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"One might naturally conclude that, as the life of the sheep is much shorter than that of man, the cyst in that animal is small, because it has not had sufficient time to attain the larger dimensions of human echinococcus bladders. This is not, however, the explanation, for I have three times, in children under four years of age, seen a cyst as large as the head of the child who harbored it. On the other hand, none of the multiple cysts found in the bodies of three discarded stud ewes of twelve years and upwards were larger than a filbert. The health of sheep does not appear to be affected by the presence of the parasite-that is, the cyst, and not the worm, the host of which is the dog. The taenian ova are taken into the body of the intermediate host in all stages of freshness, and in all varieties of number. The man who drinks water recently contaminated by a large number of recentlydischarged eggs runs a greater risk of developing a numerous brood of cysts in his inside than a man who consumes an equal number of old ova which have been

The professor proceeded elaborately to show how the disease could be communicated from the dog to man, and then operated upon a portion of the inside of a pet dog which had just been killed to put it out of its misery, as it had been ill, to show the reporter, if possible, the tiny tapeworms which are responsible for the spread of the disease. There were numerous worms in the specimen, and the attendant was instructed to take great care of it. It was made clear that however healthy a dog might appear to be there was always the danger of the hydatid eggs being conveyed into the human body by the careless handling of the canine per, especially in connection with the practice which some persons encourage of allowing dogs to lick the hands of children and ever

grown-up people.

weakened by exposure."

MUSICAL EXAMINATIONS.

To the Editor.

Sir-I have read Mr. Montague's letter and his first statement is absolutely inaccurate. Trinity College is not a limited company, and is not registered at the Board of Trade as a trading company. Regarding this gentleman's other statement, I ask the public to withhold their decision till I can get replies from Sydney and London in a week or so. The principle charge against the London College of Music is that they have used the names of leading musicians in England without authority. Will their secretary kindly forward me a specimen copy of their prospectus, syllabus, and circulars? I will send them home to a competent authority, and in a short time will settle that point. I do not believe the statement about the Mayors of London, Manchester, Birmingham, Liverand Leeds. Mr. Montague says the pamphlet I quote from is ancient history. So it is. The London College of Music, Limited, has been accused for years of all these delinquencies, and had not made the perpetrators apologize or withdraw, or taken legal action against anybody. Its own secretary in London admitted that he had given some certificates and diplomas without examination. In my first letter the initials "L.R.C." were wrong-I meant "L.C.M." (London College of Music). Mr. Peterson, of Melbourne University, made the most public and damaging statements about the Loudon College of Music, Limited. Why have they not forced him to apologize? I hold no brief for the legitimate visiting bodies. I have irequently stated that I think their conduct of examinations in ladies seminaries of all denominations and small country places is a serious drawback to music as on art. The letter offering a diploma to a gentleman in Perth has been reprinted in many newspapers, and was read in Court at the Leeds Assizes. Would Mr. Montague inform us if he was an examiner or a representative for 10 years. I'ernaps Mr. Hopf might inform us how they intended to pay him?-per capita or ctherwise? I am, Sir, &c.

Port Pirie, May 16. C. BARTON.

ADELAIDE UNIVERSITY.

A VALUABLE GIFT.

LIQUID AIR MACHINE.

The University of Adelaide has lately entered into possession of a valuable machine for making liquid air. It is the gift of a well-known South Australian philanthropist, and has been presented to the University with a view to assisting Professors Bragg and Rennie in the experiments which they are making with respect to the properties of radium. It appears that in studying the effect of radium in gases it is essential that the gases should be pure, and liquid air ensures purification.

