil, finds his task a pastime. The poor is hungry, athirst, but for him also there is food and drink. He is heavy laden and weary, but for him also the heavens send sleep, and of the deepest. But what I do mourn over is, that the lamp of his soul should go out, that no ray of knowledge should visit him. Alas! while the body stands so broad and brawny, must the soul be blinded, dwarfed, stupefied? Alas! was this, too, a breath of God bestowed in heaven, but on earth never to be unfolded?

"That there should one man die ignorant who had capacity for knowledge—this I call the deepest tragedy."



must the soul be blinded, dwarfed, stupened? Alas! was this, too, a breath of God bestowed in heaven, but on earth never to be unfolded?

“That there should one man die ignorant who had capacity for knowledge—this I call the deepest tragedy.”



1908

# SPEECH

OF

## PRESIDENT JAMES K. PATTERSON OF KENTUCKY UNIVERSITY

Before Circuit Judge Stout Holding Court In Frankfort.

(Published by request.)

Following is the argument of James K. Patterson, President State University, before the the Franklin Circuit Court, September 25, 1908, on the Constitutionality of the appropriation made for the State University by the late Legislature:

May the Court Please:

Inasmuch as I am not a licensed attorney, I esteem it both an honor and a privilege to be allowed to present views on the case under consideration before your honor.

My Attorney General, whose offices I read with pleasure, and whose purity of language and of composition, holds, that the change of "College" to "University"

BY THE

not claim the constitutionality and sanction conceded to those made for the Agricultural and Mechanical College. I shall attempt to show that the University idea existed implicitly, if not explicitly, in the original act of Congress making provisions for the establishment of the land grant colleges, of which the Agricultural & Mechanical College of Kentucky was one; that the Agricultural & Mechanical College still exists in the University; that the continuity of the institution is unbroken and its identity unimpaired. I shall further attempt to show that the inhibition contained in Articles 49 and 50 of the Constitution, does not apply to the appropriations made to the University by the last General Assembly; that the appropriation did not involve or imply a loan, and hence does not come within the scope of the inhibition expressed in articles 49 and 50 aforesaid.

What is known as the Morrill Act, approved July 2nd, 1862, made an appropriation of public lands to each State in the Union, in proportion to representation in Congress, the interest accruing from the proceeds of the sales, of which should be appropriat-



1908

—SPEECH—

OF

PRESIDENT JAMES K. PATTERSON

OF KENTUCKY UNIVERSITY

Before Circuit Judge Stout Holding Court In Frankfort.

---

(Published by request.)

Following is the argument of James K. Patterson, President State University, before the the Franklin Circuit Court, September 25, 1908, on the Constitutionality of the appropriation made for the State University by the late Legislature:

May the Court Please:

Inasmuch as I am not a licensed attorney, I esteem it both an honor and a privilege to be allowed to present my views on the case under consideration before your honor.

The Attorney General, whose official utterances I read with pleasure, because of their purity of language and elegance of composition, holds, or seems to hold, that the change of name from "College" to "University" affects seriously, if it does not destroy the validity of appropriations made to the University. He allows the constitutionality of appropriations made to the College, during the former period of its existence, but holds that the College, as a corporation, is dead, in consequence of the change of name, and that appropriations made for the University, which takes its place, may

not claim the constitutionality and sanction conceded to those made for the Agricultural and Mechanical College. I shall attempt to show that the University idea existed implicitly, if not explicitly, in the original act of Congress making provisions for the establishment of the land grant colleges, of which the Agricultural & Mechanical College of Kentucky was one; that the Agricultural & Mechanical College still exists in the University; that the continuity of the institution is unbroken and its identity unimpaired. I shall further attempt to show that the inhibition contained in Articles 49 and 50 of the Constitution, does not apply to the appropriations made to the University by the last General Assembly; that the appropriation did not involve or imply a loan, and hence does not come within the scope of the inhibition expressed in articles 49 and 50 aforesaid.

What is known as the Morrill Act, approved July 2nd, 1862, made an appropriation of public lands to each State in the Union, in proportion to representation in Congress, the interest accruing from the proceeds of the sales, of which should be appropriat-



ed by each State, which might take and claim the benefit of the Act, for the endowment, support and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies and including military tactics, to teach such branches of learning as are related to Agriculture and the Mechanic Arts, in such manner as the Legislature of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." The language quoted above allows the widest latitude of interpretation. Certain subjects must be included in the course of instruction provided under the Act, namely, those branches of learning related to Agriculture and Mechanic Arts, and military tactics. These are obligatory. Other scientific and classical studies may be included, ad libitum.

Indefinite provision is thus made for expansion. The institutions thus founded may provide instruction in Agriculture and the Mechanic Arts and military tactics alone. They may go farther. They may include within an ampler range and a wider scope any other science, any other, which subject may be taught, or is thought desirable to be taught. The institutions founded may remain colleges only. They may expand into universities of the largest proportions.

That the Legislature of Kentucky understood the trust in this sense, is evident from Section 3 of an Act approved March 13, 1878. In order to understand the significance of this section, it may be observed in passing that the Agricultural and Mechanical College, when established in 1865, was made one of the Colleges of Kentucky University, the State reserving the

right to dissolve the relationship at any time. In 1878 the commission appointed by the Legislature of that year, with instructions to report upon the advisability of maintaining the connection with Kentucky University, unanimously reported in favor of a severance. A commission was then appointed to secure a location for the Agricultural and Mechanical College. Section 3, forms a part of the Act aforesaid, and contains definite and precise instructions in regard to the nature of the institution to be re-established and placed upon an independent basis. The language is as follows:

"Said commission shall ascertain the number of departments of study necessary for the effective operation of a first class State University, such as the geographical condition of the Commonwealth, her agricultural and mineral resources, her influence and dignity require to be constituted for the education of her sons, the plan of organization, salaries of professors and instructors, plan, cost and equipment of college buildings, experimental farm, mechanical department, horticultural department, laboratories, museums, and cabinets, and to report the same to the next General Assembly."

It will thus be seen that in 1878, fifteen years after the trust was accepted, the Legislature of that day had in mind the development of the original Agricultural and Mechanical College contemplated in the Act of 1862. The Agricultural and Mechanical College, pure and simple, did not meet the education wants of the Commonwealth. An institution of University proportions and prepared to do University work was required. In 1880, when the institution was placed upon an independent footing and established in Lexington, the half-cent tax voted for its maintenance, yielded an insufficient income upon which to establish a University. From that time on until 1890, the constitutionality of the tax was in doubt and not until the institution obtained formal recognition in Article 184, of the



new Constitution, was its maintenance by State aid placed beyond question.

Section 2, of the Act of 1880, gives to the Board of Trustees of the reorganized College the utmost latitude in regard to the scope and compass of the work for which they may provide. "Said Trustees shall have power to determine from time to time the number of departments of study or investigation which the College shall comprise, with the scope of the organic act of Congress or acts supplementary thereto donating land script for the endowment of Agricultural and Mechanical Colleges; the relation which each department or group of departments shall sustain to each other and to the whole; to devise, allot and arrange the distribution of departments or groups of departments with the designation appropriate to each and to devise the means required for their effective instruction, administration and government."

Under this authority, the authorities of the College have provided those subjects related to Agriculture and the Mechanic Arts. They have expanded these far beyond the original requirements of the Morrill Act. They have added classical and other scientific studies. They have provided for investigation as well as instruction. They have grouped the departments established into courses of study under Deans and sub-faculties, with the designation appropriate to each. All the machinery of university work, has been in operation for years, and all this through a natural process of growth, development and expansion. These institutions must grow, if they are to keep pace with the progress of the age and the requirements of society. An institution which taught today the science, the literature and the art which formed the body of the recognized knowledge and instruction of half a century ago, and taught nothing more, would be an anachronism, and the institution which shall confine its instruction fifty years hence to the body of recognized knowledge of today will be equally an anachronism then. You are not in your legislation and judicial construction devising means for embalming a corpse, but for maintaining the life

and vigor and growth of a healthy and symmetrical organism. Educational institutions are like States. They grow and when they cease to grow, they decline and perish. This is the fundamental conception of American colleges and universities. The common schools grow, or should grow, academies and high schools grow, colleges and universities grow, and the college and the university as they grow and lift themselves to a higher plane, lift common schools and academies in high schools each to a higher level. The kind and character of the college and university determine the kind and character of all subsidiary and preparatory work. The character of the University forms the index of the intelligence and moral elevation of a people. What made Scotland, with her rigorous climate and large extent of barren soil, the most intelligent and most progressive of her contemporaries? The answer is, her universities—Glasgow, St. Andrews, Aberdeen and Edinburgh. These lifted her parochial schools and grammar schools to a higher level, during the 17th and 18th centuries, than obtained in England, France or Germany, and lifted the masses of her people far above the corresponding strata in any other part of Europe. What has made Virginia famous for one hundred years? The famous university founded by Jefferson. What made barren New England such a power in this nation and enabled her to wield an influence for 150 years out of all proportion to area or population? I answer, Yale and Harvard.

These celebrated institutions in America have all grown. From small beginnings many of them have attained colossal proportions. The land grant colleges established under the Act of 1862 are now contesting their hitherto undisputed supremacy. They are now instead of following, forging to the front and setting the pace for higher education in America, and in the world. They are surpassing them in income, outstripping them in numbers and excelling them in the excellence of their work. Think of Cornell, with an income representing at 5 per cent. a capitalized endowment of \$39,000,000, the Universities of Illi-



nois, Wisconsin, and California, with incomes representing endowments of \$21,000,000, the Universities of Michigan and Minnesota with incomes representing \$16,000,000, and Ohio, Missouri, Nebraska, Iowa, incomes representing endowments of \$10,000,000 to \$12,000,000. Twenty years ago these were relatively small institutions, doing under one name or another collegiate work only. Now they are full fledged Universities, adding to collegiate work, work in original investigation and research.

Section 4, of the Act of the last General Assembly, approved March 17, 1908, changing the name from Agricultural and Mechanical College to that of State University makes distinct provision for the continuance of an Agricultural College and of a College of Mechanical Arts as integral parts of the university. This is a feature common to all Universities organized under the Land Grant of 1862. They retain distinctive colleges for agriculture and the Mechanic Arts as integral parts of the university organization, co-ordinate in dignity and importance with other courses of instruction. Indeed in very many of the land grant universities, they are the most notable features of university instruction. For example, Nebraska, California, Minnesota, Tennessee and West Virginia.

In opinion addressed to Auditor of Public Accounts, the Attorney General expressed the opinion that the agricultural college is dead. I have shown that there is a college of agriculture and a College of Mechanic Arts. These form the nucleus of the university. The former has enlarged its sphere of operations, including much more than was comprised in the Act of 1862, agricultural and organic chemistry, origin of soils, chemical analysis of soils, soil physics, variation and improvement of plants, principles of stock breeding and stock feeding, dairying, entomology, analysis of fertilizers, administration of pure food law. It has since 1887 incorporated the Experiment Station as one of its departments and employs for this purpose alone a staff of more than a score of men and women. In the face of these facts and these activities, reach-

ing out all over the Commonwealth, is the Agricultural College dead?

The primitive conception of mechanic arts has developed into mechanical engineering, civil engineering, electrical engineering, rural engineering, mining engineering and civil engineering. It no longer confines itself to blacksmithing and carpentry. It does not discard these, but upon mathematics, chemistry and physics it builds the professional and industrial activities which form the important factors in modern material progress. It has educated dozens and scores of men who build your railroads, span your rivers, open your mines, supply your cities with reservoirs and traction lines and lighting plants. It supplies men who devise and build your machinery, reach out in investigation and discovery, adding increment by increment to the mass of knowledge and material wealth of the State and of the nation. Are these evidences of death? Visit the university today. You will find the Agricultural College in new and enlarged quarters, with increased matriculation and increased facilities for work. Visit the various departments of engineering. You will find former material facilities outgrown, new buildings in process of construction and plans under consideration for the enlargement of old ones. Enlarged equipment in physics, chemistry and engineering machinery. You will find increased matriculation pressing into these departments for technical and practical training. Are these evidences of death? Movement, activity, energy, these are not the characteristics of death, but of life, intense, intelligent and triumphant, a life growing, expanding, reaching out to new conquests over matter and space and time. Dry up the springs of vitality, by withholding the sustenance which is the condition of life, and death ensues. This you may do and dissolution will follow. But this happily has not yet come to pass, and I am fain to believe that under your construction and interpretation of the statute, it never will. The Agricultural College and the College of Mechanic Arts live in the University a life vigorous, full and intense and long may they



live for the glory of Kentucky and the good of her sons.

