

https://dspace.org/

Milner, Beit and Smuts

Murray, Bruce

1976-10
http://hdl.handle.net/10539/9370

Downloaded from a DSpace repository. https://dspace.org/

UNIVERSITY OF THE WITWATERSRAND

A F R I C A N S T U D I E S I N S T I T U T E

African Studies Seminar Paper
to be presented in RW
4.00pm OCTOBER 1976

Title: Milner, Beit and Smuts.

Section 1 of "British Imperialism, mining capital and the movement for Tertiary education on the Witwatersrand, 1902-1924."

by: Bruce Murray

No. 048

'British Imperialism, mining capital and the movement for tertiary education on the Witwatersrand, 1902-1922'. By B.K. Murray.

Section I: MILNER, BEIT AND SMUTS.

I.

The movement to establish a university on the Witwatersrand was initiated immediately after the Anglo-Boer War of 1899-1902. It was a movement inspired by the new British regime. Both Lord Milner, the Governor of the Transvaal and Orange River Colony and High Commissioner for Southern Africa, and Joseph Chamberlain, the British Colonial Secretary, looked towards the establishment of a teaching university on the Rand. As Joseph Chamberlain put it in his celebrated speech at the Wanderers Club on 17 January 1903:

> If I were to point at this time to what, in my opinion, is the most urgent need of this community, I should say it was the immediate provision of a High School, efficient in every respect; and of a Scientific University specialised according to the needs of the great industries of the community. I can hardly doubt that an appeal to local patriotism to those who have made their fortune here will not be without its effect, and that before long Johannesburg will possess a University, which in its own lines will be superior to anything that now exists in the world.[1]

British imperialist strategy, mining capital and the requirements of the gold mining industry of the Witwatersrand, a determination to open up the professions to locally trained persons, the assertiveness of the English-language groups in the Afrikaner North, and Johannesburg civic pride, provided the main thrusts behind the movement for the foundation of a university in Johannesburg. The counter-thrusts, which served to delay the arrival of a full-fledged university on the Rand, stemmed from the vested interests of Cape Town, the rivalry of Pretoria, Afrikaner resistance to British cultural hegemony in South Africa, an immense amount of prejudice to the notion of 'sinful', 'speculative', and 'turbulent' Johannesburg as providing the seat for a university, and the machinations of Jan Christiaan Smuts.

Strictly speaking, the story of Wits as a single institution, although with bewildering changes in name and status during its first two decades of formative struggle and development, dates from the Transvaal Technical Institute, founded in 1903. Its antecedents were nonetheless to be found in the Cape, and in the establishment at Kimberley of a school of mines.

II.

The idea of creating a school of mines for South Africa was first seriously mooted in 1890, and it was done so in Cape Town rather than in Kimberley or on the Rand. At that stage Cape Town was still the dominant city in Southern Africa--Kimberley and Johannesburg were mere mining camps--and it was certainly the centre of education and culture. It was the home of the University of Cape of Good Hope, founded in 1873 as an examining university for the Cape, and authorised two years later to operate beyond the borders of the colony. It was also the home of the South African College, established in 1829, which was the leading teaching institution in Southern Africa, preparing students for both the matriculation and university examinations of the University of the Cape of Good Hope.

In 1890 the council of the South African College proposed to establish a school of mines under its auspices, but this was opposed by Cecil John Rhodes, who became Prime Minister of the Cape in July of that year. As Rhodes informed the Cape Parliament, he believed that Kimberley rather than Cape Town should serve as the seat of any new school of mines.[2] His ambitions for Cape Town were far grander. His idea was that Cape Town should become the home of a residential teaching university for all of Southern Africa, where both English and Dutch speaking whites would study and live together, and forge the basis for a new unity. As a 'Cape Colonist' his purpose was also 'to make Cape Town the centre of South Africa'.[3] In 1891 he set aside a site at Groote Schuur for the residential university he envisaged. The proposal for a school of mines in Cape Town, for its part, was shelved, and the eighteen students who had entered the South African College with a view to preparing themselves for the new school were left in the lurch. Three proceeded to England to complete their studies, and the other fifteen simply 'drifted away'.[4]

The prime mover behind the proposal to establish a school of mines based on Cape Town was P.D. Hahn, professor of chemistry at the South African College and later generally recognised as the 'father' of the Kimberley School of Mines. His concern was to open up professional opportunities on the mines to South Africans. With the growing complexity of diamond mining at Kimberley, leading to the formation of De Beers Consolidated in 1888, and more particularly with the discovery of gold on the Witwatersrand in 1886, Hahn had been impressed by the increasing number of students at the South African College who desired instruction in the chemistry of metallurgy and assaying, and by the fact that the mining industry in South Africa remained wholly dependent on overseas sources for trained mining engineers.[5] The introduction of deep-level mining on the Witwatersrand in 1892-4 confirmed that there was an enormous future for mining engineers in South Africa.

In 1894 the South African College proposal for a school of mines was carried with the co-operation of the Cape Government and De Beers in Kimberley. Unlike 1890, Rhodes, the board of De Beers, and the Kimberley M.P.s, J.L. Lawrence and Dr. Frederick Rutherford Harris, took a positive initiative in helping to set up a school of mines based on the Cape. The change of attitude was due to two sets of factors. First, Rhodes's hopes for a 'non-racial' university at Groote Schuur had been set back, primarily because of the reluctance of Cape Afrikaners to sacrifice the Victoria College at Stellenbosch and to risk the preservation of their own heritage.[6] Second, developments in the Transvaal, notably the introduction of deep level mining, encouraged action. Given that the extensive interests of Rhodes and De Beers on the Witwatersrand were based mainly on the deep level mines, and that it was becoming evident that if the Cape failed to act, the initiative in establishing a school of mines might fall to the South African Republic, the issue of such a school had acquired a new importance in the minds of Rhodes and De Beers. Their proposal was for the South African College to take charge of preliminary theoretical instruction, and for Kimberley, and possibly Johannesburg as well, to undertake the practical instruction. In such a way, all interests might be satisfied, and costs kept to a minimum.

In the debate in the Cape House of Assembly on Lawrence's motion of 17 July 1894 calling upon the Government 'to take into consideration the expediency of establishing a School of Mines', what was stressed by Lawrence and Rutherford Harris were the career opportunities offered by the mines to those'born and bred in this country'. As Rutherford Harris, a close associate of Rhodes, put it, the permanency of the mines in South Africa was now 'more than established', and mining engineering offered a major new career opportunity for South Africans. As matters stood, only two professions in the country, law and surveying, were open to South Africans without going overseas for training: 'The proposal now was to add a third profession to the list.' He estimated that within a few years there would be 600 leading posts on the gold mines of the Witwatersrand 'to which students trained in South Africa might aspire, providing only they had a School of Mines for the training of young men'. The motion was given the support of the maverick M.P. for Victoria West, A.P.LeRoux, who declared such a school would provide a new opportunity for Afrikaners: 'He believed that if Afrikanders had only the chance, this country would be behind no other in the world.' C.W.Hutton, the M.P. for Fort Beaufort, after pointing out that 'the Kafirs' had paid £2,600 during the past year for fees for the education of their children at Lovedale, likewise supported the motion'in the belief that the school would be open to every Kafir who could afford to go there as well as to any Afrikander'. Cries of 'hear, hear' and 'oh,oh', met his assertion.[7] Several Afrikaners were to attend the South African School of Mines, but no blacks.

Rhodes responded to the motion by pointing out that the Government already favoured the commencement of a 'theoretical school' in connection with the South African College, and that the Government felt that the people of Johannesburg as well as Kimberley might wish to assist in providing facilities for practical instruction. The upshot was that a Select Committee was appointed to consider the establishment of a school of mines and to secure the co-operation of the University of the Cape of Good Hope in conducting the necessary examinations and conferring the 'proper' degrees. In September the Select Committee duly reported that the scheme for a school of mines was practicable, and requested the Government to carry out its recommendations.

The scheme that the Rhodes Government and the South African College gave their approval to for the local training of mining engineers provided for

two years of preliminary theoretical instruction at the South African College or any other college that provided suitable facilities, a third year of combined theoretical and practical instruction at Kimberley, and a fourth and final year of practical instruction at Johannesburg on a gold mine. Entrance requirements were to be 'more or less at matriculation standard', and those who successfully completed the programme would be awarded a diploma in mining engineering by the University of the Cape of Good Hope, which would conduct all examinations. In February 1895 the scheme was formally presented to the Council of the University of the Cape of Good Hope for approval.