The new machinery has been installed in one of the laboratories, and on Thursday, morning several scientific people assembled to see it in motion. Professor Bragg was in charge of the apparatus, and Professor Rennie was experimenting in an adjoining laboratory with the liquid air produced. Methane was the gas used, and it was shown how by immersing the vessels containing gas in liquid air the impurities could be removed. The machine produces liquid air at the rate of a pint and a half in an hour, and the temperature of it is 300 deg. F. below zero. So cold is the air when drawn off into crucibles that hour frost accumulates thickly in the vessels. By means of a Whitehead torpedo compresser the atmosphere is compressed 800 times, or over a ton to the square inch. After purification the air is allowed to emerge through a very fine aperture, and in emerging it is chilled. The outgoing air rises up past the pipe which conducted it, and so chills the next volume of air in its passage. As the air continues to issue forth the temperature of it goes on decreasing until at length it liquides. Liquid air can be produced about a quarter of an hour after the machine has been started, and when produced it is drawn off into double-walled glass vessels, with a vacuum in between. In appearance the liquid air is like water, except that it has a slight bluish tinge. The effects of the liquid air on certain substances is remarkable. A glowing stick, if plunged into it, will burst into flames, notwithstanding the extremely cold temperature, and a piece of indiarubber, when immersed in the liquid air, becomes as brittle as chalk. In a good vessel the air will remain in a liquid state for a week.

THE AIR WE BREATHE.

LIQUEFYING THE ATMOSPHERE.

An interested audience gathered in the experimenting rooms at the Adelaide University on Thursday morning, when Professors Rennie and Bragg were manufacturing liquid air and conducting experiments with it. The costly, delicately built machine with which the atmosphere was being transformed into a visible liquid like blue-tinged water was recently presented to the University by a philanthropic resident of the State, in order that it should be of ultimate assistance to the staff in radium research. Liquid air has its value in that direction by absolutely purifying the gases which are required in conducting the researches. If any but pure gases were employed, the experiments would be of no practical value to the scientific world, there being otherwise no definite standard of purity.

Professor Bragg explained that the machine had been producing the liquid at the rate of about a pint and a half an hour since about 15 minutes after it had been connected with the engine carly in the morning, and he produced vessels containing the liquid, which had been reduced to 300 deg. Fahr. below zero. The tubes which held the air were of special construction, having been made of double-walled glass, with a vacuum between the two walls, and the outer wall silvered over to prevent the ingress of light. Professor Bragg pointed out that the vessels were stoppered only with cottonwool (upon which a thick hoar frost had formed), because if the vessels were sealed an explosion would quickly follow. If allowed to remain in the specially constructed tubes, the compressed atmosphere would stay in its solid form for about a week. The air is reduced by a Whitehead torpedo compresser, which renders it down to 180 atmospheres, or well over a ton to the square

To give an idea of the density of the liquid element, Professor Bragg stated that one square inch was equal to 800 times its bulk of ordinary atmosphere-that is, if the air in a chamber containing 800 cubic inches were extracted and compressed into a liquid, that liquid would only be an inch cube. In the compresser the air is first purified. It then emerges through a very fine aperture, and in emerging is chilled. This chilled outgoing vapour rises above and around the pipe, which is conducting more to the aperture; thus there is a gradual and continuous chilling of the air, until it liquefies. As a practical demonstration of the extreme degree of cold which characterizes the liquid element. Professor Bragg placed alcohol in a vessel, and upon it poured the liquid. The sight was a remarkable one. As the watery element ran from one vessel to the other a cloud of pure white mist rolled heavily away and dissolved again into its own natural element. In a few seconds a portion of the alcohol had frozen into a solid ball, and upon the neck and mouth of the vessels hoar frost had gathered a quarter of an inch thick. Professor Bragg said that if a piece of indiarubber were dipped into the liquid, it could be broken in brittle pieces like chalk, and that if a smouldering stick were plunged into it the stick would be consumed by fierce flamesalthough the temperature was 300 deg. below freezing point.

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Professor Bragg will represent the Adelaide University at the conference of State officials for the consideration of the procedure regarding the Commonwealth Meteorological Bureau. Mr. Hunt (Commonwealth meteorologist) will preside. The secretary to the Department of Home Affairs (Colonel Miller) will open the proceedings on behalf of the Minister (Senator Keating) this afternoon, at the Rialto, Melbourne. The president will then deliver his address, after which the deliberations ill commence.