If there be any law more firmly established in human consciousness than another, it is the law of continuity, and the law of identity. This old earth that we inhabit has during millions of years, undergone many changes. We might say that in a certain sense, it has grown and developed, at any rate, it has undergone transformations which have fitted it for the abode of animal and vegetable life, and for continually developing higher forms of life. But who will say that the continuity of its existence has been broken or its identity destroyed? It is the same earth which formed one of the planetary spheres at the dawn of the creation when "the morning stars sang together and all the sons of God shouted for joy." Its continuity will be maintained and its identity remain until destruction ensues and it is dissipated into the original star dust from which it was formed.

Continuity is broken and identity destroyed only through dissolution. So with an institution of learning. Like the plant, the tree, the animal, it is the subject of transformation and growth and expansion, but the continuity of its life remains, its identity is unimpaired. "First the seed, then the blade, then the ear, then the full corn in the ear." The child becomes a boy, a lad, a man, a middle-aged man, an old man. Is the continuity of his life broken or his identity destroyed? When the girl becomes the maiden, and the maiden the wife, changing her name in marriage, is the continuity of life broken or identity destroyed? Most married ladies nowadays at least, would vehemently resist the assumption that marriage and change of name involves absorption and dissolution.

A modern State, a city, a railway corporation, a banking establishment, a municipal creation does not lose its identity or break the continuity of its existence by the adoption of a new constitution, a change of charter or by the amendment of their articles of incorporation. All the obligations and rights attaching to the antecedent status remain unimpaired. The colonies

became the United States. Charters gave place to constitutions. The articles of confederation under which they won their freedom gave place in 1787 to the present constitution. Did the States or the Nation lose their identity or was any break made in the continuity of their existence by these political transformations?

The county of Fincastle became the District of Kentucky, the District of Kentucky the State of Kentucky, and now all legislation, all executive action and all judicial processes run in the name of the Commonwealth of Kentucky. Is there any break in continuity or any loss of identity here? In 1824 the State of Indiana founded and endowed an institution for higher learning which it named the Indiana Seminary. It grew rapidly and in 1827 its name was changed to the Indiana College. Its continued growth warranted a still further change of name and in 1838 the Legislature changed its style and title to the Indiana State University. So I might illustrate from Harvard, Yale, Princeton, Columbia College all these within the last forty years have changed their names from College to University. The present University of Illinois, after its establishment, changed its name to its present title. But the proposition is so plain and the argument so incontrovertible that it seems useless to pursue it further.

It seems to me that Sections 49 and 50 of the Constitution are wholly inapplicable to the law making appropriations for the State University and the Normal Schools. The appropriations made for them were believed to be quite within the revenues. A committee, consisting of the promoters of the measure, with statistics compiled by the Auditor of Public Accounts, and the Auditor himself, waited upon his Excellency the Governor, to assure him that the appropriations were within the revenue. My information is that Auditor James told the Governor he could take care of them. Had the belief existed that the appropriations exceeded the revenue and that these payments must be met by a loan at a stipulated rate of interest, in bonds maturing at a date set forth in the loan, and that the propos-



ed loan exceeded \$500,000, and if the General Assembly had passed an act authorizing a loan of more than \$500,000, in order to meet the obligation, then the constitutionality of the loan would depend on an affirmative vote of the people. But none of these conditions existed. The appropriation of \$500,000 is not payable in a lump sum, but by installments extending over three fiscal years, a loan to provide the money was never suggested, and it is quite certain that no steps will ever be taken in that direction, either by the present General Assembly or by its successor.

It is a fundamental principle in all civilized communities that the obligations of contract entered into in good faith shall be unimpaired. The State of Kentucky in accepting the fund provided by Congress in 1862 accepted it in good faith with all the obligations expressed and implied in accepting the trust. The Commonwealth has established the institution required. The General Assembly of 1880, with the knowledge that the large land grant had been practically wasted, imposed a tax, the proceeds of which is applied for its maintenance. Since then the Federal Government has made additional gifts and the Commonwealth additional appropriations. Will the State now break faith with the Federal Government and with its own people by repudiating through its highest judicial authority its implied collateral and reciprocal obligations on the flimsiest of all possible pretexts, the change of name and the fiction of a loan? The State University has now under contract and under process of construction a building for physics and civil engineering, on the basis and on the faith of the appropriations made to it for buildings. Must we be compelled, through failure of the State to meet its obligation, to the university, to repudiate the obligations undertaken in good faith and bring the work to a standstill? We have expanded our courses of study and added a new one, that of law. We have enlarged our instructional force on the faith of increased revenue. Must we contract our sphere of operations, discharge our recently employed professors, with a threatened suspen-

sion at the end of the year, in order to discharge our liabilities? If you thus deal with our appropriations, what shall hinder any tax payer from testing by injunction the validity of any appropriations made by the last General Assembly or by preceding General Assemblies for the Colored Normal School, the Institution for the education of the Deaf and Dumb? If Articles 49 and 50 of the Constitution militate against appropriations for us, equally so do they against appropriations made for them, and not only for them, but for all other purposes. The alleged inhibition is far reaching. It does not stop with us. All appropriations made contribute to swell the aggregate of which we are only a part.

The institution which was the State College and is now the State University has been the subject of discussion and contest in the General Assembly, in the Constitutional Convention and in the courts. It has been traversed at every step, halted and made to show its passports at every turn. Heretofore it has emerged successful from every contest. I sincerely hope that the cause of progress which it represents and its good fortune will carry it through this crisis also. It has had the good will of the Legislature, the judiciary has by the wisdom and rectitude for its deliverances upheld and sustained the action of the General Assembly, and the Executive has given it an enlightened and sympathetic support. The College and the University have not disappointed the public expectation. Its alumni are found everywhere loyal, capable and well equipped, confident in the assurance of educated talent and worth, and having nothing to learn from the best representatives of the best schools in America. They take prizes out of all proportion to their numbers and acquit themselves to the full measure of the most exacting requirements. They are making a name for Kentucky, of which Kentucky will be proud. Let the good work go on. Give us the conditions for success and success is assured. Let the scholars and professional men and women who issue from the halls of the university as from the college, maintain the reputation of



the Commonwealth in the arts of war and in the arts of peace. We are now in a certain sense at the parting of the ways. A favorable opinion from this court will give the university an impulse forward which will be felt for years, an adverse opinion, a check which may require years to overcome. Progress is not always in a right line, sometimes in a curve, but it still remains a moral as well as a mathematical truth that a straight line is the shortest distance between two points and that time is saved and energy conserved by following the straight line, rather than the curve.



47-M-64



Reprint of

**Commencement Address**

---

---

**State University of Kentucky**

---

---



---

---

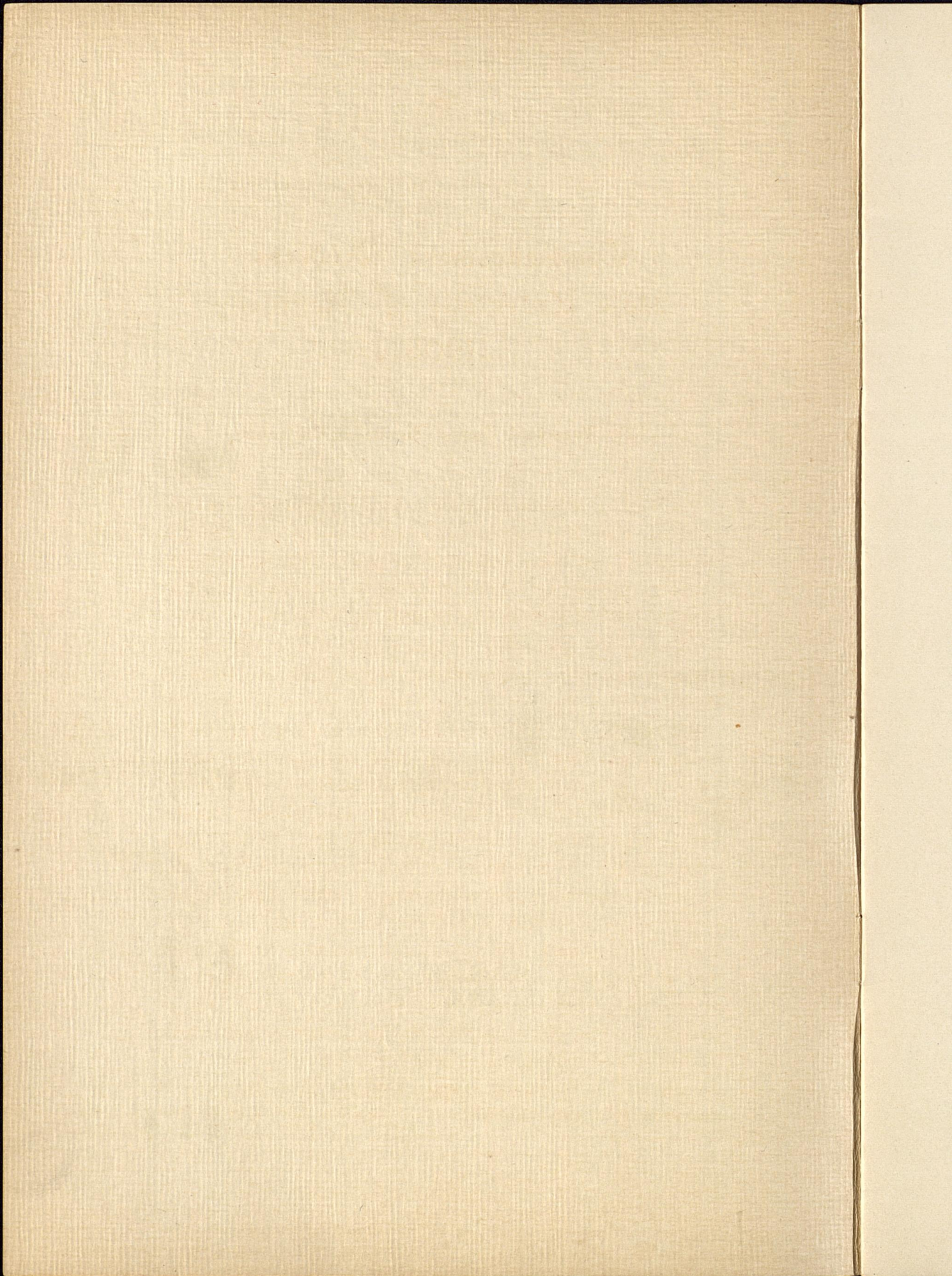
By President James Kennedy Patterson

---

---

Delivered June 4th, 1908  
Lexington, Kentucky







Commencement Address  
State University of Kentucky.  
...1908...

By President James Kennedy Patterson.

I think it not inappropriate, before the conclusion of these exercises, upon this auspicious occasion, to say something in reference to the State College of the past. This will form the necessary prelude to a brief reference to the present and may form the basis of a reasonable forecast for the future.

During the presidency of James Buchanan, a bill was introduced into the Congress of the United States by Justin S. Morrill, then a member of the House of Representatives, the object of which was to appropriate a part of the rapidly diminishing domain then known as the public lands to endow and to build up a system of schools throughout the Union, which should devote themselves to the education of the industrial classes, especially in agriculture and the mechanic arts. In 1857 Agriculture in America may be said to have been in its infancy, and the great manufacturing establishments which have become sources of untold wealth to the people of the United States were also in their infancy. The plea could then very well be made that they required the fostering care of the Government to protect them from injurious competition with the products of foreign countries. The object of Mr. Morrill was to build up an intelligent and industrious citizenry, who should utilize to the utmost the inexhaustible resources of the great agricultural communities of the United States of America, and to lay an in-



telligent basis upon which to establish and maintain productive industries through educated and intelligent artizans. This measure, although passed by both Houses of Congress, was vetoed by President Buchanan. During the second year of the Civil War, Mr. Morrill again re-introduced his bill, and although the country was then engaged in the most gigantic struggle that had ever taken place on this continent, Congress found time to legislate upon matters of far-reaching import, not only to that generation, but to the generations to follow. Mr. Morrill's measure carried with it an allotment of public lands, 30,000 acres for each representative in Congress to the several states of the Union, the proceeds of which should be applied to found and to endow colleges in each state, "wherein should be taught those branches of learning related to agriculture and the mechanic arts, without excluding the classics and other scientific studies, and including military tactics, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." Provision was made that when the states then in revolt had been re-established as members of the sisterhood of states, they also should be made the beneficiaries of this munificent provision. Upon this foundation all the great institutions of the country founded since 1860, with the exception of Johns Hopkins, Leland Stanford, and the University of Chicago, have been established.