The effect of the scheme, in terms of educational interests, was to give an additional boost to the South African College, to preserve the monopoly of the University of the Cape of Good Hope over examining and the award of degrees, and to ensure that a school of mines for South Africa would be based on the Cape and not the Transvaal. In Johannesburg, the South African Mining Journal denounced the scheme as 'crude and hasty'.It had long thought the idea of establishing a school of mines in the Cape as opposed to the Witwatersrand as rather ridiculous:'The absurdity of starting a School of Mines in a place like Capetown is only second to the almost equally absurd proposition to make Kimberley the centre from which the science of mining the precious metals is to emanate.' But what appalled the Mining Journal in 1894 was that the Cape had not secured the co-operation of the Transvaal Government in its planning, and that Pretoria was threatening to launch a rival school of mines. The Cape scheme was too obviously for a Cape school of mines, rather than a truly South African school supported by the combined states of South Africa. The fear of the Mining Journal was that 'if the Cape University carries out its present proposals and makes its certificates of proficiency in engineering of the same value as its present certificates in surveying, and if the Transvaal also establishes a School, the certificates of which will be of an even lower value, then the title of South African engineer, instead of being an honourable title, will be a by-word for laughter and scorn'. What the Mining Journal wanted was for the whole issue of a school of mines to be treated as an educational question separate from 'the disturbing influence of political feeling'.[8]

The inter-state co-operation called for by the Mining Journal did not materialise, and instead it became quite impossible as a consequence of the Jameson Raid on the Transvaal in 1895. Indeed the whole idea of having students proceed from Kimberley to Johannesburg for their final year proved something of a shambles in practice, and the period spent by students on the Rand was consequently to be curtailed. The first class had to contend with 'chaos in Johannesburg'. [9]

The South African School of Mines in Kimberley, as a separate institution fed by the South African College and later by the Victoria College, opened in August 1896, receiving from the South African College the grand total of five students, who in July had passed the first mining examination of the University of the Cape of Good Hope. To welcome the five pioneers in Kimberley was Professor J.G. Lawn, a graduate of the Royal School of Mines, London, and at 28 years of age, the first professor of mining in South Africa. He was also principal of the South African School of Mines and its sole teacher. A local committee under Gardner F. Williams, the American born general manager of De Beers, was responsible for the management of the Kimberley school.

As Gardner Williams later conceded, the Kimberley school of mines never really got off the ground. 'We started the School of Mines', he admitted in 1902, 'on the worst possible basis and with the least amount of money that any school ever started, and we have dragged along from year to year.'[10] Throughout its brief career, the school was short alike of finance, staff, and students. In 1898 it acquired its second full-time teacher in John Orr, the iron and woodwork master at the South African College and a product of Glasgow University, who at the age of 28 was appointed professor of mechanical engineering, but no further full-time appointments were made. Student numbers fluctuated between twenty and thirty, except in July 1900 when thirty eight students enrolled. This exceptional enrollment stemmed from the fact that in the previous year the school had been forced to close down temporarily because of the outbreak of the Anglo-Boer War and the siege of Kimberley.

A particular problem that confronted the pioneer class of 1896 was that no provision they could readily detect had been made for their final year in Johannesburg, and they could find no central organising head responsible for ensuring their future programme. In desparation they wrote on 28 April 1897 to the council of the South African College: 'We apply to you because we know of no central authority, and it was as students of your College that we were induced to enter upon this course and we trust therefore that you will be able to take steps to secure the necessary arrangements for us to complete our course with advantage.'[11]

The upshot was that in July Lawn was sent to Johannesburg to ascertain 'the best method of carrying out the original scheme for the School of Mines, which was that the Fourth Year's course should consist

of practical work on the Rand'. He had no difficulty in arranging for his five students to continue their work at 'very good mines', but nonetheless came to the conclusion that the idea of a final year on the Rand was basically impracticable.

> The chief objection to this scheme is the great expense which would be entailed on the School authorities and on individual students. It would be necessary that some suitable person be appointed at Johannesburg; and, on account of the expense of living there, a high salary would be necessary to provide which there are no funds available. Besides which, the theoretical instruction could not be given either conveniently or very efficiently because of the scattered positions of the mines at which the students would be working. The speculative atmosphere of Johannesburg is also against study.
>
> Students could not get board and lodgings for less than ten pounds per month, and if, in addition to this, heavy fees were charged, the cost of a year's course would be very considerable.[12]

As a consequence of Lawn's urgings, the period spent on practical work at Johannesburg was thereafter severely curtailed.

What proved fatal to the Kimberley school of mines was the defeat of the Boer republics in the Anglo-Boer War. The war had already put an end to the brief life of the mining school established in Pretoria by the Kruger Government in 1897, and with the reduction of the Boer republics to colonial status the political incentives for maintaining a school of mines based on the Cape fell away. The training of mining engineers in South Africa could at last be treated as an essentially educational question. In these circumstances the logic for basing a school of mines in Johannesburg became irresistible, as was recognised even in Kimberley. Johannesburg was not only the centre of South Africa's most prosperous and promising mining industry, but the educational arguments for concentrating the training of mining engineers in a single major centre, instead of spreading it between Cape Town, Kimberley, and Johannesburg, were overwhelming. As Professor Lawn stated at a special conference between representatives of the South African College and the Kimberley school with the Transvaal Technical Education Committee in Johannesburg in December 1902, the current sharp demarcation between the first two years of theoretical instruction and the latter two years of technical training was most unsatisfactory. The need, as he saw it, was for a single properly co-ordinated course at a single

institution, located in Johannesburg. Gardner Williams likewise supported the opening of a school of mines in Johannesburg, and the closure of the Kimberley school. He recognised that, in addition to its other advantages, Johannesburg had the greater financial resources with which to maintain a modern school of mines.[13]

The Kimberley school had nonetheless played an important pioneering role. It had begun the training of mining engineers in South Africa; it had drawn its students from a fair range of white South African society, from the Free State and the Transvaal as well as the Cape, and from sons of farmers, and even, the occassional general dealer, hotel proprietor and clerk, as well as the sons of professional and commercial men; and a large proportion of its graduates were to attain positions of responsibility and leadership in the mining industry of South Africa.[14] The numbers of those who graduated from the Kimberley school were far too few to satisfy the demands of the industry, which still recruited extensively from abroad, but a start had been made in local training, and a new career opportunity had been opened up to the white youth of Southern Africa.

III.

Almost as soon as the Treaty of Vereneeniging had been signed on 31 May 1902, steps were taken by the British regime for the Transvaal and Orange River Colony, under the command of Lord Milner, to establish Johannesburg as the centre for mining and technical education in South Africa, and possibly even of university education as well. Johannesburg and the Rand were the keystones for the future British South Africa that Milner was determined to engineer.[15] From the gold mines would pour the wealth that would enrich all South Africa, that would stimulate its entire economy, including agriculture, and that would thereby attract British settlers to the country in their droves, to the land as well as the towns. As envisaged by Milner, Johannesburg was to be the heart of the new society, and it was in Johannesburg that he established his own headquarters. As he put it on 9 January 1902 at a banquet given for him by the Johannesburg Town Council, Chamber of Mines, and Chamber of Commerce:

> A great Johannesburg - great not only in numbers, but in the character of its inhabitants, in intelligence, cultivation, and public spirit, means a British Transvaal. A British Transvaal turns the scale in favour of a British South Africa, and a British South Africa will go a long way to consolidate the British Empire.[16]

It was with this grand imperial vision in view that Milner favoured Johannesburg as the centre for technical and higher education in South Africa.

That the University of the Witwatersrand should come to be located at Milner Park is, in other words, not among the ironies of history; its address does not belie its origins. The University was an outgrowth of 'Milnerism', and that it took so long to grow out of a school of mines owed something to the fact that the idea of a university in Johannesburg was seen as Milner's idea.

Milner's vision for South Africa and the Empire was shared by Joseph Chamberlain, and it was this that impelled him during his visit to South Africa in 1902-3 to urge the foundation of a 'scientific university' in Johannesburg. As perceived by both Milner and Chamberlain, if Johannesburg was to play the historic role they had given it, it would have to attract a large settled population, and a permanent white proletariat, as opposed to the floating population of the pre-war years. In his speech at the Wanderers Club on 19 January 1903, Chamberlain saw two major obstacles to the imperialist vision for Johannesburg and South Africa - the 'excessive' cost of living on the Rand, and the want of adequate educational facilities. It was those two factors that discouraged permanent settlers, and that required to be overcome.