Dydney Daily Selegraph. May 25th. 1904

THE CALL OF THE YEARS.

LECTURE BY PROFESSOR JORDAN.

DEMANDS OF THE TWENTIETH CENTURY.

It was an expectant audience that filled to overflowing the Great-hall of the University last night on the occasion of the first of a series of lectures by President David Starr Jordon, of the Leland Stanford, Junior, University, one of the greatest authorities on education in the United States of America.

Sir Normand MacLaurin (Chancellor) presided, and among others on the platform were Senator Gould, Judge Backhouse, Professors Woodhouse, Bavid, MacCallum, Carslaw, Haswell, Wilson, Rennie (Adelaide), and Kernot (Melbourne), Messrs, Orlando Baker (U.S. Consul), E. R. Holme, B.A., and J. M. Taylor, M.A., LL.B (secretaries, extension board), P. Board, M.A. (Under-Secretary Public Instruction), H. E. Barff (registrar), E. B. Taylor, Rev. A. Aspinall (Scots College), Rev. C. J. Prescott (Newington), Mr. A. B. Weigall (Sydney Grammar School), Miss Macdonald (Women's College), Mrs. Garvin (Girls' High School), Lady and Miss Fairfax, Dr. G. E. Rennie, and Dr. A. MacCormick.

Briefly introducing the visitor, Sir Normand MacLaurin explained that they would not have had the pleasure of Professor Jordan's presence had it not been that Professor David happened to meet him in California, and induced him to visit Sydney on the invitation of the Uni-

versity Extension Board.

After thanking the audience for its welcome. Professor Jordan commenced his address, "The Call of the Twentieth Century." His purpose was in part, he explained, in some degree to tell what kind of century this was to be, what kind of work it had for young men, and what kind of young men it needed for its work. In general one century was very much like another, but each one had some distinctive traits which stood out as marking its individuality. twentieth century, above all others, would be strenuous, complex, and democratic. Strenuous because it had so much to do, of all sorts of things, and only a hundred years to do them in, and seven of those years had gone already. It would be complex because the inventions of science had made all men neighbors. had made the great world very small, so that it was but a slight distance around it; they had made this little world very large, because all the peoples of all the earth were brought to stand in the closest relation to each other. In the picking and choosing which made up the conduct of life we had to-day to say yes or no a hundred times to where our ancestors had to choose once. All this had made the current of life no longer simple. We must understand its rules and its signals. We must be wise in knowing what to do next, and virtuous by having the courage to do it. And because life was thus strenuous and complex it must be democratic. If we had something that needed doing we must find the man who could do that thing.

"We do not seek for a son of Lord This or the Earl of That, for a scion of some family which has lain on velvet for a thousand years. want the man who can build the ship, establish the enterprise, invent the machine, carry the message to Garcia. We do not care what his name is, or where he came from, or who his father was, or where he got his eduction if he

can do the work." (Applause.)

Democracy meant opportunity-opportunity for the man to find the work he could do, opportunity for the work that needed to be done to find the man who could do it. Democracy did not mean equality. It meant forever increasing inequality from an equal start, equality before the law, a fair start and a generous education for every child of the Commonwealth, and after that only the fair play of a fair competition. It was the man who did most for the community, for which the community should do the most. The most that any community could do was to see fair play between man and man, and to look after great matters of common interest too large for the individual (Applause).

As to the work for young men to do, Dr. Jordan referred to the wealth of opportunity in engineering, in commerce, in agriculture, in medicine, in law, in teaching, in journalism, and in all forms of applied science. Never before in the history of the world was the young man who could do things and who could be trusted to do them as they should be done, so much in

For all this work what kind of a man did the century demand? . It was clear that it could not use all sorts of young men. In the places of drink, in the gambling houses, about the racetrack, and in many still worse places, were the young men the century did not want. There

were too many of these. It was fair to say that one-third of the strength of the young manhood of America was lost through drunkenness and vice. He was told that conditions in Australia were much the same in this regard. It was only the other two-thirds the century cared for. The rest it held in ruthless scorn. First, of the men it could use, the century would demand training. It was just as easy to do great things as small if a man only knew how. The successful men of the future would be university men, for the great universities of the world were now training men along lines of personal success. Their help the strong man could not do without. A university education to-day was as broad as the range of human activities. It no longer restricted men to some narrow field of conventional learning, to language, mathematics, and philosophy. Its purpose was to take each man's best abilities, and to raise these to the highest power of effectiveness. And this, in the stress and competition of life, was a help that no wise man would try to do without.