In almost all the states of the Union, these agricultural and mechanical colleges became the nuclei around which have grown up institutions of a scope and compass much wider and much more representative of educational necessities in their respective states than was originally intended by Mr. Morrill. The agricultural colleges of Michigan, Kansas, Pennsylvania, Massachusetts and Iowa have been content to remain agricultural and mechanical colleges pure and simple. Their states have voted large sums of money for their upbuilding and they have attained a degree of excellence comparable with the oldest established



and best managed agricultural colleges of the Old World. They have given to mechanic arts, however, an interpretation far beyond that originally contemplated in the organic law of Congress. While giving instruction such as would enable the mechanic to become an expert journeyman in carpentry and a skilled worker in metals, they have gone far beyond these simple conceptions. They have developed into technical schools of a high order, embracing engineering in all its phases and in all its relations, Mechanical, Electrical, Civil, Mining, Sanitary and Municipal. Many of them have equalled and not a few of them have surpassed the famous schools of technology of the East. With this interpretation of the principles of science as related to the mechanic arts and the principles of science as related to agriculture, they have been contented and have gone no farther. Other institutions, such as the Universities of Illinois, California, Missouri, Ohio, Wisconsin, Minnesota, and Cornell, have added to instruction in agriculture and the mechanic arts, classics, modern languages, elaborate courses in history, economics and sociology, English literature, biology, botany, physics, endowed and equipped upon a scale enabling them to do work of equal value with those of the older universities of the nation. They have expended thousands and millions of dollars upon the establishment of libraries and the creation of laboratories and the collection of museums whereby original research has been encouraged and prosecuted with a degree of success far surpassing the expectation of their promoters. A large number of these institutions have likewise added professional schools, law, medicine, dentistry and pharmacy, their object apparently being to embrace within the scope of their educational activity and resources all the knowledge of the time and to make provision for extending the boundaries of knowledge in every possible direction.

Kentucky made no effort to establish an agricultural and mechanical college until after the close of the war. The land scrip allotted to this state, amounting to 330,000 acres, would



if it had been judiciously located among the vacant lands of the west, have formed the basis of an endowment fund, large and ample for the necessities of the institution, especially during its earlier years. The Commonwealth, however, in the management of this delegated trust, committed two great mistakes. The land scrip representing this magnificent domain was turned over by the Legislature to the Sinking Fund Commissioners, who employed an agent to dispose of it for what it would bring upon the market. It was sold for fifty cents an acre and the proceeds of the sale invested in Kentucky State bonds, the interest of which, amounting to \$9,900 per annum, was applied for the maintenance of the Agricultural and Mechanical College. This sacrifice of the fund given by the general government was the first mistake. The second mistake consisted in attaching the Agricultural and Mechanical College to a denominational school, making it a branch of Kentucky University, instead of placing it upon an independent footing. This was done by the Legislature of 1865. The Legislature, in forming the partnership with Kentucky University, reserved the right to withdraw the Agricultural and Mechanical College at any time that the public interests might demand. The relationship continued for thirteen years, namely, until 1878, when the General Assembly intervened and dissolved the connection, placing it in 1880 upon an independent footing and providing additional means through the imposition of a tax of one-half of one cent on each one hundred dollars of taxable property for its maintenance. The institution was when detached from Kentucky University, in the condition of a bankrupt, who through an ill-omened partnership of thirteen years had lost both time and money and when liquidation was ended, emerged from the partnership with nothing at all.

When the College began operations as an independent institution in 1880, its faculty was small, only six in number, its matriculates few and ill prepared for college work. Indeed, five out of every six were unfitted for college work and had to be pre-



pared in the Academy before entering the Freshman Class. \$9,900 per annum, accruing from the congressional scrip fund, added to \$17,500 per annum received from the proceeds of the tax, made a fairly good working income with which to begin. Indeed, the amount seemed so large that ere two years the denominational colleges of the Commonwealth took alarm and insisted that the Legislature of 1882 should repeal the tax and compel the College to limit its operations within an income of \$9,900. After a fiercely fought contest, extending over three months, the movement to repeal was defeated. That was the first contest and the greatest contest in which the State College was during its history of twenty-eight years, involved. Its very existence, pending the legislative struggle, hung in the balance. Both its present and its future were by many of its friends despaired of. The belief prevailed that in the course of a few years it would have to close its doors and hand back to the general government the miserable pittance of an income which was all that the gross mismanagement of the Commonwealth got from an endowment of 515 square miles of public lands,

The City of Lexington had given the ground upon which the State University now stands. In addition to that, the city and county had given \$50,000 for the erection of buildings. These buildings were in process of erection when the legislative contest opened. Misled by the architects employed, the amount of money at their disposal was found to be wholly inadequate to the completion of the college building and old dormitory. Their progress was arrested half-way, the college treasury was exhausted and the income from the State in imminent danger of being cut off. At this juncture the Board of Trustees were at their wits' end, they knew not which way to turn. An effort was made to obtain a loan from one or more of the banks of the city, to enable them to complete the buildings. They were met by the objection that the College had nothing to offer as security, either as realty or collateral. At this juncture, I intervened.



By economy I had succeeded in putting aside a small margin every year to the credit of profit and loss, and these assets, not very large, but representing about all I had, I placed at the disposal of the College. I went to the Northern Bank, put up my own securities, borrowed the necessary amount of money for the completion of the buildings and placed it in the hands of the Executive Committee. This tided over the difficulty so far as buildings were concerned, and to the surprise of the friends of the College and the discomfiture of its assailants, the House of Representatives laid the motion to repeal upon the table. The College was saved and its future apparently assured.

Pending the motion to repeal the tax, the opposition believed that they had discovered that the tax was unconstitutional, "that no money could be raised by taxation or otherwise for purposes of education other than in the common schools." This constitutional provision appeared upon its face to be absolutely prohibitive. An elaborate argument was made by Judge Lindsay, the attorney of the associated colleges, before the joint committee of the House and Senate. At the conclusion of his argument, the case of the College appeared absolutely hopeless. The Executive Committee had made overtures to some of the most distinguished lawyers in the Commonwealth, among others, John G. Carlisle, to defend the constitutionality of the Act. He declined to undertake the defense, because he believed that it would be impossible to sustain the constitutionality of the tax, either before an inferior court, or the Court of Appeals. Though not a lawyer, I ventured to make an argument before the Committee, at the conclusion of which the opinion of the large majority of those present was that Judge Lindsay had failed to make good his plea.

After the Legislature adjourned, the question of the constitutionality of the tax was raised in Louisville, Mrs. W. W. Hill refusing payment. The case came into the Chancellor's Court; the six protesting colleges were represented by Judge Lindsay, Alexander P. Humphrey, Bennett H. Young and James Trabue.



I was allowed by the Court to file as a brief the argument in reply to Judge Lindsay which I had made before the legislative committee and when the case came to the Court of Appeals, a like courtesy was extended. The composition of the Court was manifestly hostile to the College, but through the good offices of Judge Pryor, the case was held up until 1890, when its constitutionality was affirmed, Judge Holt delivering the opinion. He did me the honor to say that he decided the constitutionality of the Act upon the lines which I had laid down and upon the argument which I had presented in my brief.

Between 1882 and 1890, the College grew, not rapidly, but steadily, a better class of matriculates entering year by year, a smaller proportion in the Academy and a larger proportion in the college proper, but we were not left undisturbed. Efforts were made during every meeting of the Legislature in the intervening period to procure the repeal of the Act. The judgment of the court affirming its constitutionality in 1890, discouraged these efforts. Thereafter the biennial motion to repeal was introduced for several successive Legislatures, but the opposition grew less and less, until in 1898 it practically ceased. Meanwhile the income from the half-cent tax had been growing from year to year.

In 1887 the Congress of the United States passed an Act establishing Experiment Stations and appropriating \$15,000. annually therefor. The State College of Kentucky shared in this beneficence of the general government. The Experiment Station was put upon a substantial footing, the income from the Station in connection with the income from the fertilizer law, provided the necessary funds for its effective operation. These two sources of income have been enlarged in subsequent years by the passage of the pure food act, the management of which is vested in the Station, and by the passage of the Adams Act by Congress, giving an additional annual increment of \$15,000 per annum.



In 1890 a measure was introduced by Hon. Justin S. Morrill of Vermont for the further endowment of Agricultural and Mechanical Colleges. \$25,000 per annum was given to each state which had availed itself of the benefits of the Act of 1862, but the full amount of \$25,000 did not come to the State College. By the terms of the Act two alternatives were presented, either to admit colored students upon a footing of equality with the white, or to divide the appropriation of 1890 with them upon the basis of population. The College, of course, chose the latter, and 14½ per cent of this fund was and is applied to the maintenance of the colored school at Frankfort. In 1906 a further annual appropriation of \$25,000 was made by the general government to each state upon identical conditions with those of the Act of 1890. In 1900 the Legislature appropriated \$60,000 for the erection and equipment of a gymnasium and for the construction of a home for young women. Two years later \$30,000 was added for the young women's home, and out of this fund, namely, \$60,000, a very handsome and commodious building has been erected and equipped for boarding and lodging the young women matriculates of the College. In 1904 an additional \$15,000 was appropriated annually by the State Legislature for income, and in 1908 \$20,000 more, making in the aggregate from all sources, tuition fees included, a total income of about \$125,000.

The city and county gave the grounds and the money in 1880 for the erection of buildings. Since then additional buildings have been added, until now, instead of two, there are fourteen buildings upon the college campus, with the prospect of two more during the present biennial period. The equipment for Mechanical and Electrical Engineering is the best south of the Ohio River. The Departments of Chemistry, Physics, Botany, Biology, Geology, Anatomy and Physiology, Languages, Ancient and Modern, Metaphysics, Ethics and Physical Culture, are second to none in the South. The faculty of instruction numbers nearly fifty persons. The heads of departments rank



among the ablest in the country, while the majority of the assistants are developing a talent for instruction which places them in the line of promotion. In the meantime, 250 acres of land have been bought for experimental purposes, representing an actual outlay of about \$100,000, and an actual present valuation of about \$130,000. The College Campus, with buildings and equipments, represents about \$850,000.

All this, you will observe, has been created and developed within the last thirty years in the face of the fiercest and most determined opposition. Indeed, I make bold to say that no land grant college in America and no institution East or West, North or South ever encountered so many obstacles and survived. Through all its vicissitudes, its friends never faltered, and while at the close of each session of the General Assembly, they hoped that they had encountered and overcome the last assault, they had learned by experience, while secure of the past, to distrust the future and prepare for whatever the next succeeding Legislature might have in store for them.

A wholesome impetus was given to the College by the passage of the Ferguson Bill in 1893, making provision for the payment of traveling expenses and free tuition to county appointees. This wise legislation disarmed the opposition of the outlying counties and secured for the College a continuous supply of most excellent material. Some years thereafter, the affiliation of the best high schools of the Commonwealth with the State College brought annually a large number of well prepared students, honor graduates of their respective schools, and representative of the best culture and traditions of their respective cities and counties. Increasing income, as indicated above, enabled the College to strengthen its existing departments and accomplish larger and better results than had been possible before 1890. Moreover, the success attained by the alumni and the facility with which they obtained good positions with remunerative



compensation added largely to the prestige of the College and increased its matriculation list from year to year.

Thus, when the transition from the style and title of State College to State University took place, the University had a solid foundation upon which to rest and an honorable background behind it. The antecedent period had been stormy, the clouds from above frequently lowered, casting a shadow and a gloom over its present possibilities and its future prospects, but these from time to time lifted and through the rifts the sun shone ever and anon, indicating that even the darkest day may have gleams of light to cheer those who had been sitting in the shadows.

And now a word or two with reference to the future. I find that by looking over a report which I made to the Trustees in 1889, after making a tour of some of the Universities and Colleges in the North and West, that their endowments and income and prospects at that time, though bright as compared with ours, were not by any means so bright as are ours today. The income of the Ohio State University at that time, exclusive of the expenditure for the maintenance of the Experiment Station, amounted to \$68,000. It is now \$450,000. The income of the Agricultural College of Michigan was \$63,000. It is now \$288,000. The income of the University of Wisconsin was then \$190,000. It is now \$1,100,000. The income of the Agricultural and Mechanical College of Kansas in 1889 was \$45,424. It is now \$203,000. The income of the Missouri University was then \$70,000. It is now \$556,000. The income of the State College of Kentucky was then about \$30,000. For the next fiscal year it will be \$125,000. While we have not kept pace in growth of income with these other institutions, we have still, considering the undeveloped interest in education which obtained then and which to some extent obtains still, made very commendable progress. From this comparison, I think that we may anticipate with some degree of confidence a future for the State University of Kentucky commensurate with the successes of the past and with a



well grounded belief that in the no distant future we will far surpass them.

One word, before we pass to the distinctive feature of University work. After the establishment of the Normal Department in 1880, as one of the integral departments of the State College, wherein provision was made for education of teachers, I brought the question of admitting women to the State College before the Board of Trustees. Judge W. B. Kinkead, to whom I had previously communicated my views, gave me his cordial support. I represented that inasmuch as a large number of the teachers of the Commonwealth were women, that they could not, upon any fair interpretation of the statute, be excluded. On the contrary, that they must be included within the scope of the instruction given by the College. The Board of Trustees somewhat reluctantly acceded to my view and the doors of the Normal Department of the College were opened to women. Ere long it was found expedient no longer to confine them to the privileges of normal school work, but to open all the departments of the institution to them. Since that time they have formed a very appreciable percentage of the matriculation of each year, on the average, say, about twenty per cent. No distinctive courses for women have been provided, but all the courses of instruction leading to a degree and all the departments thereof have been made available to them upon identical conditions with males. A very considerable percentage of each graduating class consists of young women, whose education has embraced as wide a scope and has been of as thorough a character as that gotten by young men.