Milner and his educational advisers believed that the answer to these obstacles lay in the foundation in Johannesburg and environs of a teaching university which would have allied to it a technical institute, a school of agriculture, and a normal school for teachers. The school of agriculture would promote the 'scientific' farming needed to rescue agriculture from 'the rut of stagnation in which the Boer farmers had been content to allow it to remain', and which would eventually ensure lower food prices by encouraging a more productive agriculture.[17] A teaching university, which would have in the first instance a school of mines as its most important branch, would create the higher educational opportunities required by a modern industrial city, and would 'enable the youth of this country to compete for the leading positions in the higher branches of industry and learning with those who have been trained in the schools of Europe and America'.[18] A residential teaching university, moreover, would bring together Boer and Briton, and promote the assimilation of the Afrikaner.

Even before the end of the Anglo-Boer War Milner and his director for education, A. E. Sargant, had begun creating their new system of free elementary and secondary education for Johannesburg and the Transvaal in which English would be the medium of instruction. In August 1902 Sargant tackled the question of technical education by appointing a committee, which included representatives of the Witwatersrand Council of Education, to examine the best means of promoting technical education in the Transvaal. In October the committee recommended the

creation of a technical institute in the vicinity of Johannesburg and proposed further that the institute should 'form an integral part of a Teaching University'. At the beginning of 1903 a commission was consequently established to consider the larger question of a teaching university. Its chairman was Fabian Ware, deputy director of education and a staunch imperialist, and it included representatives both of the mining industry and the Council of Education.

By 1902-3 the Uitlander Council of Education had outlived its original purposes. It had been founded in 1895 to provide English-language elementary schooling in the Transvaal, a function which was now being performed by the government. But the Council had also pioneered technical education on the Rand, and had established in 1897 evening classes in physics, chemistry, and assaying. Dominated by mining and professional interests, and financed mainly by the mines, the Council saw its primary new role as that of helping to meet the demand for more advanced education on the Witwatersrand. The historian of the Council, J. W. Horton, states that once the Milner Government had secured the rights of English-speaking children to education of their parents' choice the Council was able to realise its ideal of political detachment: 'With this fundamental principle settled - at least for the following three decades - the Council was able to be non-political in practice as well as in theory'.[19] This was true in the sense that the Council no longer had to wage ideological warfare with the government, but members of the Council certainly continued to use it to attain definite ideological and political objectives. The Council was invited to participate in the Transvaal Technical Education Commission precisely because its leading members, like Percy FitzPatrick, shared Milner's overall objectives, and because it possessed a fund of £100,000.

In its report of July 1903, the Ware Commission made three substantive recommendations. The first was that temporary premises be acquired at Johannesburg for immediate provision of a mining course, embracing four years, 'of a standard at least as high as that of the course of mining engineering of the South African School of Mines at Kimberley'. The second was that the Transvaal Government set aside Plein Square, adjacent to the Johannesburg railway station, as the site for a permanent technical teaching institution, in the nature of a polytechnic, which would include accommodation for evening classes, scientific collections, a technical library, and perhaps even the public library. The third was for the establishment of a teaching university for the Transvaal, which would have as its most important branch a school of mines, and to which would be attached the technical institute, an agricultural school, a normal school for teachers, and the state laboratories. The site for the proposed teaching university was to be located within a convenient distance of Johannesburg and Pretoria, and within easy reach of the mines.[20]

The Commission's deliberations on the establishment of a teaching university for the Transvaal provide a fascinating glimpse into the social engineering of the Milner regime. They are also striking for their essential pragmatism, and their entire lack of high-flown statements about a university that would pursue truth, regardless of consequence, and that might advance the frontiers of learning and knowledge. Such ideals, or such rhetoric, had no part in the beginning of the movement to establish a university that would serve Johannesburg and the Transvaal. The motivating ideas were rather to cater for the needs of industry, notably the mining industry, by providing a regular stream of trained recruits; to open up the professions to South African youth; and to ensure British hegemony in the Transvaal, and with it South Africa.

The Commission made no attempt to provide a blue-print for a university in Johannesburg; its concern was rather with the social design of higher education on the Rand. Where the Commission was insistent was that technical training in Johannesburg would have to cater for the interests of the artisan class as well as the sons of the rich, and this was the purpose of its proposed evening classes. White artisans required to be given an opportunity to improve their skills, and even an opportunity for them or their sons to rise into the professional middle class, or otherwise they might never come to recognise that they possessed a permanent stake in the society. Of great social and moral concern to the Commission was the question of where exactly to locate a teaching university for the Transvaal. Johannesburg itself possessed many and obvious advantages - it was easy of access, it would provide many of the university's students, it was near the mines, it possessed in Hospital Hill a natural site for a medical school, and the atmosphere of Johannesburg was British. But in the opinion of some, Johannesburg also possessed many positive disadvantages as a potential seat for a university. The cost of living was inordinately high, and there was the danger that Johannesburg would provide students with too many distractions and temptations. For some, indeed, it was the last place that any right-minded person would wish to establish a university of learning intended to mould the minds and morals of impressionable young men. It was a haven of pimps and prostitutes, (most notoriously in the Park Station area), of speculators and sharp dealers, and of liquor and violence.

The compromise solution reached by the Commission was to recommend that the technical institute be located in the Johannesburg municipal area, and that the teaching university be situated on a large farm outside Johannesburg. The one dissentient to this recommendation, Dr Charles Porter, ridiculed the suggestion that 'an Oxford or Cambridge, without the endowment, social atmosphere or traditions of either, is going to be successfully created and maintained on

the veldt', and urged that as the type of university education required in the Transvaal was largely technical and utilitarian, the model of Birmingham University, which was situated in the town itself, should be followed. With a view to assimilating the Afrikaner he also contended that 'students from rural districts, accustomed to a somewhat narrow and primitive daily environment, should be brought into contact with the wider circumstances and refining influence of modern urban social life'. [21]

Suggestions that it was premature to consider establishing a university in or near Johannesburg, that it would be a very long time before the Transvaal might be justified in embarking on so expensive a project as a university, and that the colony's system of secondary education would have to make enormous strides before it could ever sustain a university, received scant attention from the Commission. What was impressed on it was rather the need for rapid action for the sake of a new South Africa. As Dr Manfred Nathan urged in the evidence he gave before the Commission: 'I consider in view of the fact that the war is over and that education is one of the great factors for bringing the races together, that the present is an opportune time for starting a university, inasmuch as the Government has now special opportunities which may not later arise when there is a representative form of Government'.[22] Events were to confirm Nathan's forebodings about the consequences of delay, and the award of responsible government to the Transvaal in 1906 was in fact to prove a major set-back for the cause of university education in Johannesburg.

In the Johannesburg press it was recognised that the proposal for a teaching university for the Transvaal was 'encouraged by the highest authority of the land', namely Milner himself, and the proposal itself was generally welcomed. In the opinion of a columnist in the Rand Daily Mail, such a university would become 'a repository of a genuine South African culture yet to be created, a special training-ground for the honest and careful development of the country, and a leavening centre of loyalty'. He added that a university 'would go far to provide for one crying want of the Transvaal - a stable population, ready to undergo their education, to find their pleasure, and to live their lives contentedly here'.[23] The Star also approved the idea of a teaching university, but ridiculed 'the fantastic recommendation that the university should be planted down on the veld between Johannesburg and Pretoria'. The Star had from the first had some doubt as to the competence of the Commission to deal with the question of a teaching university, and attributed to its American bred members 'the recurrence of the old vicious theory that Governments and Universities should exercise their functions as far from the great centres of population as possible.'[24]

What was universally supported in the press was the proposal for immediate action to establish a technical institute in Johannesburg, and the action

taken was immediate. In August 1903, within weeks of the Ware Commission having submitted its report, Sir Arthur Lawley, the Lieutenant-Governor for the Transvaal, formally established the Transvaal Technical Institute and appointed a governing council under the chairmanship of Fabian Ware. Temporary premises for the institute were secured in an old cigar factory at the corner of Gold and Kerk streets, which had latterly served as the Government High School for Boys, the forerunner of King Edward VII High School, and in the old Lost Property Building, Von Brandis Square, which had catered for the recovery of property lost during the war. Professor Henry Hele-Shaw, the first professor of engineering at Liverpool University College and later inventor of the multiplate clutch, was seconded as senior professor, and by mid-February 1904 five assistant professors had been appointed. They were John Orr in engineering, J.H. Dobson in mathematics and electrotechnics, R.B. Young in geology, T.E. Robertson in mining and metallurgy, and J.A. Wilkinson in chemistry and physics. Classes at the Institute started on 7 March 1904.