In the same way, the twentieth century would demand men of character, loyal men, hopeful men, men who thought in terms of action. There was no virtue that would not add to a man's salary. There was no vice that was not daily

subtracted from his income.

Above all else the century would demand the sober mind. The finest piece of mechanism in the universe was the human brain. Its highest manifestation was the mind. Whatever injured the brain in like fashion injured or destroyed the mind. Without the mind the body was no-

thing-waste flesh.

Above all duties was that of maintaining the brain and mind intact. Vice was self-inflicted injury. It was in the final result injury to the brain, the mind, the soul. The impulse to vice was the effort to receive happiness without earning it, the desire to feel well without deserving to feel well. In that end came the misuse of drugs, of stimulants and narcoticsstimulants that made one feel exhilarated when he was really depressed, narcotics that made one feel rested when he really suffered from nervous irritation. All these things impaired the truthfulness of the nervous system, the mind did not get the truth from the senses, and the more the nerves were forced to lie the more difficult it was in the future for them to tell the

Dr. Jordan closed his address with an appeal to young men. "The one duty most important to you. young man," he said, "is to live in such a way that the man you ought to be may in his time be possible, be actual. Far away in the twentieth century-1920, 1930, 1940-the man you ought to be is waiting for the world to move on. for your life to blend into his. Will you live in such a way that this man may be your developed self, that he may be wise in your experiences, happy in your joys, strong in your training, efficient in your friendships; or will you, wanton-like, throw it all away, destroying his patrimony before he has a chance to touch it, decreeing that the man you ought to be shall never, so long as the world shall last, have the chance to exist? This is your problem to-day and every day. It is for you every day to choose, and the hour of your choice marks the crisis in your destiny." (Applause.)

Judge Backhouse moved a vote of thanks to the lecturer, expressing gratefulness on behalf

of the University Extension Board.

The motion was seconded by Professor David. He stated that all he had heard of Professor Jordan in America was in his praise. To begin with he was spoken of as a fine athlete-a fine baseball pitcher, and as a pitcher in a sense of being able to bowl out every time all kinds of ignorance and vice. There was no one in the United States who was more looked up to as an authority on education than Professor Jor-

Amidst applause the motion of thanks was passed.

Prior to the lecture an organ recital was given by Mr. J. F. Lydall, B.A.

I elegraph.

THE WORK THEY ARE DOING.

DEVELOPING ALL THE TALENTS OF THE COMMUNITY.

In his second lecture in the Great-hall of the Sydney University last night, Professor Jordan kept another crowded audience interested as he talked in his quaint, original way, with flashes of dry humor, about the progress of American Universities, and the organisation of the University system in the United States. Sir Normand MacLaurin (Chancellor of the Sydney University) presided, and amongst those on the platform were Professors David, MacCallum, and Woodhouse, Sir James Graham, and Mr.

Daniel Levy, M.L.A.

Dr. Jordan pointed out that the keynote of the American system of higher education was found in the phrase, "Constructive Individualism." It was not an attempt to raise a few gifted men up to a high pre-arranged standard, but its aim was to take the talent existing in the community, and to make the most of it along the various lines in which it might be developed. It was a phase of what might be called the "Higher Socialism," the development of the individual for the sake of the State; for the State was effective and competent only in proportion as its individual units were effective and capable of self-direction. The system was based on the idea that the most precious property of the State was found in the talents of its children. He admitted that one of the existing defects in America was the carelessness exhibited in the use of the terms "University" and "college," which were used almost interchangeably. A University was a large college, which blossomed out into graduate courses. The four years leading to the Bachelor's degree belonged to the college. No American University was without a college or under-graduate department, and in most of them this constituted the main portion. Exceptions to this were the Johns Hopkins and Clark institutions.