And now the State University stands before you strong, vigorous, symmetrical, disciplined by adversity, but victorious in every contest, "with charity for all and enmity to none", ready to set the pace for advanced education, for research, for discovery, it opens wide its doors and invites all to enter. In its history, setting out from small beginnings, the first twenty-five years of



its life a constant struggle for existence, the State University is a conspicuous example of survival of the fittest. *Esto perpetua.*

“Ours is no sapling, chance sown by the fountain,  
Blooming at Beltane, in winter to fade,  
When the whirlwind has swept every leaf from the mountain,  
The more shall Clan Alpine exult in his shade.  
Moored in the rifted rock,  
Proof to the tempests shock,  
The firmer he roots down,  
The ruder it blows.”

Now that the transition has been made from State College to State University, it is pertinent to inquire what the distinction between college and university may be. Stated in general terms, the function of the college is to teach; the function of the university is to discover. Collegiate instruction consists mainly in communicating to students the contents of knowledge already discovered and verified. The function of the university, on the other hand, is to extend the boundaries of human knowledge, to proceed from the known to the unknown, using the former as a basis for the discovery of new truths. Research then may be described as the characteristic and distinctive feature of university work. Investigation, experiment, discovery, verification, are the essential features of research. A new truth discovered may or may not profoundly modify our conceptions of the body of truth hitherto known and accepted. Induction from accepted conclusions leads either to new principles or to a modification of the old. That is to say, to co-ordination with accepted conclusions in collateral lines of research and discovery. These frequently lead to an adjustment of conclusions heretofore accepted in other systems of knowledge more or less intimately connected with each other. For example, the theory of the age of the earth and the duration of animal life, formerly believed



to be not more than 6,000 years, by discoveries in geology, palaeontology, embryology, biology, physics, chemistry, astronomy, and language, in fields closely related and in fields remotely related, all of which point in the same direction, is no longer tenable. The old system of chronology has been completely overthrown and while nothing definite has yet been discovered to replace it, it is quite certain that the period of terrestrial life cannot be embraced within less scope than millions of years.

It will be seen, therefore, that the honest investigator, the honest seeker after truth, must divest himself of all preconceived prejudices and as Prof. Huxley says, animated only by a fanaticism for truth, proceed with the work of research, altogether untrammelled by pre-existing views, following resolutely wherever the torch of science may guide him, even though it be through darkness and gloom.

The eighteenth and nineteenth centuries have been pre-eminently the period of discovery. The wonderful awakening of European thought which preceded and accompanied and followed what is commonly known as the Renaissance, has resulted in the discovery of a body of knowledge such as could not have been dreamed of or anticipated three centuries ago. Roger Bacon in the distant past dimly apprehended the cloud upon the horizon no bigger than a man's hand, and in a wonderful forecast which seemed almost prophetic, he indicated in general terms some of the most wonderful triumphs of modern scientific research. Copernicus followed, after a long interval, and demonstrated the true theory of the universe. Galileo still later and Leuwenhoeck, the one with a very rudimentary telescope, and the other with an equally rudimentary microscope, took the first steps in disclosing the infinitely large and the infinitely small. The earth was no longer the centre of the universe, but one of the smallest of the planets, revolving around a mighty solar centre, distant millions of miles. Animal life was no longer limited to visible forms, but millions upon millions of tiny ex-



istences found a local habitation within the compass of a drop of water.

The interpretation given to geological phenomena within the last hundred years has laid the foundations of the rational system of geology which now obtains. Physical causes by which the earth was gradually fitted to become the abode of animal life are now recognized to be identical with causes silently operating and with which we are quite familiar today. The more or less intelligent forecast of Democritus and Lucretius nearly two thousand years ago had no philosophic ground-work upon which to rest, but the ideas to which they gave expression found a prolific soil in the anticipations of Buffon, Wallace and Darwin, who established upon a firm basis the doctrine of evolution as now accepted and held by all the intelligent scientists of modern times. Those who remember the storm of dissent and invective which these alleged revolutionary views then encountered could scarcely anticipate the intelligent acquiescence with which they are now regarded. The Church of today feels no more endangered by the acceptance of the doctrine of the survival of the fittest than did the Churchmen who lived a century after Copernicus, Kepler and Newton feel that the foundations of their belief were shaken by abandoning the geocentric conception of the universe. The researches and discoveries in the domain of biology, chemistry, and physics have been specially prolific of good in these modern days. No one can measure the value of the impetus given to discovery in these realms of investigation by the far-sighted policy which induced Justin S. Morrill of Vermont fifty years ago to devote a part of the public lands of the United States to found and endow institutions of learning wherein those branches related to agriculture and the mechanic arts could be taught. These sciences were thus invested with a new dignity and a new significance. Hitherto pursued for their own sake, they now came to be pursued for the practical results certain



to follow their further application to the creation and development of wealth in agriculture and in manufactures.

The researches of John Dalton, early in the nineteenth century, led him to the conclusion that ultimate elements which he called atoms formed the foundation stones upon which the chemical and physical sciences are built. Davy, Farady, Tyndall and Kelvin stimulated further effort and discovery by their laborious investigations and brilliant generalizations.

The origin of life from a single cell and the growth of animal and physical structures from the multiplication of these cells introduced a new era in the conception of animal and vegetable structures and the application of science to the healing art. The discovery of anaesthetics by Warren and Simpson and of antiseptic surgery by Lord Liston have rendered possible the successful treatment of diseases which had been beyond the reach of human skill. And still later the discoveries of Koch and Pasteur enabled the modern practitioner to combat some of the dreadful scourges of humanity by the introduction of artificial cultures which render the patient immune to small-pox and hydrophobia, tuberculosis and scarlet fever. While these lines are being written, there is a well-grounded belief that tetanus and meningitis will soon be brought within the beneficent scope of these wonderful discoveries.

The most remarkable feature of the work of the chemist and the physicist is that however academic their results may at first sight appear, ere long they find a practical application in agriculture, in manufactures, in industrial enterprise, in physiology and hygiene and what is more important still, in the prolongation of human life, by enabling the medical profession to understand the etiology of disease and to apply a rational treatment for its removal.

Now it may be said that the function of the university is to afford facilities for discovery in these and kindred lines of scientific work. The discoverer works thoughtfully, patiently



unremittingly, making use of, but holding in restraint while using it, his scientific imagination, actuated by the desire to discover truth and stimulated by the reputation which his discoveries may give him, he labors year in and year out for the enlargement of the domain and the boundaries of human knowledge and for the application of his discoveries to the well-being of his race. I believe that great as have been the discoveries of the fourteenth, fifteenth, sixteenth, seventeenth, eighteenth and nineteenth centuries, that the twentieth century, the century upon whose threshold we now stand, is destined to surpass and eclipse all the eras of scientific discovery which have gone before. I believe that before this century closes, human life will be lengthened, human comforts multiplied, the foundations of religious belief not overthrown, but established upon a firmer basis than ever heretofore, because resting upon the rock of scientific truth. Philosophical theories and religious dogmas will each be purged and purified, the dross and the tin will be removed and the pure gold remain. It will still be true that in the beginning God created the heavens and the earth; it will still be true that man is the ultimate goal of all sublunary creation; it will still be true that life and immortality have been brought to life in the Gospel of the Son of God; it will still be true that this life is only a prelude and an introduction to the immortal life beyond.

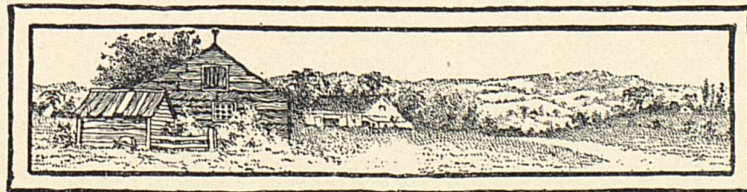
“Thou wilt not leave us in the dust,  
Thou madest man, he knows not why,  
He thinks he was not born to die,  
And thou hast made us, thou art just.”

In this onward march of human progress, what part will Kentucky play in the wonderful drama? Drama is action; drama is progress. Will Kentucky take up her role and play her part? And will the State University of Kentucky lead the Commonwealth in this onward movement to the realization of a glorious destiny? Laboratories will be provided, enthusiastic



men and women will apply themselves to unlock and to reveal and to disclose the secrets of nature. Every university in America will be a busy workshop, wherein the crucible and the telescope and the microscope and the spectroscope will be making new conquests every day. Will Kentucky in that ceaseless activity of correlated universities, play the part worthy of this Commonwealth and worthy of her traditions and her dignity?

The State University is the youngest of all the Universities of America, scarcely yet three months old, still in her swaddling clothes; but fifty years hence will see a mighty growth and a mighty development. Long before that period is reached, these grounds upon which we now stand will have been covered with buildings, each one a temple of science, each one with its own distinctive shrine, each one with its own group of worshippers. Instead of a thousand students, as enrolled last year, there may be ten thousand students grouped within these walls. Instead of a population of two and a half million from which to draw her student body, her army of workers, eager, energetic and indefatigable, there will be within the limits of this Commonwealth perhaps twenty-five millions of people. The agricultural resources, the mineral wealth, the manufacturing industries and the immense possibilities of Kentucky will invite population from east and west, from north and south. This will be the home of freedom, of industry, of enterprise, of men and women, stalwart in frame and beautiful in mind and in body. Will the Commonwealth of Kentucky and will the University of Kentucky rise to the height of this great conception and realize the destiny to which nature and God have called her?





47-M-64



*Address of*  
*Pres't Jas. K. Patterson*

*Before the*

*Ashland Educational*  
*Association*

*At Frankfort, Ky.,*

*Saturday, October 19, 1907*



*Jas K Patterson*



ADDRESS OF  
PRESIDENT JAMES K. PATTERSON  
BEFORE THE  
Ashland Educational Association  
On Saturday, October 19, 1907

---

On Saturday, the 19th of October, just before the close of the Ashland Educational Association, which met at Frankfort, James K. Patterson, President of the State College, though not upon the program, was called to the rostrum by the Chairman and requested to address the Association upon matters germane to their meeting. What he said had not been previously committed to writing and hence is re-produced at the request of the Association in substance. Professor Patterson spoke in substance as follows:

Mr. Chairman, ladies and gentlemen: I thank you for the courtesy of an invitation to address you, however briefly. I have been gratified by the courtesy and



good feeling and good sense which have pervaded the discussions of this Association since they met, and I am sure that their proceedings cannot fail to interest a much larger constituency than is embraced within the limits of the Ashland Teachers Association.

You are all aware that both men and women sometimes suffer from the indiscreet candor of their friends. The same, I think, might be said of the Commonwealth of which we are citizens. Sometimes we hear extravagant praise and sometimes indiscriminate detraction of the state of which we are all justly proud. The latter is especially true in regard to the alleged backwardness of Kentucky in education, in the common school, in the high school, and in the higher departments of education, collegiate and university. To some extent this is true, but while compromising statistics are paraded in cold blood, statistics which suggest humiliation and shame, there is another side of the picture. Sometimes a half truth misleads quite as much as a statement wholly untrue. We readily concede that Kentucky is behind the States of the North in education, that her common school system is not so well advanced or so thorough in its work, that her high schools are many of them deficient in organization, in compass and in thorough-



ness, and that her collegiate and university establishments are not up to the level which has been attained by the great universities of the north and north-west. One or two facts I wish to bring before this audience which may tend to modify the opinion generally entertained in reference to education in Kentucky.

In March 1784, Virginia, the mother of Kentucky, ceded to the general government what was then known as the North-west Territory, comprising 249,500 square miles, an area equal to 160,000,000 acres, worth at Congress price \$200,000,000. This vast area cost the general government nothing, and hence they could afford to be liberal in disposing of parts of it at least. It was provided by Congressional enactment that in each state which came into the Union after 1800, two townships of public lands should be set apart for the foundation and endowment of a university, and that one section in each township of land should be set apart as a fund upon which to base a system of common schools. The aggregate amount of school lands thus set apart by the general government amounted to 6,944 square miles, equal to 4,454,160 acres. The university lands set apart amounted to 360 square miles, an area equal to 230,400 acres. This, I think it will be conceded, was



a good nucleus upon which to found both common school and university education. On this basis was founded the common school systems and the state universities of Ohio, Indiana, Illinois, Michigan and Wisconsin, and these allotments constituted a most important factor in the origin and up-building of their respective systems of lower and higher education. Kentucky unfortunately came into the Union before the Act of Congress setting apart these public lands for educational uses and consequently received no allotment, and although the daughter of Virginia, through whose munificent gift to the general government allotments became possible to the states of the Union which came in after 1800, she received nothing. The basis of the educational systems of the states in the North-west was laid concurrently with their admission to statehood. Kentucky had no such basis upon which to build and consequently did not attempt anything in that direction for years.