Initially it had been intended that the Institute should begin by providing the third and fourth year mining courses that had previously been offered by the Kimberley school of mines, and which were examined by the University of the Cape of Good Hope. Hele-Shaw was more ambitious, and at his prodding the Institute's council agreed to embark on courses of its own during the first year of operation. The Institute was to provide a general course in engineering, which would occupy three years, to be followed by a fourth year of specialisation in either mining, mechanical engineering, electrical engineering, or civil engineering. The Institute would examine its own courses and award its own certificates and diplomas. In other words, it was to become independent of the University of the Cape of Good Hope, and its teaching freed of the constraints imposed by the demands of an external examination. Students, nonetheless, would still be at liberty to write the Cape examinations should they desire a degree and not merely a diploma.

For 1904, thirty six students enrolled for the third and fourth year mining courses, and another nine for the Institute's own general course. The fee for a course was £32 per annum, payable half yearly in advance. Lectures were formal, and members of the teaching staff were expected to wear 'academical dress whilst lecturing, when it does not interfere with their work'. In addition to the full time courses, the Institute also opened evening classes in Pretoria, Johannesburg, Germiston, the East Rand

Proprietory Mines, Krugersdorp, and Roodepoort. In 1904 some 426 students enrolled for the evening classes.

The evening classes, designed primarily for apprentices on the mines, ranged from very elementary courses for those who were almost completely illiterate and uneducated to technical courses that were of an equivalent standard to those offered during the day. These evening classes performed a variety of functions. In some instances, as in carpentry and joinery, they taught particular skills; in others they sought to give apprentices an elementary understanding of the theory behind the practical work they carried out; and in others again they provided a part-time route for professional qualification. Their over-arching social and economic design was to help create a stable, skilled white work-force on the mines. The point consistently emphasised by Hele-Shaw and the South African Mining Journal was that 'the skilled workman class is likely to be the chief factor in a permanent white population, and that the only really effective way to keep the ascendancy in the hands of that white population lies in higher scientific education'.[25]

In 1905 the Technical Institute took further steps forward. Early in the year it moved to Plein Square, and occupied temporary wood and iron buildings on the Eloff Street or eastern end of the square. The Transvaal Government put up £30,000, and the Council of Education £60,000, for a building programme for the square, the remainder of which was occupied by municipal buildings, hurriedly erected in 1903, and by the Telephone Tower. In 1905 the Institute also embarked on its first courses in law, offered in both Johannesburg and Pretoria, and took the decision to begin courses in the arts and pure science in the next year.

The Institute had the idea of advancing to university status firmly in view, and in July 1906 persuaded the Acting Lieutenant-Governor of the Transvaal to change its name to the Transvaal University College. In the same month Alfred Beit, a partner in the Rand's largest gold mining house of Wernher, Beit and Company, died in London, and in his will he provided £200,000 for a 'University of Johannesburg'. It might have been expected that Johannesburg would now move rapidly to establish a university of its own. But this was not to happen. In the actual event, the Beit bequest was to be diverted to the University of Cape Town, and Johannesburg was not to get its own university until 1922.

IV.

From the outset it had been appreciated that lack of finance was a major barrier to the foundation of a fully fledged university in or near Johannesburg. The Transvaal Government certainly did not possess the resources to fund a university, and the mining houses, beset by depression and labour difficulties, showed little enthusiasm for financing higher education. As the Ware Commission had conceded: 'Owing to the present financial depression there is not much likelihood of attracting private funds for starting a scheme of Technical Education.'

One major fund for education did already exist; the £100,000 held by the Witwatersrand Council of Education. Milner's original idea had been that this fund should be reserved for helping to finance the university scheme outside Johannesburg, but the Technical Institute soon laid claim to it for developments within Johannesburg. In September 1903 the Institute's council 'invited' the Council of Education to 'entrust the funds held by it for educational purposes to the Council of the Transvaal Technical Institute'.[26] Despite the inter-locking membership of the two councils, the invitation was duly declined, though in 1905 the Council of Education agreed to vote £60,000 for the building programme at Plein Square, in addition to its annual contribution of £4,500 towards the current operating expenses of the Institute. The upshot was that there was no capital available for proceeding with the scheme to establish a university outside Johannesburg.

It was universally accepted at the time that only the 'Randlords' were in the position to provide the massive sums required to establish a full university, either within or outside Johannesburg. The hope expressed by Joseph Chamberlain in his Wanderers Club speech was that some Rand millionaires would come forward and identify themselves with the community that sustained them by putting forward the capital for a local university, but there was no immediate evidence that his hope would be realised. Most of the Randlords, indeed, displayed remarkably little interest in the development of a school of mines and university on the Rand. From their standpoint, mining engineers were freely available from overseas, and their minds were anyhow occupied by other, more pressing problems than higher education. It was more the company managers, and the mining press, who recognised the advantages of locally-trained over overseas-trained engineers in dealing with the peculiar mining conditions of the Rand, and who saw it as a paramount need to create a stable white population on the Rand.

What troubled Milner and others was the apparent reluctance of the Randlords to devote their money and attention to local affairs and developments. Milner is sometimes seen as a creature of the Randlords, but as a man of supposed vision he had considerable contempt for the short-sightedness of a good many of the Randlords and their failure to identify themselves with the community that made them wealthy. They lived in splendour in Parktown or Park Lane and ignored their responsibilities or, worse still, their own long-term interests. 'I want to interests you people in municipal affairs', he told Percy FitzPatrick, of Wernher, Beit and Company, in March 1902, and stated that he had 'not much sympathy with those firms who made from half a million to a million a year' and did little or nothing for civic development: 'He referred by name to Farrar, Neumann, Robinson, Barnarto and Bailey.'[27] On the question of financing a local university, Milner's scepticism about the Randlords was shared by the columnist P.C.G. in the Rand Daily Mail: 'A Carnegie-like resolution "to die poor" would come as a refreshing surprise from some of our Colonies' richest. The rarity of the species should be in itself an incentive for those who care to join its numbers.'[28]

In July 1906 Alfred Beit did not exactly 'die poor', but in his will he bequeathed £200,000 to 'the University of Johannesburg'. At the end of 1904 he had donated his magnificent plantation at Frankenwald, some twelve miles from the centre of Johannesburg on the Pretoria road, to 'the Government of the Transvaal or their successors for use in perpetuity for educational purposes of all kinds and solely and only for such purposes'. The estate, then valued at £80,000, fitted perfectly the requirements for a site for the teaching university envisaged by the Ware Commission. Although Beit, who visited South Africa in 1904, was personally sceptical as to whether the educational system in the Transvaal was adequate to sustain a university in the foreseeable future, he was persuaded by FitzPatrick, who was then a key figure in the Council of Education, to provide in his will for £200,000 to be devoted to the construction and equipment of university buildings at Frankenwald, including the construction of a tramway connecting Frankenwald with Johannesburg. His will further provided that the income from the £200,000 was 'to be applied meanwhile for educational projects as the Board of Education at Johannesburg may determine, but if at the expiration of ten years after my death the said £200,000 shall not have been applied in such building and equipment as aforesaid, then this legacy shall lapse and fall into my residuary estate'. The residuary legatee was his brother, Otto Beit.[29]

What has to be explained is why the Beit bequest was never used to establish a university in Johannesburg. In April 1916 it was given, by act of the Union Parliament, to the University of Cape Town. This diversion of the bequest provoked a storm of protest on the Rand, which felt that it had been cheated, but the point is that for nearly a decade the Rand had failed to use the bequest for the purposes for which it had originally been given. The explanation for this failure is to be found in two sets of factors. The first was that the Transvaal University College possessed no clear cut plan for proceeding to full university status, and that so far from seeking to force the pace of its own development, it approached the whole question of university education from a Southern African rather than a narrowly Johannesburg standpoint. The second was that the attitude of government to the idea of a university in Johannesburg underwent a complete transformation. Up to 1905/6 the creation of a university in or near Johannesburg had been actively championed by government, in Whitehall and in the Transvaal itself, but from 1906 onwards the opposition of government provided one of the main obstacles to a university for the Rand. Milner's departure in April 1905 and his replacement by Lord Selborne as High Commissioner, the formation of a Liberal Government in Britain at the end of 1905, the award of responsible government to the Transvaal in 1906, and the attainment of Union in 1910, were all political milestones in the history of South Africa, and they also all helped to set back a university in Johannesburg. The decisive setback occurred during the period of responsible government for the Transvaal.