The habit of America was to leave its institutions to develop themselves in their own way, and so among them were found every grade, from the best to the worst. The matter of degrees was left to the control of the individual State, and for the most part was subject to no State regulation or regulation other than that of the individual institution. The degree in America was not recognised by the nation itself. It was simply a certificate of the individual institution as to what work is done in that institution; therefore it did not possess the national guarantee that the degrees in England and Germany enjoyed. It was simply a baby badge, belonging to the infancy of culture. The degrees of the inferior schools were not recognised by the better ones, and in America no degree carried with it any special privileges; but in the Universities and colleges of the first and second class the standards for degrees were as high as

anywhere in the world.

The American Universities might be divided into State, municipal, private, and denominational, and schools of technology. They might also be roughly divided into Universities of the first rank, those comprising the Association of American Universities. Of these there were 15-Harvard, Columbia, Cornell, Johns Hopkins, Yale, Stanford, Chicago, Princeton, Clark, the Catholic University at Washington, and the State Universities of Wisconsin, California, Michigan, Pennsylvania, and Virginia. The State of Wisconsin, with a wealth not greater than that of New South Wales, and a population onethird more, had developed the strongest of all the State Universities, and one which doubled in strength every 15 years. The line separating these from the best of the second group was wholly arbitrary. Among the most prominent of those of the second rank were the Universities of Minnesota, Illinois, Ohio, Indiana, Nebraska, Kansas, Iowa, Missouri, and Texas, with Dartmouth, Brown, Amherst, Colorado, Northwestern, Bryn Mawr, Smith, Vassar, Wellesley, and Mount Holyoke of the institutions under private endowment. In general, the denominational colleges were less effectively endowed than the others, and as they grew in size and influence the denominational control was usually cast off.

The plan adopted in Sydney, by which the denominations had their college around the University as branches, had much to recommend it; and he believed this method would be ultimately followed in America. In this regard Australia was already in advance of his country. In the lists of American colleges and technical schools granting degrees, 507 institutions were recorded. Of these about 250 reached the definition of "college" laid down by the laws of New York and by the Carnegie Foundation. To meet this definition the school must require four years of secondary study for admission, and four years more for graduation; it must have at least six Professors engaged wholly in collegiate work, and its income from endowments must not be less than £2000. The total wealth of these institutions and the Universities in the United States was now about £100,000,000, about threefifths of this being invested endowment funds, the other two-fifths in lands and buildings. The aggregate income was now about £6,500,000. Of this about 40 per cent. came from tuition fees, 25 per cent. from endowments derived from private gifts, 20 per cent, from the State, 10 per cent. from Federal aid, and the rest, about 5 per cent., from minor sources.

Of all the Universities, the most characteristically American were those belonging to the State, and managed and equipped by it, this support consisting of outright appropriations, standing appropriation, a tax from one-tenth of one per cent. upwards on all taxable property, and, in most cases, special gifts of land. In general the fees in the State institutions were very low. These institutions had doubled in size, wealth, and influence in 10 years. The growth of these institutions was due to a variety of causes, the first being their distinct helpfulness to the people. In Wisconsin, for example, there was not a farmer who did not realise that the investigations of the Chair of Agriculture, under Professor Henry, had directly added to his own personal welfare. In the University was invented the Babcock milk tester, and there also grains and fruits were improved by selection, whilst there were study of the best strains of domestic animals, for example, Southdown, Cheviot, Shropshire, Hampshire, and Dorset sheep. In the University all the secondary teachers were trained, and in every State Legislature the alumni of the University held commanding positions. The professors were available for lecture courses throughout the State, and the University president, a distinguished geologist, Van Hise, was personally known and honored in every community. With all this came the increase in material wealth due to having the industries of the State directed by trained men, and the belief that the University training gave each young man his opportunity. The private institutions not denominational had grown equally in the same time. Rich men saw the value of training, and some gave in recognition of what they had gained through the Universities, others in recognition of what they had missed.