In other directions, however, Kentucky was not idle. Citizens of Kentucky left an indelible record at Chillicothe, where the fatal defeat of Blue-licks was avenged, at the massacre of the River Raisin, where her best blood mingled with its waters, at Dudley's defeat, at Tippecanoe, at the River



Thames, and in the crowning victory at New Orleans, where Kentuckians won the honors of the day.

No effort was made by Kentucky to found a school system until the distribution of the surplus which had accumulated in the Federal treasury during General Jackson's administration. Of this distribution, \$1,400,000 fell to the share of Kentucky and by unanimous consent this was set apart as a fund upon which should be builded the common school system of the Commonwealth. This was afterward supplemented by a tax of  $2\frac{1}{2}$  cents upon the hundred dollars. These, however, furnished the basis of a relatively small income, which received no considerable augmentation until several years after the close of the Civil War.

Another contributory cause to the backwardness of education in Kentucky was found in the institution of slavery. The census of 1790 shows an aggregate slave population of 694,000, distributed throughout all the states of the Union, except the State of Massachusetts, where there were none. Of this number more than 40,000 were in the states of New Hampshire, Connecticut, Rhode Island, New York, Pennsylvania and New Jersey. Geographical and climatic considerations determined the ultimate home of the negro. The states north found slavery



to be unprofitable and very generously sold them to negro traders who carried them south, thus ridding themselves of the institution and the stigma which attached to it. Not long thereafter, a philanthropic impulse moved them to establish a crusade or propaganda for the extinction of slavery in the states whither they had but recently sold their own negroes. This crusade, as is well known, grew in vehemence and intensity until it culminated in the Civil War, which destroyed the homes of the South, destroyed their property and wrecked the educational institutions which had begun, though late, to establish themselves throughout the southern states. Kentucky suffered in common with the states south of the Ohio, but not to the same extent.

After the close of the Civil War, their thoughts naturally turned towards subsistence, towards the re-habilitation of their industries and commercial enterprises. Years passed before these were placed upon a living basis, and meanwhile educational matters occupied but indirectly their attention. They have now fairly recovered from their losses. Not one in a hundred, or perhaps in a thousand, regrets the extinction of the institution of slavery. Its most baneful effects rested more heavily upon the whites than upon the



the blacks. The several states lately in rebellion have for the most part made generous provision for the education of both races, without discrimination or prejudice. Kentucky now shares in this generous uplift, although it is to be regretted that she has done less than some of the states farther south which suffered more. But a brighter era, we believe, is at hand. The average Kentuckian has an inextinguishable horror of taxation and will vote for no taxes from which he does not see a fair prospect of a quid pro quo. Convince the average tax-payer that education will pay and he will vote all that is necessary for placing the common schools and the high schools and universities of the Commonwealth upon a living basis. It is futile to argue that our Legislators are behind the times. You cannot expect them to be much in advance of their constituents. They are sent to legislate not along arbitrary lines upon their own initiative, but to represent their several constituencies. If their several constituencies refuse to vote the tax, it is impossible to support public schools, and legislation establishing taxation without the consent of the constituents whom they represent would speedily come to grief. The thing then to be done in Kentucky is not to blame our Legislators, but to take the neces-



sary steps to educate the voters. Convince them that their sons and daughters, if well educated, will enter upon the struggle of existence with a greatly improved prospect of advancement and promotion, and handsomely remunerated service, and they will vote all the money you want; but until this is done, an attempted legislation will accomplish nothing.

Already I begin to see manifest evidences of improvement. Twenty-seven years ago, when the half cent tax was levied for the benefit of the College, producing a scanty revenue of \$17,000 a year for its maintenance, opposition of the gravest character was encountered by the measure. In the House of Representatives it was carried by but one majority and in the Senate by a very small margin. Repeated efforts were made thereafter, from year to year, to bring about its repeal, but these efforts waxed feebler and fainter until in the course of fifteen or twenty years they have altogether ceased. When the constitutionality of the tax was questioned and came before the Court of Appeals for decision, a majority of the court, as then constituted, was against the tax. It is due only to one man, a member of the bench at that time, Judge Pryor of Henry County, that an adverse decision was not ren-



dered. The record came into his hands and he held it up until by good fortune the composition of the bench was entirely changed and a majority favorable to the affirmation of its constitutionality was found.

The Legislatures of 1900 and of 1902 gave the College \$90,000 for the erection of a gymnasium and the College home for young women. In 1904 the Legislature enacted a measure giving the College \$15,000 additional each year for endowment. Both of these measures passed with much less opposition than had been encountered when the original half-cent tax was voted and levied in 1880. When the constitutionality of the last appropriation was questioned and the case came to the Court of Appeals, a decision was rendered, Judge O'Rear delivering the opinion, affirming the constitutionality of the appropriation. The grounds upon which its constitutionality was questioned are found in Article 184 of the Constitution, namely:

“No sum shall be raised or collected for education, other than in common schools, until the question of taxation is submitted to the legal voters and the majority of the votes cast at such election shall be in favor of such taxation, provided the tax now



imposed for educational purposes and for the endowment and maintenance of the Agricultural and Mechanical College shall remain until changed by law."

The opinion of the Court delivered by Judge O'Rear held that the proviso in the section quoted lifted the A. & M. College out of the prohibition contained in the previous clause, insamuch as the Agricultural and Mechanical College had existed prior to the adoption of the new Constitution and the constitutionality of an appropriation for its benefit had been affirmed and recognized by the Legislature and the courts prior to its adoption. The opinion of the Court delivered by Judge O'Rear then affirmed that not only was the appropriation of \$15,000 constitutional, but that it was entirely within the competence of the Legislature to increase or diminish at any time it thought proper the income appropriated by the state for the Support and maintenance of the College.

The Legislature of 1906 passed a measure establishing two Normal Schools in Kentucky and appropriating for each \$25,000 a year for maintenance. The constitutionality of this measure was questioned on the grounds of the inhibition set forth in Article 184 of the Constitution. When the case came into



the Court of Appeals, the court held, Judge Barker rendering the opinion, that the constitutionality of an appropriation for the State College having been previously recognized implied the recognition of the constitutionality of an appropriation for any department of the State College, hence the recognition of the constitutionality of an appropriation made for the Normal Department of the State College. The opinion rendered by Judge Barker said:

“At the time the present Constitution was framed, the Normal School for white persons was carried on as a part of the Agricultural and Mechanical College, where it still in part is conducted. What the Act in question does in practical effect is to separate this school into three parts, leaving one as a Department of the Agricultural and Mechanical College at Lexington, Ky., and establishing two others at different points in the State, one at Richmond and the other at Bowling Green, Ky.”

The opinion of the Court thus clearly establishes this proposition, that the Normal School at Richmond and the Normal School at Bowling Green owe their validity to their relationship to the Normal School of the State College of Kentucky, that they are parts of an organic whole, that they are branches of the Normal School in connection



held,  
tion,  
pro-  
ving  
the  
of  
nent  
cog-  
an  
mal  
The  
aid:  
itu-  
ool  
s a  
ani-  
on-  
oes  
his  
as  
and  
y.,  
ent  
nd  
y.”  
rly  
he  
he  
we  
to  
ge  
an  
es  
on

with the State College, and as such may receive recognition and maintenance from the State without traversing Article 184 of the Constitution. Their constitutionality then is clearly dependent upon the fact that they are viewed as parts of the Normal Department of the State College of Kentucky and not as independent entities. As independent entities, the State aid, without submitting the question to a vote of the people would have been unconstitutional.

What is the manifest inference from this? That all educators in Kentucky must accept loyally the fact of the interdependence and the organic relationship that exists between these three Normal Schools, resulting from the subdivision of the original whole, that so long as the Normal School at Richmond and at Bowling Green retain their organic relationship with the Normal School at the State College, appropriations for their maintenance are constitutional. If at any time this organic relationship should cease, their constitutionality would fall, with the severance of the connection. This occurs to me to be a far-sighted and statesman-like deliverance. The Court of Appeals in construing the Act establishing these two Normal Schools, asserts in unequivocal terms their solidarity, their common relationship, their organic unity,



and the plain inference from it is that the three ought to co-operate and must co-operate loyally with each other for the attainment of a common end. Emulation and competition are admissible; antagonism and strife and division, never.

I would then impress upon you, ladies and gentlemen present here this morning, this fact, that if we are to succeed in building up the interests of the Commonwealth, in contributing educated men and women as teachers of the schools, we must not waste our energies in futile crimination and recrimination, but make a united effort to obtain from successive Legislatures what each needs for the up-building and developing of the parts and of the whole.

I may quote in confirmation of this opinion another sentence or two from the decision of the Court of Appeals rendered by Judge Barker, namely:

“There is nothing in Section 184 or in any other part of the Constitution to which our attention has been directed that militates against the power of the Legislature to separate the Normal School for white persons, (that is, the Normal School of the State College), into as many parts as may be deemed appropriate and to divide the appropriation between the different schools as may be thought proper. Certainly



it will not be contended that the Legislature lacks the power of making any appropriation it sees fit for the benefit of the Normal School as conducted under the auspices of the Agricultural and Mechanical College."

The plain inference therefrom is that if the Legislature can appropriate for the Normal School of the State College, it can make the necessary appropriation also for carrying on its other affiliated parts.

I congratulate you, ladies and gentlemen, on this deliverance of the Court of Appeals and the firm foundation upon which it establishes the constitutionality of the Normal Department of the State College and its affiliated Normal Schools for Eastern and Western Kentucky.



47-M-64



8dups  
in AC  
in bound vol

ARGUMENT

MADE BY

President Jas. K. Patterson

BEFORE

THE SENATE COMMITTEE, FEB. 15, [1908]

ON THE

PROPOSED CHANGE OF NAME FROM A. & M.

COLLEGE TO STATE UNIVERSITY.



## ARGUMENT.

---

In the life of institutions as in that of individuals varying conditions require constant readjustment of relations. The village grows into the town, the town into the city. The youth develops into the lad and the lad into the man. The Academy expands into the College and the College into the University. The government of the village differs necessarily from that of the city. The responsibilities and duties of the youth differ from those of the man. The functions and relations of the Academy differ in equal degree from those of the University.

The State institution which I have the honor to represent before your committee has undergone a similar transformation. It now possesses lands, grounds, buildings, laboratories, stock and equipments equal to \$500,000, all the accumulation of the last twenty years. When detached from Kentucky University, with which it had an unfortunate connection for thirteen years, it had absolutely nothing. It was then quite contented with the modest designation of a College. But the Legislature of 1878 in the Act providing for its future location and for its additional endowment from lands appropriated by Congress looked forward to the time when it should grow into a University and so provided.

We desire respectfully to represent to your honorable body that we believe that the time has come when the name of this institution, hitherto known as the A. & M. College of Kentucky should be changed to that of the State University. Allow me to state briefly the reasons why such change should be made, and then to consider the objections thereto :

1. It has since 1880 grown far beyond its proportions at that date and has attained a development unparalleled in the history of education in this Commonwealth.

2. It has now eight distinct courses of study leading to a degree. If one course of study leading to a degree entitles an institution to be called a College, surely eight distinct courses should entitle it to be called a University.

3. This is the only institution in Kentucky owned, managed and administered by the State.



4. These two ideas should find appropriate expression in its name. If then it is doing University work its claim to be recognized as a University is beyond cavil. If it belongs to the State, the State should have recognition. On these grounds the name asked for is just and right, viz.: "State University."

The objections come from Kentucky University, a denominational institution in which the State has no pecuniary interest and over which it has no control. They allege as a ground of protest :

That that the names "State University" and "Kentucky University" would lead to confusion.