The Beit bequest was made at a juncture when what was called 'the University Question' was emerging as an issue of inter-colonial or Southern African significance. Simultaneously but independently in late 1905, the councils of the South African College and the Transvaal Technical Institute examined the question of securing full university status for themselves. This was prompted by their dissatisfaction with the University of the Cape of Good Hope as the only degree awarding body in Southern Africa. The essence of the complaint against the University of the Cape of Good Hope was that through its examination system it dictated syllabi and transformed the teaching colleges into mere 'cram' schools. In practice, the Johannesburg institution escaped this 'tyranny'

of the external examination by setting its own examinations and awarding its own diplomas, though its students were also free to sit the examinations of the University of the Cape of Good Hope. It was the desire to award its students degrees, and not merely diplomas, on the basis of its own examinations that underlay the interest of the Transvaal Technical Institute in achieving university status, but there was a fundamental divergence within the council as to whether the Institute should immediately seek to become an independent university or whether it should associate with other institutions of higher learning in a federal university. As Sir Richard Solomon, the Acting Lieutenant-Governor of the Transvaal, advised Lord Selborne, 'the more ambitious and optimistic' members of the council were in favour of immediate legislation giving them degree-conferring powers, but the more cautious majority inclined to participation in some sort of federal university.[30] The South African College, for its part, firmly rejected the federal solution. After an investigation of university systems around the world, the council of the South African College came to the conclusion that federal universities did not work particularly well, and decided to seek for itself full powers as an independent teaching university, which would be incorporated as "the University of Cape Town".[31]

Both immediately before and after the Beit bequest, the council of the Johannesburg institution gave considerable thought to its own future, and that of higher education in South Africa generally, and even with the Beit money at its disposal it favoured a federal approach to the university question. In December 1905 the chairman of the council, W.F. Lance, and the registrar, John Robinson, had drawn up a report for the Transvaal Government urging that the Technical Institute be given university status. They had contended that a 'vigorous teaching university' in Johannesburg would give unity and purpose to the entire education system in the Transvaal, would check the exodus of students to the Cape and Europe, equip Transvaal youths for a range of professions, and act as 'a means of bringing together for a common purpose, the various sections of the people who, outside of academical matters, may hold divergent views'.[32] The council, appreciating the dangers inherent in independent and premature action, particularly the danger of calling into being in South Africa a series of "tinpot universities" offering worthless degrees, voted instead to request the Transvaal Government to

arrange an inter-colonial conference 'to bring about co-operation among certain institutions doing higher educational work in the various South African Colonies'. Should the conference fail to devise a co-operative system for the granting of degrees in South Africa, which would involve teachers in the examining process, the council would recommend that the Transvaal Government go ahead and give the Technical Institute its own degree conferring powers.[33] At the end of 1906, after Beit had made his bequest, the council reiterated its preference for a federal university that would allow considerable autonomy to its constituent colleges. In a memorandum prepared in December 1906, the council of the Transvaal University College asserted that, given the limited population in South Africa and the danger to standards that would be posed by separate degree giving institutions, it would 'seem desirable, if possible, to have one university for the whole of the sub-Continent'. The functions of this university were nevertheless to be severely limited. Essentially, it was to serve as a guardian of standards, and was to do nothing that could 'possibly be left to the Colleges'. Where it would differ from the Cape University was in that it would be composed of the constituent colleges, and in that lecturers would have a major say in examinations and awards, but its functions were to be no greater.[34]

In response to the proposals of the Johannesburg institution for an inter-colonial conference to consider setting up a federal university, and the urgings of Theodore Reunert, who became chairman of the Witwatersrand Council of Education in 1906, Selborne sounded out the colonial governments of Southern Africa, and after some negotiation summoned an inter-colonial conference to meet in Cape Town at the beginning of 1907 to discuss university education.[35] The move disconcerted several groups in the Cape. Champions of the South African College saw the conference as an attempt to prevent it from gaining university status, and defenders of the University of the Cape of Good Hope likewise saw it as a threat. As John X. Merriman, the leader of the opposition South African Party in the Cape, advised Jan Smuts in the Transvaal in a letter of 17 February 1907, the University of the Cape of Good Hope had drawn up its own plans for reform, and these

were now being jeopardised. 'Your friend Selborne', Merriman protested to Smuts, 'must have a finger in this as in every pie'. What Merriman suggested was that Selborne and his officials in the north were desperately anxious to settle the university question before the new responsible governments of the Transvaal and Orange River Colony got to work, and this argument was in fact used to secure the postponement of the conference until February 1908.[36]

The University of the Cape of Good Hope's own plans for reform, and for associating teachers with the examining process, were in fact regarded as inadequate by almost all the colleges of South Africa, but only the South African College favoured 'single college' or independent universities as opposed to some sort of federal scheme. When the inter-colonial conference finally met in February 1908, it accepted that the time was not yet ripe for 'single college universities', and advocated 'the establishment of a South African University with constituent or affiliated colleges'.[37] It also concluded that examinations should continue to be exclusively in the English language, and thereby provoked a storm of protest in Afrikaner circles.[38] Thereafter the movement towards establishing a federal university for South Africa was overtaken by the wider movement for political unification, and it was left to the government of the new Union to establish a university system for all of South Africa. In the intervening period, decisive steps were taken in the Transvaal that ensured that Johannesburg would get neither the Beit bequest nor one of the Union's first teaching universities.

In the Transvaal the attitude of government to a university in or nearby Johannesburg had become positively hostile. The previously favourable attitude had cooled immediately after Milner's departure from South Africa. Although Alfred Lyttelton, Chamberlain's successor as Colonial Secretary in the Conservative Government, continued to favour a residential university near Johannesburg, largely with a view to promoting the assimilation of the Afrikaner, Selborne, as Milner's successor, regarded the idea of a university in the Transvaal as rather preposterous. As he explained in a report to Lyttelton in December 1905, the Transvaal simply did not possess the educational infrastructure necessary to sustain a university. 'The general standard of education in the Transvaal', he wrote, 'is such as to make university work properly so called practically impossible for a considerable time to come.'

The system of secondary education in the Transvaal was still 'retarded', and more of a handicap than a help in preparing students for higher education, and anyhow the demand for university education among the youth of the Transvaal was minimal. 'In the circumstances stated', Selborne advised, 'I think it would be unwise in the Government to force on the establishment of a residential university near Johannesburg much as I feel the weight of the considerations adduced by you as to the beneficial effect on the young men of both races of living a collegiate life together and growing up under a common university education.'[39] Thereafter the British authorities ceased to promote the idea of a university on the Rand. The extension of responsible government to the Transvaal, and the victory of Het Volk in the subsequent general election of February 1907, effectively wrecked the prospects for a university in Johannesburg by creating a government in Pretoria actively hostile to the idea. So far from continuing to make progress in the field of higher education, Johannesburg was decisively set back by the responsible government of Louis Botha.

As his Colonial Secretary and Minister of Education, Botha appointed Jan Smuts, and it was Smuts who proceeded to sabotage the development of Johannesburg as a centre of higher learning by transferring teaching in the liberal arts and pure science to Pretoria. Again it was to be Smuts who, with the coming of Union, was to play a key role in diverting the Beit bequest to Cape Town.

In his history of the Witwatersrand Council of Education, Professor Horton suggests that Smuts's opposition to a university in Johannesburg might have been rooted in a hostility to Johannesburg itself—in Boer distrust of Uitlander Johannesburg, a puritan dislike of the town as a centre of vice and violence, and political rivalry with the Progressives, who drew their strength from the mining magnates of Johannesburg.[40] Professor H.M. Robertson, the historian of the University of Cape Town, believes that this is to ascribe to Smuts 'some rather more petty motives than seem to be consistent with the character of a man so markedly uninfluenced by petty and parochial views'.[41] What is clear is that in his role in 1909/10 in seeking to divert the Beit bequest to a national university in Cape Town, Smuts was acting in what

he deemed to be the national interest, but it is nonetheless also clear that he was strongly prejudiced against Johannesburg as a university centre. As he bluntly told the Transvaal Legislative Assembly in August 1907, Johannesburg was not a 'suitable place' for a university.[42] What is remarkable is the tenacity with which Smuts was to oppose the idea of a university in or near Johannesburg, and the lengths to which he was prepared to go in order to frustrate the development of Johannesburg as a potential university centre.