The fees in State Universities ranged from nothing to £6 per year. Those in private institutions from nothing upward to £50. The usual figure was £30. The business affairs of the American Universities were in the hands of boards of trustees, usually business men and lawyers. The educational affairs were controlled by the Faculty and the president. With the president usually rested all educational initiative. New plans originated with him, and American institutions continually tried experiments. This was one thing a University was for. All appointments, promotions, and removals usually originated with the president, and could not take effect until approved by the board of trustees, and usually the faculty or a Senate of professors must also approve. The president was the executive officer and representative of the institution. He might be a clergyman, a business man, or a scholar. The most successful had always been scholars, for only a scholar really understood a scholar's business.

In America the salaries of professors ranged from £1200 to £400; those of University presidents from £2400 downward; those of instructors and intermediate professors from £160 to £600. The highest salarles were paid in the schools of private foundation, and to these the Carnegie retiring fund of a little more than half-pay is granted at the age of 65. The salaries throughout America are too low, when we consider the high pay granted to experts in all

industrial matters.

Students were usually admitted to Universities on certificates of proficiency from lower schools. In most colleges there was no fixed curriculum, the student choosing his work under the advice of a dean, of an appointed advisor, or of his "major professor." The latter system was replacing the others. Each man was granted his degree when he had met the requirements, but degrees were formally conferred only on Commencement Day. In all class-rooms and on all public occasions, the American student behaved with perfect decorum. The granting of degrees was an occasion on which no disturbance would be tolerated. The students had a great range of activities-athletics, dramatics, debates, journalism, serious and humorous. In the student bodies were various long-established fraternities known by Greek letter names, each having chapters in the various Universities. Highly distinguished also are the societies of honor, the Phi Beta Kappa for literary, and Sigma Xi for scientific excellence. A student who was unable or unwilling to do his work properly was dropped from the rolls.

In no other country had there been such progress in University development as in America. In none had there been such generosity in public and private gifts. The membership and the income of the best institutions doubled every 15 years. Yet to-day the system was still in

its early youth,

Mo on 30-1907.

MEN, NOT ORNAMENTS.

PURPOSE OF EDUCATION.

UNIVERSITY IDEALS.

The Great-hall of the University was filed again last night by an audience that had gut ered to hear President David Starr Jordan the Leland Stanford Junior University, delashis lecture on "The Aims and Ideals of America. Education."

Mr. J. A. Hogue, Minister for Public Instrution, presided, and on the platform were las-Northcote, Professors Woodhouse, David, Mr. Callum, Anderson Stuart, and Warren, Mein P. Board, M.A. (Director of Education), J. Day. son, M.A. (Chief Inspector), Alex. Mackie (Priscipal, Training College), Dr. Graham, Dr. Mg. Cormick, D. Levy, M.L.A., and H. E. Buy M.A.

The keynote of the American University erstem, said the professor, was that of adaptation to the needs of a people which governed thenselves. It was essentially a creation of denscracy, with all the virtues a democracy had a its best, with all the mistakes and limitation ignorant people could impose on themselves. In in the long run wisdom always prevailed. The best safeguard against the mistakes of dencracy was to let those that were responsible suffer from their own mistakes. When the pople found what hurt them, the remedy wait their own hands.

Speaking of the American Universities, 1 Alfred Moseley was reported as saying:-"Whe strikes me most is that your workshops in filled with college-bred men. At Home a Tosity man is graduated into frock coat and glom. He is educated into overalls. The keynotest American education is training for efficient "It is the function of the University," in Emerson, "to bring every ray of varied gets to its hospitable halls, by their concentrate effort to set the heart of the youth in flame."