To this it may be replied that almost all the patronage of Kentucky University outside of Fayette County comes from members of the Christian Church, and not one in one hundred is likely to lose his way and land in the State University. If he did the State University authorities would be glad to assist the unfortunate youth to find his proper habitat. Per contra not one in a hundred of the county appointees sent to the State University would be likely to drift to the Kentucky University. If so, the question of the payment of fees would speedily reveal his mistake, and the Kentucky University would be most happy to hand him over to his proper environment. As a matter of fact in relation to the past a few—and considering the matriculation lists of both institutions—a very few mistakes have been made, but they led to no confusion. An occasional application has been made to me for entrance by an applicant whose evident intention was to enter Kentucky University. I promptly informed him that this was not his intended destination, and directed him how to find his way thither. Occasional cases have occurred where a student mistook Kentucky University for the State College, but President Loos, to whose loyalty and unfailing courtesy I bear cheerful testimony, uniformly sent the lost sheep to our fold. I have no doubt that his successor would do the same if occasion required. I may without impropriety say in this connection, as an evidence of our neighborly disposition, that the State College has invited the Kentucky University to inform its under-graduates that they may upon graduation enter any one of our advanced post-graduate courses free of tuition fees and upon



identical conditions with our own, and that not a few have availed themselves of the privilege. Students from the Bible College who were preparing for the missionary field have been received without fees to instruction in the Mechanic Arts while yet pursuing their Biblical studies in order that they might be able to impart to their converts in heathen lands the rudimentary principles of material well being. Surely this manifests a disposition to assist instead of to hamper the growth and development of our sister institution. With such spirit how could we be suspected of a likelihood to take any advantage of the ignorance or want of experience of a student who had lost his way? It is not by petty practices of this sort that great institutions are built up. What is true of persons is also true of occasional letters which find their way here through mistake. But the post-master would know too well the distinction between State University and Kentucky University to make many mistakes of that sort. And if the mistake be made by writer or sender of mail matter occasional errors of address would be speedily rectified as heretofore. Their apprehensions and fears in this respect are groundless. Shades and shadows are sometimes conjured up and float before our vision, but in the futile attempt to combat them they vanish into thin air.

The change of name would aid in building up every course of study in the institution. We believe that its good effect would be especially notable in building up the Agricultural, the Mechanical and the Normal Training courses of study. Greater prestige and dignity of designation would be additional inducement to students and all courses would feel the benefit of the additional impulse.

Increased numbers would advertise its liberal provisions and its thorough training more and more widely. This increase and expansion would serve as a wholesome stimulus to other institutions within the sphere of its activity and would determine them in the future as it has done in the past to a higher energy and a broader activity. The apprehensions of the friends of Kentucky University are wholly groundless. Years ago they expressed the belief that our success would be detrimental to them. All the



colleges in the Commonwealth made common cause with them and shared in their alarm. What has been the result?

Not as they apprehended, but just as I predicted, that the success of the State College, so far from being injurious to them or to the other denominational colleges would stimulate them to greater activity, would determine them to provide better courses of study and more of them, to man them with their best men and provide themselves with the best equipment. Every college in Kentucky has by this stimulus been lifted to a higher plane in its ideals and in its work. They have been reaching out for larger endowments. They have brought themselves more into line with the necessities of the age. They have sloughed off the old habiliments and arrayed themselves in more modern dress. The late President of Center College told me only a few months before his death that his college had more than doubled its endowments and income within the last fifteen years. The prosperity of one institution does not imply the decline of its neighbors. The State College has brought the blessing of education to hundreds of men and women of small means in the mountains and valleys from the Big Sandy to the Mississippi who never would have found admission to any other college in the Commonwealth, who are now among the best agriculturists, the best civil engineers, the best mechanical engineers, the best scientists, the best lawyers, the best physicians and the best teachers in Kentucky.

What is the reflex influence from this? Why to stimulate men and women to educate themselves in order to enter upon the struggle for existence with all the power, moral, mental and physical which God has given them cultivated to the end that they may overcome difficulties and become potent factors in shaping their own destiny, the destiny of their nation and the destiny of mankind. These will be called to enlarge the area of mental and moral vision, to swell the ranks of intelligent creators of wealth, to become the captains of industry and leaders of men in the Cabinet and in the field, to push forward the boundaries of knowledge, to make the world better and to leave it better than they found it.

In all this you look to your own cherished institution to play



no unimportant part. When the right of her Alumni to leadership is challenged at home or abroad, when they are asked to show their passports and to justify their claim on the basis of scholarship and discipline let the parchment which certifies their honors and vindicates their title be the highest which the Commonwealth can bestow—at once worthy of her dignity and of their desert. They will come into competition with men from the East and from the West—from Maine to California and from the Lakes to the Gulf. Let their shields bear a cognizance and carry a prestige equal to those borne by the sons of New York or Wisconsin, of Ohio or of Louisiana.

For a longer period than the Hebrew Patriarch served for his beloved Rachel we have patiently and assiduously worked and waited. Now that we have won our spurs we ask the modest privilege of wearing them.

In the infancy of the Commonwealths which make up the American Union schools of learning, when founded, made little or no distinction between academies, colleges and universities. They forgot that a certain number of well manned departments was essential to the constitution of a college and a certain number of well defined and distinctive courses of study was essential to the college and a certain number of well defined and distinctive courses of study was essential to constitute a university, that the scope and compass of the one were wider and more comprehensive than those of the other. Hence the name of college or university was adopted as suited the fancy and the caprice of the founders. But as education advanced distinctions commensurate with the facts were made. The advanced institutions of learning which comprised one or two well defined courses of study leading to a degree came to be recognized as a college, the advanced institutions containing from two to six courses of study leading to a degree and which moreover provided advanced courses of study beyond graduation, leading as a recognition of post-graduate work to an advanced degree were recognized as a university. We hold that the General Assembly is bound in justice to recognize these facts. It owes to itself, to its sons, to the public to confer on its educational institution which by virtue of Section 14 of its Charter is constructively the head of the common school system



of Kentucky, a style, title and designation commensurate with the scope and character of its work. If it be nothing more than a college let it remain a college in name. If it be in fact an institution doing university work give it the style and designation to which it is entitled.

On the authority of Professor Neville I make the statement that there is no other denominational university in America that bears a State designation.

On the authority of Professor Shackelford I make the further statement that the most intelligent men in the Christian Church concede that the name Kentucky University is a misnomer.

I make the further statement on the authority of the recognized organ of the Alumni, the Cloverleaf, that the Alumni Association have for some time past been agitating for a change of name from Kentucky University to Transylvania University on the ground that their present name is a misnomer.

But we do not ask or suggest that Kentucky University change its name, if they chose so to do we certainly shall oppose no obstacle.

The essence of our contention is this: Are we doing University work? If so, we merit the title "University." Are we a State Institution? If so, we are entitled to State recognition. Neither of these propositions can be seriously contested. We are doing University work. We are a State Institution. Therefore we are a "State University" and as such are entitled to the style and title of the State University.

The idea that this designation will either breed confusion or injure Kentucky University is utterly groundless.



The first part of the paper is devoted to a general  
 consideration of the problem. It is shown that the  
 problem is equivalent to the problem of finding  
 the minimum of a certain functional. This is done  
 by means of the method of Lagrange multipliers.  
 The second part of the paper is devoted to the  
 derivation of the necessary conditions for the  
 extremum. It is shown that these conditions are  
 satisfied by the extremal. The third part of the  
 paper is devoted to the derivation of the  
 sufficient conditions for the extremum. It is  
 shown that these conditions are satisfied by the  
 extremal. The fourth part of the paper is  
 devoted to the derivation of the maximum  
 principle. It is shown that the maximum  
 principle is satisfied by the extremal. The  
 fifth part of the paper is devoted to the  
 derivation of the transversality conditions.  
 It is shown that these conditions are satisfied  
 by the extremal. The sixth part of the paper  
 is devoted to the derivation of the natural  
 boundary conditions. It is shown that these  
 conditions are satisfied by the extremal. The  
 seventh part of the paper is devoted to the  
 derivation of the Weierstrass conditions.  
 It is shown that these conditions are satisfied  
 by the extremal. The eighth part of the paper  
 is devoted to the derivation of the Legendre  
 conditions. It is shown that these conditions  
 are satisfied by the extremal. The ninth part  
 of the paper is devoted to the derivation of  
 the Jacobi conditions. It is shown that these  
 conditions are satisfied by the extremal. The  
 tenth part of the paper is devoted to the  
 derivation of the Mayer conditions. It is  
 shown that these conditions are satisfied by  
 the extremal. The eleventh part of the paper  
 is devoted to the derivation of the Pontryagin  
 conditions. It is shown that these conditions  
 are satisfied by the extremal. The twelfth  
 part of the paper is devoted to the derivation  
 of the necessary conditions for the strong  
 minimum. It is shown that these conditions  
 are satisfied by the extremal. The thirteenth  
 part of the paper is devoted to the derivation  
 of the sufficient conditions for the strong  
 minimum. It is shown that these conditions  
 are satisfied by the extremal. The fourteenth  
 part of the paper is devoted to the derivation  
 of the necessary conditions for the weak  
 minimum. It is shown that these conditions  
 are satisfied by the extremal. The fifteenth  
 part of the paper is devoted to the derivation  
 of the sufficient conditions for the weak  
 minimum. It is shown that these conditions  
 are satisfied by the extremal. The sixteenth  
 part of the paper is devoted to the derivation  
 of the necessary conditions for the normal  
 minimum. It is shown that these conditions  
 are satisfied by the extremal. The seventeenth  
 part of the paper is devoted to the derivation  
 of the sufficient conditions for the normal  
 minimum. It is shown that these conditions  
 are satisfied by the extremal. The eighteenth  
 part of the paper is devoted to the derivation  
 of the necessary conditions for the abnormal  
 minimum. It is shown that these conditions  
 are satisfied by the extremal. The nineteenth  
 part of the paper is devoted to the derivation  
 of the sufficient conditions for the abnormal  
 minimum. It is shown that these conditions  
 are satisfied by the extremal. The twentieth  
 part of the paper is devoted to the derivation  
 of the necessary conditions for the singular  
 minimum. It is shown that these conditions  
 are satisfied by the extremal. The twenty-first  
 part of the paper is devoted to the derivation  
 of the sufficient conditions for the singular  
 minimum. It is shown that these conditions  
 are satisfied by the extremal. The twenty-second  
 part of the paper is devoted to the derivation  
 of the necessary conditions for the singular  
 minimum. It is shown that these conditions  
 are satisfied by the extremal. The twenty-third  
 part of the paper is devoted to the derivation  
 of the sufficient conditions for the singular  
 minimum. It is shown that these conditions  
 are satisfied by the extremal. The twenty-fourth  
 part of the paper is devoted to the derivation  
 of the necessary conditions for the singular  
 minimum. It is shown that these conditions  
 are satisfied by the extremal. The twenty-fifth  
 part of the paper is devoted to the derivation  
 of the sufficient conditions for the singular  
 minimum. It is shown that these conditions  
 are satisfied by the extremal.



## Kentucky University

Address of Prof. J. K. Patterson, President of the A. and M. College, of Kentucky University, delivered in Morrison Chapel, June 10th, 1870. In connection with the commencement exercises of the University. [at close of his first year as President]

At this stage of the Exercises of the day, already perhaps sufficiently protracted, I ought not to detain you long. Under other circumstances I should probably say nothing, but in view of the relation which I sustain to the College of which you are an alumnus, and which you have for four years sustained to the same Institution, it is not inappropriate that I should say a few parting words.

Your connection as student, and mine as Professor are both identified with the foundation of the Agricultural and Mechanical College of Kentucky University. You were one of the original number from whom its classes were organized under the direction of the able, clear headed, veteran educator, the severance of whose connection with us on account of interest elsewhere, we were called too early to regret. Through the various stages of its development from a meagre beginning to the attainment of its present respectable proportions, you have been identified with its interests and I may add grown with it, till now you are a just participator in its fame. And I doubt not in after years, if God spare you to the usefulness and reputation which it is our hope you will attain, when in old age you look back over the well deserved honors and triumphs of a life devoted to science and religion, that one of your happiest thoughts will be your connection with the foundation of this college.

You have passed through its curriculum, and to-day you stand before me its second foster son, Baccalaureus in scientiis. You have partaken of its milk and somewhat of its meat, and have thriven not indifferently on the diet. At each successive step you have attained a more extended prospect, and as with toil and sweat, often times foot sore and jaded your labored along its rugged paths, you have felt your sinews become closer knit, and your muscles grow hard and strong.

Associated as we have thus been in these latter years, it becomes my duty as well as my privilege, on my own account, and on behalf of my colleagues, to say a word of farewell and advice.

Like the youth on a sea-faring coast whose pupilage is past, you now venture a voyage on your own account. Hitherto he has sailed only with a skillful pilot at the helm, who knew the rocks and shoals of his native coast, or he has ventured alone only in calm weather, and but a few leagues from the shore. Now he trains his craft, however, for a distant voyage and now he proposes himself to stand at the helm. Thus it is with you; you have hitherto been a learner, now you become an independent investigator.

You cannot now as before avail yourself of the aid and advice of a Williams a Peter or a White. Your data and your generalizations will be your own, and your result will, be either a solid foundation on which you can stand, or a treacherous quagmire in which you will sink.

"There are more false facts current" says Cullen, "than false theories." This can hardly be said now in the domain of natural science, the first and special object of which is to note and register the facts the whole facts and nothing but the facts. When the survey is complete these should be allowed to adjust themselves and gravitate into principles. the diffi-



culty now is that scientists too often wish to force the facts, and instead of waiting till the induction is complete, generalize prematurely on insufficient data, supplement one crude hypothesis by another, and then baptize it principle. This is the danger to avoid. Not the false facts, but the false hypotheses. An important check upon extravagant speculation and illogical procedure in science has been imposed in these latter years by what I shall denominate the correlation of the sciences.