With regard to higher education in the Transvaal, Smuts's basic achievement between 1907 and 1910 was to transfer the teaching of the liberal arts and pure science, and the Transvaal University College itself, from Johannesburg to Pretoria, and to leave Johannesburg with a school of mines. From the first Smuts was determined that Pretoria rather than Johannesburg or Frankenwald should serve as the centre for university education in the Transvaal, and he immediately set about trying to devise a scheme whereby this might be achieved without sacrificing the Beit bequest. In 1910 he finally succeeded in transferring the Transvaal University College to Pretoria, but at the loss of the Beit bequest for higher education in the Transvaal. For the Beit bequest Smuts had instead developed another idea. With the formation of the Union, he wanted to see it diverted to the foundation of a national university for South Africa, based on Cape Town.

In 1907, the scheme that Smuts devised was for a tripartite division of the Transvaal University College. Mining and technical instruction was to remain in Johannesburg; teaching in the liberal arts and pure science was to be transferred to Pretoria; and an agricultural school was to be established at Frankenwald. His hope was that the trustees of the Beit bequest would allow it to be devoted to the agricultural school, but in the event they would not hear of the proposal. Beit had intended his bequest for a university, and not an agricultural school. As Sir Percy FitzPatrick informed Smuts in December 1907: 'In regard to Mr. Beit's Bequest--in regard to the clearly expressed wishes of a dead man, he had no right to compromise, and he never would compromise.'[43]

In first announcing his scheme in the Legislative Assembly, in the debate on the estimates in August 1907, Smuts made it clear that he would never consent to either Frankenwald or Johannesburg serving as the centre

for higher education in the Transvaal. Frankenwald was unsuited for anything other than an agricultural school because of its isolated position, and Johannesburg was unsuitable in that 'our experience in the Transvaal is that parents will not send their children to Johannesburg'. They preferred to send their children to the Cape for a university education rather than have them go to Johannesburg, and by making provision for the teaching of the arts and pure science in Pretoria Smuts said he hoped to check this exodus to 'the coast'. As he saw the matter Pretoria, as the capital, was the ideal place for a university for the arts and science, and it 'must become the centre of education in the Transvaal'.[44]

In the last months of 1907 Smuts pushed the main part of his scheme through in a highly autocratic fashion, and did very little to explain the necessity for his proposed tripartite division. In September 1907 a departmental committee, on which the Transvaal University College was represented, reported in favour of Smuts's scheme, but only under pressure and with the greatest reluctance. According to what Charles Ward, a member of the committee and chairman of the council of the Transvaal University College, told his council, 'when the committee convened its deliberations, the removal of the Arts branch to Pretoria had been decided upon by the Government'.[45] The committee reported that it supported the Smuts scheme 'only because we understand that the difficulties in the way of finding one place where the three branches can be developed side by side are insurmountable'; but these 'insurmountable' difficulties were not specified.[46] In November and December, when the council of the Transvaal University College sought to delay the implementation of the scheme for 1908, Smuts simply went ahead and made 'the necessary preliminary arrangements' for the teaching of the arts and science in Pretoria. In January 1908 the council of the Transvaal University College finally gave its approval to the transfer of arts and science to Pretoria, on condition that 'the larger question' of a university for the Transvaal should 'not be considered as disposed of by the present proposed reorganisation'. The question of an agricultural school at Frankenwald was placed in abeyance at the council's insistence and the refusal of the trustees of the Beit bequest to release funds for such a school.[47]

Repeatedly during the negotiations Smuts stressed that he was not 'actuated by any local considerations or predilictions' or by 'ulterior motives of any kind', and that his sole concern was to further the best interests of higher education in the Transvaal, and particularly to prevent 'the large exodus from the Colony of students requiring literary and scientific education of a University character'.[48] He was perfectly correct that the arts and science courses of the Transvaal University College in Johannesburg had not proved at all successful in attracting students, and this was not merely because Afrikaners failed to attend them. Old habits died hard, and English-speaking parents as well as Afrikaners continued to send their children to the Cape for a university education. Furthermore, in 1907 certain high schools in the Transvaal had been authorised to provide post-matriculation courses, thereby robbing the Transvaal University College of prospective students. Despite the problems of the Transvaal University College in Johannesburg, and despite Smuts's protestations, it is nonetheless evident that he was strongly prejudiced against Johannesburg as a university centre. This prejudice was neither political nor cultural so far as he personally was concerned, though both no doubt played a part in the wider Afrikaner prejudice against Johannesburg. But Smuts himself, it seems evident, had no lingering hostility to Johannesburg as a town of Uitlanders, Randlords, and Progressives, and he entertained no narrow Afrikaner objection to a university there that would promote the assimilation of Boer and Briton. Rather his prejudice against Johannesburg as a potential seat for a university was academic and puritan. As a product of the Victoria College, Stellenbosch, and of Cambridge University, he associated university education with relatively quiet provincial towns, and found the idea of locating a university in a bustling industrial and commercial centre rather incongruous. When that centre happened to be Johannesburg, he found the idea positively obnoxious. There was always a strong puritanical streak in Smuts, and that streak had been exposed to the nerve when, in his first public office as Attorney General in Kruger's Government in 1898, he had taken the responsibility for tackling the problems of vice and prostitutionism in Johannesburg. It became his task to enforce Law 2 of 1897—the 'Ontucht Wet'—against prostitutionism, and the experience convinced him that Johannesburg was incorrigibly corrupt and vice-ridden.[49] It was a town he thereafter visited as infrequently as was possible, and it was certainly not a place in which he would encourage the foundation of a university for impressionable young people. Furthermore, in a period when rivalry between Pretoria and Johannesburg was still very acute, it is evident that Smuts was also intent on promoting the standing of Pretoria as against Johannesburg, and one means of doing so was by concentrating university

education in the Capital.

In Johannesburg the Star dismissed Smuts's tripartite scheme as 'grotesque', and denounced the Colonial Secretary for 'his complicity in a peculiarly poisonous project'. [50] What Smuts's scheme entailed was a repudiation of Milner's vision of a Transvaal dominated by the influences of a British Johannesburg, and a rejection in practice of the whole idea that higher education should provide a major channel for the anglicisation of the Afrikaner. For The Star the real meaning of the scheme was that Boer and Briton in the Transvaal would remain apart for the purposes of higher education. It was this that the Star found unforgivable, for in its opinion 'the root of all evil' in the Transvaal lay 'in the great gulf fixed between the different interests and origins of its people', and it was this that had troubled Smuts's own committee on the organisation of higher education in the Transvaal. In its report on Smuts's proposal for a tripartite structure the committee, after observing that 'there can be no common corporate existence in which students of the three branches can participate', commented:

> This effect of the proposed organisation is to be profoundly regretted. The students will represent the future aristocracy of the professional, agricultural, and industrial sections of the inhabitants. From their ranks the leaders of social and political life will be recruited. But they will not meet during their most impressionable years. They will have no opportunity to develop mutual understanding, toleration, and respect through the discipline of common fields, common class-rooms, a common hall, and a common chapel. The organisation proposed will indeed fail in respect of one of the highest of university functions, namely, the cultivation of social magnanimity. The aggregate of the ablest and most cultivated members of the three fundamental sections of the inhabitants of the Colony will remain, for all that university education will do, a mixture of disparate elements, not a blend in which differences of vocation and of race are lost or at least exist but to strengthen the whole. This is the cardinal weakness of the scheme.... [51]

From the strictly academic standpoint, the main criticism levied gainst the Smuts scheme was that it would hamper educational advance in the Transvaal unnecessarily fragmenting effort and resources, producing a proliferation of weak stitutions instead of a single strong one. Although Pretoria and Johannesburg were constitute branches of a single university college, with a common council, it was dely anticipated that they would develop into separate institutions. 'Once one cides on a scheme of separate colleges,' R.W.S.Schumacher, a member of the council of e Transvaal University College, warned Sir Julius Wernher, 'the mistake will have been

made, and it will be irreparable, because local jealousies will prevent an amalgamation at a later date, and the result will be a number of weak, isolated units as there are in the Cape Colony, instead of one strong, central body.'[52]

Schumacher's prediction was soon proved right. By mid 1909 friction between the two branches had reached such a point that the decision was taken to provide for entirely separate institutions in Pretoria and Johannesburg. In April 1910, during its last session, the Transvaal Parliament duly voted to incorporate the Transvaal University College at Pretoria and to establish the South African School of Mines and Technology at Johannesburg. The move was seen as a triumph for Smuts, and his determination to make Pretoria the centre of higher education in the Transvaal. 'I can sum up the whole position in these words,' Sir Percy FitzPatrick declared during the second reading debate in the Legislative Assembly, 'that the Colonial Secretary has got his way. He has stuck to his scheme for a long time, and has got his way.'[53]

Smuts's transfer of the Transvaal University College to Pretoria, and his refusal to consider the creation of a university institution at Frankenwald, and thereby utilise the Beit bequest, were crippling blows to the movement to establish a university in Johannesburg, and more or less ensured that Johannesburg would be by-passed when provision was made for teaching universities in the new Union of South Africa.