Two very different ideals of education hadeisted among Americans and their fathers in Biland. In the one the aim had been to see from the mass a few gifted men, and to rethem to a high ideal of scholarship and books erudition, leaving the mass uneducated, or, it's gentle breeding, to be contented with acquire the manners of the gentleman. To this end versities had been examining rather than team ing institutions. They set the mark high, a quite apart from questions of utility or ciency. Their purpose was to test those will strove to reach this mark, and to reward the who were successful with honors and privilege It had been the boast of the examining United sity that within its walls "nothing useful " taught."

In the other theory men were considered B individual men, not as possible social ornaments. No prearranged goal was suggested except the individual goal each man might possibly reach The purpose of education in this theory was to enable each man having talents worth training to perform his part in life with intelligence and efficiency. The courses were adapted to the individual man, and as each man in the democracy must in some fashion work, the 'Varsity man was as often an engineer or a farmer as a gentleman or clergyman. Hence he was graduated with overalls, if the overall was the best garment in which to do his work.

In this theory the most precious possession of any community lay in the talents of its individuals. The greatest possible waste was in letting this talent lie undeveloped. "A boy is better unborn than untaught," "For a man to have died who might have been wise and wa not, this," says Carlyle, "I call a tragedy."

Hence there arose in the Universities of ever democracy the ideal of constructive individual ism. In the same connection arose the educa tion for action. America was "a motor nation whose successful men were those who though in terms of action. The straight line was th shortest distance between two points, and a irrelevant matter in education, all ceremony, o ornamentation were pointless effort. The perio of youth was in men the time of the formation of babits, the crystallisation of character. It that period the student, if ever, must learn the value of time. It was good for him to have all the work he could do, and to be forced odo each part of it when that part was due. F. 100 the American University maintained high . . ndards, and, still better, enforced them from day to day. And the student went at his task willlingly, because his course of study, being "ed to his needs, appealed to him as related , his future work and to the success he hoped to achieve. A student who was hard at work along lines in which he was personally interested was saved at once from idleness, from vice, and from conceit.

In the American theory knowledge was the basis of action. Wisdom was knowing what one ought to do next, virtue was doing it. The American University maintained an open door to all who could use its advantages. Nowhere else in the world, not ever in Scotland, was the path from the farmhouse to the college so well trodden. To this end the Universities and the secondary schools stood in close relation-a relation which grew closer each year, and the low fees made it possible for the youth of promise to pay his own way as he went, if he cared to work hard enough. On the other hand, it was part of the American plan to treat rich and poor alike, and the general feeling was that free scholarships and special bursaries were undesirable, or at best a choice of evils. The element of choice in relation to subjects made for high scholarship. To deal only with students interested in their work made better teachers out of the professors.

In the English Universities of the past the ends sought had been social. Culture placed a man in a higher caste than he would otherwise reach. The gentleman and the clergyman were needed in society, and these Oxford produced, together with the scholars necessary to keep the old learning alive. The college at Oxford taught, but it did not examine. Hence, examining rather than teaching became the function of English Universities. To this day, for the most part, the teacher was not the examiner. No matter how broad his view of the subject or how fresh his material, his work was largely lost on the student. For the student must look out for the examination, and the questions were set along conventional lines by someone else. It was this abyss between teaching and examination which marked the divergence of the American from the English Universities. It was this fetich of the examination which gave all the evils of the cramming system, and of a degree based on intensity of memory and not on breadth of view or efficiency in action.

The ideal of the English system had been that of personal culture, the development of the gentleman. That of the German Universities had been that of erudition, that of France and Italy largely the preparation for ready-made careers. The ideal of America was individual efficiency. If that be based on erudition, and adorned by culture, so much the better; but for culture which was ineffective in the conduct of life the American people had very little respect. "Culture in the form of useless knowledge," said Mr. Justice Holmes, "I utterly abhor."

Dr. Jordan's view of his subject was expressed in one sentence-"I look upon our American Universities as a whole as the greatest triumph

of democracy."