The discoveries of the last quarter of a century have established beyond doubt what is known as the correlation of Physical force. If it be true that heat is a mode of motion and that electricity and magnetism find adequate expression in terms of heat, that all known forces are but modes of something generic, yet unnamed one of which is capable of transformation into another by definite law, then this not only renders possible but necessitates a corresponding correlation of the sciences respectively conversant with these. Not only that, but if the laws of mental life as conditioned, here presuppose the laws of animal and vegetative life then there must also be a correlation of consciousness to organization, and if further, the laws of animal and vegetable life presuppose the laws of Chemistry, there, the law of radiance, heat, Electricity and Magnetism, there the laws of Dynamics and these the laws of Mathematics - each higher in the scale, presupposing the lower but not the reverse, then it follows that an assumed truth, or fact of one must be consistent with the known facts of all. No contradiction can be tolerated here. A new fact, new principle, new law affirmed then of any one of the correlated sciences must be in harmony with all the known truths of all, and if contradictory of any of these must face and do battle with all. The intruder must show indefeasible right before he can establish naturalization, or dislodge the old occupant, and claim his little deeds. This I apprehend is the best guarantee for the correctness of newly naturalized truths, that they be in harmony with the already accepted truths, not only in the science specially concerned, but with all others. One illustration will suffice. But few years back the philosophers of Mr. Darwin's school developed the greyhound from the wolf, and the wolf from some less civilized ancestor, and so on in a regressive series, all but infinite. Each development requiring an indefinite time which was supplied by infinite drafts on infinite duration, till the promordial protoplasmic germ was reached from which all organized existences have sprung. The most moderate of those estimates was 1,000 millions of years and many not content with this demand claimed 1,000 times more. Give us the conditions said they, an indefinite time - and by the known laws of natural selection or survival of the fittest, we will establish the probability, nay almost certainly of the assumed hypothesis. But the check on this extravagance came from a quarter least expected. Sir William Thompson has shown from purely physical data that life cannot have existed on this planet more than 100 million of years ago, thus cutting down the demand of the most moderate ten fold, and what is more, all the adherents of the hypothesis of evolution feel themselves compelled to accept the term of limitation and adjust the times accordingly. Now evolution may for aught I know be true or may not be true. One thing is certain, it can no longer make drafts on a time assumed to be infinite, and have its drafts honored.

And so I might show the interdependence of Geology Zoology and Botany, of Physics and Astronomy, Consciousness and Organization, and of these several groups to each other, and how an error in one would affect all.--



This is certain that every truth is in harmony with, and cannot be in antagonism with any other truth thought sundered wide as the poles. The knowledge of the Human is correlated to, and in harmony with the knowledge of the Divine, however obtained, whether by induction or by revelation, the science of the Spiritual with that of the Physical, all but phases of one grander science which embraces them all, and exhausts them all. This science we may not attain here, we may hereafter, now we see through a glass darkly, then face to face. Now we know in part, then we shall know even as we are known.

Do not fear the legitimate deductions of science any more than you should fear the legitimate deductions from the accepted truths of Revelation. They are but different phases, different manifestation of the same infinite, God in nature cannot be opposed to God in grace. Study the book of nature diligently reverently, prayerfully and grasp the truths she yields. I fear no more that Revelation rightly interpreted shall be undermined by the discoveries and generalization of science than I would fear the disintegration of the diamond, by the light which shines upon, and illuminates the brilliant.

No, rightly interpreted it has nothing to fear, but what I do fear is the crude deductions of science and the no less crude interpretations of scripture brought into temporary collision, and making shipwreck of the faith of some. Too often have both had occasion to say save me from my friends. The problems science proposes to solve are arduous, many of them to my thinking impossible, because assuming impossible relations. One of the fundamental laws of thought is that contradictions cannot be identified. So long as I believe that I have no thought that it shall even be shown that the Jesus Christ of the scriptures is only the ultimate development of forces, latest in the mushroom and the sponge. All the sober deductions of science point to a Reason antecedent in time and superhuman in degree, and which is not the subject of change or development of any sort. These stand asunder like two opposing cliffs between which rolls an impassable flood which only infinite wisdom and infinite power can bridge.

To matter or to force  
 The All is not confined;  
 Besides the law of things  
 There is the law of minds.  
 One speaks in Rock and Stream,  
 And one within the main;  
 In unison at times.  
 And then apart again;  
 And both in one have brought us hither,  
 That we may know our whence and whither.  
 The sequency of laws  
 We reach through mind alone.  
 If she speak truth at all,  
 The voices must be true  
 That gives these visible things,  
 These laws, their honor due.  
 But tell of One who brought us hither,  
 And holds the keys of whence and whither.  
 He in his science plans  
 What no known law foretells;  
 The wandering fires and fixed  
 Alike are miracle.



The common death of all,  
 The life renewed above,  
 Are both within the scheme  
 Of an all circling love.  
 The seeming chance that cast us hither  
 Accomplishes his whence and whither.

Another corrolary of the correlation of the sciences is, that all who labor in this, that or the other department of investigation, are co-workers in the same field. Paleontology would be impossible apart from Chemistry, Zoology, Botany and Geology. Spectrum analysis could have no existence but for the prior existence of Chemistry and Optics. Philology implies, as its corresponding correlative, Psychology. Ethmology depends upon Physical Geography, Language and Anatomy. Some are closely related, proficiency in the one implying intimate acquaintance with the other; others more remotely; but perfect isolation in any is impossible. They all form so many converging lines that meet in a common focus.-- The student who works in Natural History, the Astronomer, the Philologist and the Metaphysician -- all these find themselves laboring in some special department of the universal Science, whose domain is the universe and whose centre is Deity. You and I may work on different sides of this great pyramid, unseen to each other, and unknown, having apparently little in common; but as we rise, the distance narrows more and more, the lines slowly but steadily converging, shorten the diameter which separates us, and when the preparatory discipline of this life is over and its work done, though rising from opposite sides, we shall meet at the top.

---

The Kentucky Statesman,

June 17, 1870

P. 2 Cols. 3 & 4

---

VS/RS/6/13/41



1900

The Century just closed witnessed many notable changes. The discovery of the possibilities of steam and its application has revolutionized industrial production and commercial enterprise. The rapid progress made by chemical science and its application to the various branches of industry have contributed largely to multiply and cheapen the ~~various~~ necessities and conveniences of life. The ~~correlation~~<sup>correlation</sup> of the physical forces and the transformation of one into another by fixed laws and in definite proportion has given to the physicist a power over the forces of nature unknown to our fathers.

These and other advances which have been made have widened the boundaries of human knowledge and brought within its <sup>m</sup>compass known truths which must find expression in the College and the university through text-book and laboratory, through observation and experiment, through theoretical exposition and through practical application. And these influences have infiltrated down into the Academy, the Seminary and the High school - down even to the Common School and have profoundly affected and materially influenced the whole course of education.

In this busy, productive commercial age of our there is a constantly increasing demand for an education which above all things shall be capable of being turned to practical account - an education which can find expression in bushels of wheat and bales of cotton and tons of steel. It <sup>s</sup>is manifest that college and university education conducted on the old lines and in accordance with the old ~~old~~ ideals can no longer serve the manifold exigences of life. As a preparation for the learned professions - for the pulpit and the bar - <sup>and for a literary career</sup> classical training is as indispensable as ever, and holds and will continue to hold its ground. In the healing art it is no longer essential.



"If" says the Psalmist, "I take the wings of the morning and dwell in the uttermost parts of the Universe, God is there"

Knowest thou any corner of the world where Force is not?

The drop which thou shakest from thy wet hand rests not where it falls but to-morrow it is swept away. Already on the wings of the North wind it is nearing the Tropic of Cancer. That little Fire which glows star-like across the dark-growing moor where the sooty smith bends over his anvil - is it a detached separated spark? cut off from the universe or indisolubly joined to the whole? That smithy fire was kindled at the Sun - is fed by the air that circulates from before Noah's Deluge - from beyond the Dog Star. Therein with iron force and coal force and the far stronger force of man are cunning affinities and battles and victories of Force brought about, a little ganglion in the great vital system of immensity".



Language and Philosophy and economics and Logic and Belle Lettres hold an important place still and are, and ever will be the foundations on which culture and civilization must rest. They contribute little however to increase the products of the ~~earth~~ soil; the products of the loom and of the mine; the building of railways, the erection of bridges; the opening of mines; the smelting of ores; the construction and navigation of ocean lines.

It is as true now as it was 1900 years ago that man does not live by bread alone. It is equally true that bread is the indispensable condition of man's existence, and bread must be provided.

Population notwithstanding ~~was~~<sup>was</sup> and conflagrations and volcanic upheavals, the pestilence that walketh in darkness and destruction that ~~walketh~~<sup>was</sup> at noonday is treading close upon the heels of subsistence and he who can multiply the means of subsistence and cheapen and multiply the necessities and the comforts of life is the benefactor of his race. There is a gospel of work and there is a gospel of grace, and the apostles and missionaries of the former, though entitled to less praise than the latter because working in a lower ~~sphere~~ sphere are still entitled to the gratitude of mankind.

Now this is the special work to which the State ~~Kinga~~ College of Kentucky addresses itself. Not neglecting the development and discipline of the mind, the cultivation of the moral powers and the quickening of the religious instinct in man, not ignoring the subordination of the material to the spiritual and the building up of character on the true, the beautiful and the good as the rational end of human life, it adheres to the lines laid down in the organic law to which it owes its existence and endeavors to carry out faithfully its requirements.



It is essentially a technical and scientific school with classics and Normal School training as collateral adjuncts. Its courses of study are varied and designed to meet the varied wants of our people and our age. Instruction in those branches of learning related to Agriculture and the Mechanic Arts find expression and application in schools of Agriculture and Horticulture, theoretical, experimental and practical, in Pedagogy, in Classics, in Science, theoretical, experimental and applied, and in engineering, Civil, Mechanical and Electrical and Mining. Each Department is presided over by an expert whose individual time is given to it, with a <sup>competant</sup> competitive staff of instructors.

Laboratories in Botany, Anatomy, Geology, Mineralogy, Chemistry, Physics, Mechanics - well equipped and costing thousands of dollars annually for their maintenance supply the necessary facilities for instruction and investigation. Sixteen courses of study are thus provided vi Agriculture and Horticulture

Mechanical Engineering

Mining Engineering

Civil Engineering

Electrical Engineering

Seven Scientific Courses viz:

Chemical	as major with associated branches,		
Mathematical	" " " "		
Biology			
Biology	" " " "		
Geology & Palaeontology			
Botany	as major with		
Physics	" " " "		
Entology	" " " "		
Anatomy & Physiology			
Classics	Latin & Greek as major		
"	English, French & German as Major		
Pedagogy			



In Science and its application to Agriculture and the Mechanic Arts, we stand alone in Kentucky. First with no second. In classical and liberal culture we stand quite as well to the front with more of Modern Languages and more of Aryan and Oriental Philology than any of our contemporaries. In Pedagogy the course is equal in length, in compass, in thoroughness, in adaptation to any in America. Instruction in every part of the College is at the service of a the candidate for this degree. All its laboratories are open to him. Language and Science and Literature ancient and modern- afford the amplest range of choice. Moreover, post-graduate work leading to the Masters degree is open to all, open not causa honoris but for actual work and upon approved evidence of fitness.

Our teachers command the best schools in the commonwealth. The superintendent of public instruction says that wherever a teacher educated at the State College holding the county certificate, the state certificate or the diploma of B.Ped. comes in competition with those educated in other schools they invariably carry off the prize.

Our graduates in classics secure the best positions as professors in Colleges, High Schools and Academies. Our Engineers are all engaged months in advance of graduation. We stand in the very front rank with the best technical schools in America and measured by the success of our Alumni in responsible positions and remunerative occupations we stand in advance of any of them.

If the last century achieved much the 20th. century upon the threshold of which we stand is destined to achieve still more.

The portals have been passed but the arcana have not yet been revealed. Science notwithstanding its advance and its triumphs is yet in its



infancy. Much has been revealed but the twilight has not yet gone and its sun has not yet risen. Intelligence is awakening; to be alive is bliss, but to be young is heaven.

You, teachers of Kentucky - young, energetic, alive to your opportunities, - have a noble opportunity. The work of leading the van is given to you. Prepare yourselves for your work. Educate yourselves; infuse into your pupils the enthusiasm you feel. Take away the reproach that has attached to your State by lifting to a higher and a higher plane as the years pass by the standard of intelligence and of instruction.

The race to which you belong- this English speaking race of ours - first in intelligence; first in enterprise; first in freedom; first in all the essential elements of success and of sovereignty is the most imperial race that has ever trod this earth.