V.

In all, the life-span of the Transvaal University College in Johannesburg represented a setback for the cause of higher education in Johannesburg, and the movement, led by the Council of Education, to provide the foundations for a university there. To be sure, the years 1906-10 were not without their achievements. In late 1908 the building on the eastern end of Plein Square, which was intended to be the first of a larger plan for the square, was completed, and was formally opened by Lord Selborne in March 1909. Then again, these years were important for the development of the organisational infrastructure of an institution of higher learning. This included the

formation in 1908 of a senate, consisting of all full professors, responsible heads of departments, and other members of the teaching staff co-opted from time to time, and divided into two faculties: the faculty of arts and science in Pretoria, and the faculty of applied science in Johannesburg. A students' representative council had existed in Johannesburg since 1905, and in 1909 was formed a college union composed of members of the council, staff, and past and present students. The college also became more of an institution of higher learning by shedding its evening classes of an elementary nature; in 1908 these were taken over by the Transvaal Education Department.

For the rest, the career of the Transvaal University College in Johannesburg hardly constituted a record of success and advance. The college finances were in a parlous condition; the number of full-time students for the mining and engineering courses, after initial rapid growth, declined alarmingly in 1907-9, giving rise to anxious debates on how to recruit more students; the failure of the classes in arts and science to have attracted more than a handful of students confirmed Johannesburg's reputation as a philistine town with no interest in the arts; and not even the Transvaal Government would recognise the college's matriculation examination, on the grounds that it would be mistaken to establish a rival matriculation board to the University of the Cape of Good Hope. Worst of all, perhaps, the atmosphere in the Transvaal University College was not a happy one. Not only was there the rivalry and tension that developed between the Johannesburg and Pretoria branches, but within the Johannesburg branch itself acute cleavages and tensions became evident.

One explanation that was given for this tension was the absence of a principal capable of giving the college firm leadership. In 1905 Hele-Shaw had served as principal, but due to personality conflicts his tenure was not a particularly happy one, and when his contract expired at the end of the year he returned to England.[54] He was not replaced as principal and instead John Robinson, as registrar, took responsibility for the administrative functioning of the college. As he lacked any academic standing, Robinson was an inadequate substitute for a principal, and his dealings with the professorial staff were generally tricky. In the opinion of John Yates, Hele-Shaw's successor as professor of mining, Robinson's position was in fact untenable, and that what the college

required was a principal. As he urged in a letter to Smuts in November 1907, the board of studies, the forerunner of the senate, could not be entrusted with the control of academic work in Johannesburg: 'there is too much jealousy, too many overlapping and conflicting interests among the members of the Board to permit of smooth and harmonious working without a head'.[55] In September 1908 the report of a council commission likewise recommended the appointment of a principal, and suggested that he should be 'a Mining man of standing, strength of character and of tact'.[56]

The newly formed senate, however, immediately perceived in the proposal to appoint a principal a threat to its powers, and firmly opposed the idea. As it advised the council:

> The appointment of a Principal would seem to be undesirable in view of the past history of the College. This aspect of the question it is difficult for us to discuss quite objectively, but it will be admitted that only those who have experienced from within the utter demoralisation occasioned by previous disastrous experiments, can fully appreciate the dangers which attend this new proposal.

The senate added that it was 'anomalous' to think of attaching the principalship to the chair of mining, particularly when it was remembered that the Transvaal University College included a faculty of arts: 'The permanent appointment to the Principalship of the Professor of Mining in Johannesburg, must, inevitably, we believe, by lowering the status of the Arts Faculty, react disastrously upon the development of the Transvaal University College in Pretoria.' What the senate wanted was for its chairman, elected on an annual basis, to 'discharge the functions associated with the office commonly known as Principal'.[57]

The advice of senate was duly ignored, and in the middle of 1909 J.G. Lawn was appointed professor of mining and principal. It was not an appointment that assisted the college in any real way, and in the next year Lawn took up the post of consulting engineer with the Johannesburg Consolidated Investment Company.

The root cause of the tensions among the teaching staff in the college, particularly in Johannesburg, lay not in the absence or presence of a principal, but in the lack of finance and full-time students, and the consequent sense of insecurity among the staff.

In the optimistic days of 1905, when Lance and Robinson had urged the case for a university and had predicted a take-off in student numbers, appointments had been made freely, but for 1908 three professors were retrenched and, at the insistence of the teaching staff, cuts were also made in the administration. The chief victim on the administrative side was Robinson, whose large salary, apart from anything else, made him an obvious target for retrenchment. In the view of the teaching staff, three administrative officers, consisting of an accountant and two typewriting clerks, one each for Johannesburg and Pretoria, were perfectly adequate for the administration of the college, instead of the existing complement of six officers, including Mr. Robinson:

> This gentleman has since the College was founded, received over five thousand pounds from it.... The sum he has received would have secured the services of any other person of his qualifications, such as the Registrar of one of the other Colleges in South Africa, for at least eight or ten years. We are therefore of the opinion that no injustice will be done by his immediate retrenchment, with compensation on the scale set forth in the draft Civil Service Bill of the Transvaal Government.
>
> We would point out that the Council has not hesitated to retrench three of their most distinguished professors, who were admittedly not overpaid, and whose work reflected great credit on the College.[58]

The letter was written on 14 May 1908. In July the council used the opportunity provided by the transfer of the elementary evening classes to the Transvaal Education Department to dispense with Robinson's services. Those services had not been inconsiderable. Robinson, who had previously acted as secretary to the Council of Education, had played an active role in the founding of the Transvaal Technical Institute and its elevation to the status of the Transvaal University College, and had been in office ever since the inception of the Institute. He was given a gratuity of five months's salary and a hearty vote of thanks.[59]

Despite the almost inevitable clash between teachers and administration in a period of retrenchment, it was among the teachers themselves that the tensions were most acute, notably in 1907/8 in the confrontation between John Yates, the professor of minining, and John Orr, the professor of engineering. It is impossible to do justice to the personality conflicts of those early days, but it is evident that there was a substantial divergence in principle and interest between Yates and Orr. Yates saw the salvation of the college as lying in the extension of evening classes, whereas Orr was the foremost champion of the so-called 'sandwich system' for engineering students to help counter the decline in the number of full-time students. Under this system students would first apprentice themselves, and then divide their time equally between the college and 'the works' or mine, spending six months at each. Its adoption was urged on the grounds that the system worked 'at Home', and that students who would otherwise be unable to afford to attend the college for day classes would now 'manage to earn enough during six months to keep them through the remainder'.[60] The system was approved by senate against the opposition of Yates, who saw it as a threat to the evening classes.[61]

Yates lost more than his fight against the 'sandwich system'; he also lost his job. His conflict with Orr had done much to poison the atmosphere at the college; certainly, he had made an implacable enemy of Orr by having the temerity to denounce the professor of engineering as a 'blithering idiot' in 'the presence of the College Porter'.[62] In the course of 1908 Yates also fell out with his day students, suspending two of them from attendance at lectures, and complaints were subsequently registered against him by some students. At the request of the senate, the council appointed a commission to enquire into these complaints, and it came to the conclusion that 'although Professor Yates was not incompetent, yet, judging from the evidence that had been laid before them, the interests of the College would be best served by appointing a more capable, and, if possible, an outstanding man, for the teaching of Mining'.[63]