Mr. Hogue stated that the addresses of the Professor must be welcome to this community. which was so deeply interested in education. Of late years the Universities in this and other countries were becoming more and more democratic, and Australians must be interested in looking within the doors of the American Universities opened to them by Professor Jordan.

THE HUMAN HARVEST.

EFFECT OF WAR.

PROFESSOR JORDAN'S LECTURES.

Prefacing his lecture at the Sydney University last night with a few remarks on the subject of "Evolution," Professor Jordan observed that we did not know absolutely that there was a single form in the beginning. Geologists told them that there was a period when there was no life as they knew it to-day, but there was no scientific or any other man who doubted the general principles of organic evolution. They could put him down as a believer in the general principles of organic evolution-that the species who inhabited the world to-day had been derived by the natural law. They knew a great deal more about evolution than Darwin. There had been so many active men exploring-men like Professor Haswell (of Sydney), Professor Hill, and Professor Wilson. Professor Haswell's book was accepted in America, because they recognised it as a better book for its purpose than any other they could put their hands on. (Applause.) The things they knew better than Darwin might be summed up under four heads: (1) Variation, in that they knew that no two organisms were exactly alike; (2) heredity, for they had been able to work out in the germ cells and other cells of the body the machinery by which heredity was accomplished; (3) the process of selection; and (4) segregation, or isolation. The great merit of Darwin was that he was able to foresee that discoveries would be made, but at the same time evolution remained substantially as Darwin left it, with a great many additions and changes. The problems they had to face to-day were the problems of the causes of variation-why was it that no two animals or plants were just alike? Why was all this variety in the world? What was the cause of it all?

Coming next to the particular subject of his lecture, Professor Jordan said that he was going to say some severe things about war, but whatever he did say would not affect the general proposition that the people of Australia ought not to be asleep amongst the nations of the world in seeing to the security of their own defences. (Applause.) There was an early Roman saying that "the human harvest was bad," when there was a shortage of good men. He wished to impress the all-compelling fact in the history of Europe that the destruction of the strong men and breeding of a new generation from those that were left, was injurious to a nation. When Rome fell it was because all the great Romans had gone, and the great country filled up like a marsh with odds and ends. A country would always keep full, but not necessarily with the right kind of people. What was true of Rome was true of other countries. It was the saving of the best that made for the progress of a nation; it was the saving of the worst that hindered. Unfortunately the man who was left determined the future of the country would what He referred to the history of France her millions slain in wars of long and ago. Lately a commission had been appointed to find out the cause of the alleged degeneration -why it was that all through the towns of France the people were shorter and less fertile. and what constituted the superiority of the Anglo-Saxon. Greece and Spain afforded further examples. They who belonged to the great British Empire were anxious to know what the effect on the Anglo-Saxon race would be. He did not believe that England was a degenerate nation. A great many had gone out of England who would have made her stronger if they had remained, for the world always lost a great deal when a strong man departed or died and left no descendants. Go through the cathedrals of England, and they would find record of the toll. Some perhaps were sorry scapegraces, but the great body were of the heart of England. America had had a similar sorry experience in her war of the revolution and the great civil war. The more just, the more inevitable a war, the more a country had to pay. The poets had testified amply enough what was a nation's loss of her best and bravest men. Emerson once said, "The best political economy is the care and culture of men." The best political wisdom was that of the bells that rang to them at Christmas of "peace on earth, goodwill

toward men." Sir James Graham, in proposing a vote of thanks to Dr. Jordan for his lecture, said that the proposition had been discussed of securing an interchange of teachers between nations for their mutual advantage, and Dr. Jordan's visit had emphasised the excellence of the plan. As regards Dr. Jordan's recent criticism of the Sydney University, he (Sir James) thought that the remarks made on that occasion ought to be written in letters of gold and taken to heart by the University authorities. Dr. Jordan had mades how may benefit off remisent rest their Uni-

singles and Ascot Racing Chubs, and that several whe had craidently appelled to the A.J.G, have made similar spelication to the L.J.G, have made similar positionation to the Law and Chubs, and chubs