The American will ere long be its chief exponent, and Kentucky is in the heart of the American nation. Be it yours to hold up the banner of intelligence and to lead the van of progress.

The State College is the head of the Common school system in Kentucky, graduates of all its schools are eligible to appointment and have access to all its advantages without fees for tuition or residence.

You are than all interested in its upbuilding and its progress.

It has accomplished much but the young Hercules has only entered upon his labors. In the future some observer when recounting his triumphs and his glories may note how ~~great~~ "

"Great Alcides stooping from his toil  
Rests on his club and holds the  
Hesperian spoil".

*But long ages shall pass away and new conditions arise before his translation to Olympus, and when this consummation is reached be assured that no poisoned shaft of Ares shall precipitate his departure to join the ranks of the Immortals.*



"Two men I honor, and no third. First the toil-worn craftsman, that with earth-made implement laboriously conquers earth and makes her man's. Venerable to <sup>me</sup> is the hard hand, crooked, coarse, wherein notwithstanding lies a cunning virtue, indefeasibly royal, as of the scepter of this planet. Venerable, too, is the rugged face, all weather beaten, tanned, besoiled, with its rude intelligence. But in him ~~is~~ a God-created form to be unfolded. A second man I honor, him who is seen toiling to remove the thick adhesions and defacements of his labor, not for daily bread, but for something higher. Unspeakable touching is it when both dignities are united, and he that must toil outwardly for the lowest of man's wants is also toiling inwardly for the higher. If the poor and humble toil that we ~~may~~ have food, must not the high and glorious toil for him that ~~he~~ have light and guidance and freedom and immortality? These two in all their degrees I honor. All else is chaff and dust, which let the wind blow wither it listeth".



ADDRESS OF JAMES K. PATTERSON Ph.D., LL.D. President State College  
AT THE LAYING OF THE CORNER STONE OF THE GYMNASIUM MAY 16, 1901.

It is both a pleasure and a duty to welcome you to these College grounds to participate in the ceremonies connected with the erection of this building. Twenty-two years ago not a stone nor a brick had been laid for collegiate purposes within the enclosure in which so many many buildings now stand devoted to education.

The State College had been cut adrift from its ill-starred connection, but had as yet found neither a local habitation nor a name. The city of Lexington provided a site, the city and county gave liberally for the erection of buildings, and the legislature accepting these generous donations made provision for its operation and maintenance.

Setting out from small beginnings it has grown from year to year, adding house to house, land to land, until its realty now represents more than half a million, *and the capitalized sources of its income represent more than two millions of dollars.* Accommodations at first deemed ample have long since ceased to be equal to our needs. The <sup>Experiment</sup> station building, the Engineering, <sup>Plant</sup> the Science Hall with other structures of lesser note have from time to time been added as our necessities required.

This building, the corner-stone of which you lay to-day, is the latest of the series but not the last. External expansion, though rapid, has not kept pace with internal development. Departments multiply, classes increase in numbers, laboratories of all sorts multiply and expand; equipments grow in volume and in value - all of which imperatively demand more buildings and larger buildings.

If our growth has been so marvelous within the last twenty-years, who can forecast what it will be twenty years hence? Our Engineers, our classical scholars, our trained teachers are in demand every where and their success brings in constantly increasing numbers, ready to enter upon the apprenticeship of toil and discipline which has made their predecessors masters in their respective crafts.

The strongest and most emphatic testimony to our success is the movement to-wards consolidation on the part of some of our contempora-



ries who confess their inability singly to compete with the State College of Kentucky. This will be an additional stimulus to all connected with this institution to make past success the stepping stone to still further achievements. We must maintain the leadership which we have won by honest work, by offering more and better courses of study than any of our contemporaries, and by making the diploma of the State College of Kentucky second to none East, West, North or South in all this broad land of our. *Our Supremacy has been conceded. It must and shall be maintained.*

Silently, resolutely, unremittingly this institution has addressed itself to the work. It has outlived the denominational hostility which at the outset threatened its overthrow. It has <sup>steadily</sup> plowed its way through the hostile craft by which it was surrounded, beating them off, not seeking conflict, but when compelled to exchange blows, hitting hard and fast until at last it has reached the open sea and with all its sails set moves on silently and resistlessly to the accomplishment of its destiny.

The emblems of your craft, gentlemen, are symbols of building and of progress. "Beneath the <sup>s</sup> omniscient eye above, the glorious architect divine" you have set yourselves to build for humanity. It is yours to raise the fallen, to speak words of cheer to the disconsolate, to succor those in need, to encourage those who hesitate, to dry the tear of the widow and to take the fatherless and orphan by the hand.

The tents which afforded shelter to primitive man have given place to stationary and durable structures of wood and stone and iron. The log school house and <sup>the noble</sup> temple of justice and <sup>the humble</sup> legislative hall have been succeeded by the stately university and the splendid capitol with its gilded dome and gorgeous decoration. So isolated charities, individual benefactions, personal sympathies have given place to organized beneficence, cooperative philanthropy, intelligently devised and systematically directed charity; to a united effort to uplift to advance and elevate all that fall within the sphere of your interests and relations.

2  
Your recondite and unarticulated speech evokes the touch of nature which makes the whole world kin. You in your esoteric seclusion occupy



a sphere within a sphere. You create a world within a world, but in such wise that while breath<sup>er</sup>, intimately related, within this narrower sphere, you do not cease to be closely identified with the interests of <sup>all mankind within the compass of</sup> the larger sphere. Rather, thereby, your manhood has grown in intensity and your humanity in compass and in volume.

Your mission is not to destroy but to build; to mould and quicken and direct the social and civic virtues; to create and exalt and to purify ideals of thought and action. Hence we invite and welcome you to-day.

When the mysterious impulse of militant fanaticism - known as the Crusades hurled its hundreds and its thousands upon the Moslem in order to rescue the tomb of the Savior from the possession of the infidel and to extort the privilege of undisturbed pilgrimage to and from the Holy Places - the monastic soldiery known as the Templars arose to do battle for the faith and symbols of the Cross.

Organized by Hugo de Paganis, supported by the powerful Abbot of the Cisterceans and sanctioned by the Roman Pontiff, they were for 170 years <sup>bulwark of Christendom</sup> the fiercest in assault, the most resolute in defence and the sagest in council of all the servants of the Church. Every hill in Palestine was Gaza and Ascalon, <sup>are</sup> ~~are~~ and Safed and Damietta - names made illustrious by the desperate valor of the defenders of the Temple - names inseparably associated with the heroism and the glory of the order, will never perish from the recorded annals of the world.

the magnificence of kings. On these knights devolved a double duty; to do battle with the hosts of Islam in the field and to do battle with the flesh and the devil in the conflict between good and evil in the soul. With these they waged a fiercer warfare than any which raged upon the ensanguined field. In that combat the accoutrements of physical powers were laid aside. In that strife the power which gained the mastery was the yearning of the soul for communion with God supported by the <sup>good</sup> ~~angels~~ <sup>who</sup> ~~which~~ came to his aid when in danger of being overborne by the hosts of darkness. In that dim, indefinite contest there was no clang of weapons, no banners waved, no battle cry was heard. The flesh fainted under the scourge; the limbs were emaciated by fasting, but when the trumpet sounded



a sphere within a sphere. You create a world within a world, but in such wise that while breath<sup>er</sup>, intimately related, within this narrower sphere, you do not cease to be closely identified with the interests of <sup>all men kind within the compass of</sup> the larger sphere. Rather, thereby, your manhood has grown in intensity and your humanity in compass and in volume.

Your mission is not to destroy but to build; to mould and quicken and direct the social and civic virtues; to create and exalt and to purify ideals of thought and action. Hence we invite and welcome you to-day.

When the mysterious impulse of militant fanaticism - known as the Crusades hurled its hundreds and its thousands upon the Moslem in order to rescue the tomb of the Savior from the possession of the infidel and to extort the privilege of undisturbed pilgrimage to and from the Holy Places - the monastic soldiery known as the Templars arose to do battle for the faith and symbols of the Cross.

Organized by Hugo de Paganis, supported by the powerful Abbot of the Cisterceans and sanctioned by the Roman Pontiff, they were for 170 years <sup>bulwark of Christianendom</sup> the fiercest in assault, the most resolute in defence and the sagest in council of all the servants of the Church. Every hill in Palestine was dotted with their castles; every point of vantage became a fortress; the noblest blood of France, Germany, Italy and England enlisted in their ranks. 9000 <sup>a</sup>knights scattered over western Europe supplied them annually with millions of money, enabling them, though professing poverty, to rival the magnificence of kings. On these knights devolved a double duty; to do battle with the hosts of Islam in the field and to do battle with the flesh and the devil in the conflict between good and evil in the soul. With these they waged a fiercer warfare than any which raged upon the ensanguined field. In that combat the accoutrements of physical powers were laid aside. In that strife the power which gained the mastery was the yearning of the soul for communion with God supported by the <sup>good</sup> angels <sup>who</sup> came to his aid when in danger of being overborne by the hosts of darkness. In that dim, indefinite contest there was no clang of weapons, no banners waved, no battle cry was heard. The flesh fainted under the scourge; the limbs were emaciated by fasting, but when the trumpet sounded



Gaza and Ascalon, <sup>ars</sup> ~~Asce~~ and Safed and Damietta - names made illustrious  
by the desperate valor of the defenders of the Temple- names insepara-  
bly associated with the heroism and the glory of the order, will never  
perish from the recorded annals of the world.



the call to arms they sallied forth with spear and battle axe to cleave a passage through the serried ranks of the foe. For 170 years under seven and twenty Grand Masters the sword of the Templars was never sheathed and his harness was never laid aside. But in the process of time the vast possessions acquired in Europe by the voluntary gift of the nobility who joined the order, made them an "imperium in imperio", made them objects of jealousy and cupidity in more than one of the kingdoms of the West. Their wealth aroused the <sup>a</sup>avarice and the hatred of Philip the Fair of France. When Ahab the King, covets the vineyards of Naboth his subject, false witness is readily procured to maintain an accusation of disloyalty and treason. Charges of immorality, impiety and heresy were invented and preferred against them.

Upon the death of Boniface who stoutly resisted the importunities and threats of the French Monarch, Clement purchased the support of the avaricious and relentless king by the pledge that if raised to the papal throne he would issue a bull for the suppression of the order. Upon his succession to the Papacy the nefarious compact was sealed. Their property was <sup>is</sup>sealed, their accumulated treasures appropriated, their <sup>a</sup>monitors confiscated, themselves siezed and imprisoned. Never did men bear themselves more nobly. Confronted with violence and falsehood by the secular power; with treachery by the Church which they had served so well; doomed to the axe the gibbet and the fagot, the great majority stood fast in their integrity and yielded their lives but not their honor.

De Molay, the last Grand Master whose name you adopt and revere died the death of a martyr and a hero. Bearing in his body the scars of war and the wounds of torture - doomed to a lingering death by the charcoal fire lighted on the banks of the Seine; resolute, calm, defiant his noble spirit ascended in a chariot of ~~fire~~ flame to Heaven.

And what is the lesson for you my friends? Jacques de Molay preferred death to dishonor. He had served his order for forty eight years. He had participated in its glories. He sank in the universal ruin with which king and Pontiff <sup>overwhelmed</sup> held it. But the echo of his indignant protest



still lingers. The heroism of his life and the grandeur of his death will never perish from the minds of men.

Misfortune may assail prosperity be succeeded by adversity; darkness and gloom supplant the light, but the man of integrity, of truth and of honor will maintain evermore a spirit lofty, serene, undaunted and defiant.

We welcome you to-day. You dignify by your presence and encourage by your participation in the ceremonies of this hour those who are endeavoring to carry on the work of the development of the human mind.

To provide facilities for an education which shall build up the physical man, which shall supply the indispensable training whereby physical culture can subserve and stimulate an intelligent and efficient patriotic service - to make these and all other aids the means for the development of character noble, manly and true - these are among the objects sought to be obtained by the erection and proper use of the building which we now proceed to consecrate in part at least to-day.

Many a man plants who does not live to enjoy the fruits of his labor. We have begun the work which other will carry on. This structure is not for a day or for a year but for all the ages which shall follow. In time no doubt a larger and more ample building will replace it, but the continuity of thought and purpose will remain and their fruits shall be gathered by generations yet unborn.

And what is this Building, what are all buildings, but the temporal symbols of the buildings not made with hands, Eternal in the Heavens.

The finite and the temporal find their interpretation, their foreground, and their background in the Infinite and the Eternal. Then

"Build thee more stately mansions, Oh my soul

As the swift seasons roll.

Leave thy low vaulted past

Let each new temple nobler than the last

Shut thee from heaven with a dome more vast.

Till thou at last art free

Leaving thine outgrown shell by life's unresting sea."

*"Non nobis, Domine, non nobis, sed nomini tuo da gloriam."*