Yates was firmly convinced that he had been 'got at' by some of his colleagues, who 'influenced' his students into producing an 'atrocious concoction' against him, despite his 'brilliant record' both prior to and after joining the college. It also did not escape his notice that the decision to dismiss him was linked to the decision to appoint a principal, who would also happen to be the professor of mining.[64]

Yates saw his predicament as rooted ultimately in the problems of the college, notably the lack of discipline among students, their poor attendance at lectures, the decline in student numbers, and poor examination results. It is evident that attendance at lectures by third and fourth year students was extremely erratic and, given the small numbers involved, this clearly had a demoralising effect on certain lecturers, including Yates. But the main problem was the relative lack of full-time students; for 1908 the total enrollment for the day courses in Johannesburg was a mere 45 students shared among 8 professors. It was, again, among third and fourth year students that the slump in numbers was most evident, and this was attributed by the senate to a variety of factors, but notably the deep financial depression since 1906, the general lack of financial assistance for students in the form of bursaries and scholarships, and the readiness of the mines to hire engineers after their second year of study, rather than insisting on the full diploma. The senate nonetheless felt sure that: 'As regards the future...the introduction of the Sandwich System, if approved by the Council, is certain to effect a radical improvement in the number of students attending the College.'[65]

Clearly, many of the problems that confronted the Transvaal University College in Johannesburg were to be expected of a pioneer institution in a colonial society, particularly in a period of economic depression. The main setback to the Johannesburg college as an embryo university derived not from its teething problems, but from the political intervention of Smuts in transferring the arts and pure science to Pretoria. Paradoxically, while Smuts's next step in helping to negotiate the diversion of the Beit bequest to Cape Town put an end to any hope that Johannesburg or Frankenwald would provide the site for one of the Union's first universities, it also served ultimately to regenerate the movement to found a university on the Rand, and gave that movement a genuinely popular base for the first time.

NOTES

1. R.D.M., 19 Jan. 1903.
2. Cape Hansard, 3rd. Session of the 8th. Parliament, 1891, 64.
3. Quoted in the African World, 21 Jan.1911.
4. Cape Hansard, 1st. Session of the 9th. Parliament, 1894, 300
5. 'Paul Daniel Hahn', South African Journal of Science, April 1918.
6. M. Boucher, Spes in Ardus: A History of the University of South Africa (Pretoria, 1973), 87-8
7. Cape Hansard, 1st. Session of the 9th. Parliament, 1894, 300-3.
8. S.A.M.J., 26 Aug. 1893 and 1 Sept. 1894.
9. E.A.Walker, The South African College and the University of Cape Town 1829-1929 (Cape Town, 1929), 55.
10. Annexure to the Report of the Transvaal Technical Education Commission, July 1903.
11. S.A.College Council Letters, 1897.
12. Ibid.
13. Annexure to the Report of the Transvaal Technical Education Commission, July 1903.
14. For the social background of students at the Kimberley school see the attendance register kept by Orr, University of the Witwatersrand Archives.
15. See C.Headlam, The Milner Papers (London, 2 vols., 1931-3).
16. The Times, 11 Jan. 1902.
17. C.Headlam, The Milner Papers , II, 367.
18. Report of the Transvaal Technical Education Commission, 5.
19. J.W.Horton, The First Seventy Years: Council of Education, Witwatersrand (Johannesburg, 1968), 36.
20. Report of the Transvaal Technical Education Commission, 6-10.
21. Minority Report by Dr.C.Porter, Ibid., 11-12.
22. Ibid.,
23. R.D.M., 21 May 1903.
24. Star, 30 July 1903
25. S.A.M.J., 9 Dec. 1905 & 27 April 1907.
26. Minutes of the T.T.I. Council, 25 Sept. 1903; Lawley to Milner, 3 Oct.1903, MS. Milner 1207.
27. Fitzpatrick to J.Wernher, 7 March 1902, in A.H.Duminy and W.R.Guest (eds), Fitzpatrick: The South African Politician, Selected Papers 1888-1906. (Johannesburg, 1976), 305.
28. R.D.M. 14 May 1903.
29. Clause 14 of the Will of Alfred Beit, Eckstein & Co Record Dept.
30. Solomon to Selborne, 2 April 1906, Papers of the Lieutenant-Governor of the Transvaal Colony (L.T.G.), vol.140, 114/96
31. M.Boucher, 'The Transformation of the University of the Cape of Good Hope, 1910-1918', South African Historical Journal, XII (Nov. 1971), 67-8

32. 'Report to His Excellency the Acting Lieutenant Governor re Permanent Institute in Johannesburg and Permanent Colonial Institute', Dec. 1906, and minutes of the T.T.I. council, 9 Feb. 1906.
33. Ibid., 16 Feb. 1906. The expression 'tinpot university' was used by Justice Wessels in a speech in Pretoria in August 1906. See the Star, 27 August 1906.
34. Memorandum on 'Provision for University Education in South Africa', Dec. 1906, T.T.I. Documents 1903-7.
35. For correspondence on the conference see L.T.G., vol. 140, 114/96.
36. Merriman to Smuts, 17 Feb 1907, MS. Smuts V.
37. W.Ritchie, The History of the South African College 1829-1918 (Cape Town, 2 vols., 1918),II, 529-30.
38. Boucher, 'University of the Cape of Good Hope', 68.
39. Selborne to Lyttelton, 11 Dec. 1905, L.T.G., vol. 139, 114/52.
40. Horton, Council of Education, 43
41. H.M.Robertson, The University of Cape Town 1918-1968 (unpublished draft), 9
42. The Transvaal: Legislative Assembly Debates, 1st. Session of the 1st. Parliament (1907) 1981-3.
43. R.W.S.Schumacher to J.W.Wernher, 2 Dec. 1907, Eckstein & Co. Record Dept.
44. The Transvaal: Legislative Assembly Debates, 1st. Session of the 1st. Parliament (1907) 1981-3.
45. Minutes of the T.U.C. council 1 Nov. 1907.
46. Report of the Committee appointed by the Colonial Secretary to consider the question of the organisation of Higher Education in the Transvaal, Correspondence Relating to the Organisation of Higher Education in the Transvaal, T.G.-24 - 1908.
47. Acting Assistant Colonial Secretary to Registrar, Transvaal University College, 24 Jan. 1908, Ibid.
48. Acting Assistant Colonial Secretary to Registrar, Transvaal University College, 3 Dec. 1907 & 24 Jan. 1908, Ibid.
49. For the puritan in Smuts see W.K.Hancock, Smuts:The Sanguine Years 1870-1919 (Cambridge, 1962), especially chapter 1. For Smuts and ontucht see the forthcoming essay by Charles van Onselen, 'Prostitutes and Proletarians'1886-1914'.
50. Star,28 Nov. 1907.
51. Correspondence Relating to the Organisation of Higher Education in the Transvaal.
52. Schumacher to Wernher, 2 Dec. 1907, Eckstein & Co. Record Dept.

53. The Transvaal: Debates of Both Houses of Parliament, extraordinary session of the 1st. Parliament (1910), 217.

54. For some of Hele-Shaw's difficulties see the correspondence of Hennen Jennings, July 1904, Eckstein & Co Record Dept., vol. 281.

55. Copy of letter of Yates to Smuts, Nov. 1907, T.T.I. Documents 1903-7.

56. Minutes of the T.U.C. council, 5 Oct. 1908.

57. Letters to the council, 16 April and 17 Oct. 1908, T.U.C. Documents 1908-9.

58. Letter to the council, 14 May 1908, Ibid.

59. Minutes of the T.U.C. council, 21 May & 25 June 1908.

60. Report of the sub-committee on the Training of Engineering students by the Sandwich System, Sept. 1908, T.U.C. Documents 1908-9.

61. Minutes of joint senate & council committee on Sandwich System, 12 Nov. 1908, T.T.I. Sub-Committees various.

62. John Orr to Dr. Breyer, chairman of the senate, 8 Sept. 1908, Ibid.

63. Minutes of the T.U.C. council, 5 Oct. 1908.

64. Yates to W.F. Lance, chairman of the council, 26 & 31 Aug. and 4 Sept. 1908, T.U.C. Documents 1908-9.

65. Senate minutes, 17 Oct. 1908, Ibid.