

The Brown Animal Sanatory Institution

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INTRODUCTION

The history of the Brown Animal Sanatory Institution was intended originally to be published in book form, and was therefore divided into chapters. For the sake of convenience this division has been continued, even though it is unusual for the term to be employed in scientific periodicals. The history will be published serially in four consecutive issues of the *Journal of Hygiene*. References have presented a difficulty. In two instances the title of the paper referred to has had to be omitted, because no copy of the original journal in which the article appeared has been obtainable. More important, however, is the failure to give references, beyond the date, to a number of statements in the text, because the information in question has been abstracted from sources that are not available to the general reader.

For helping me in one way or another I should like to thank Sir Douglas Logan, formerly Principal of the University of London, Miss Gibbs of the Paleography Library, Mr A. T. Picton of University College Medical School Library, Miss Horder of the Royal College of Veterinary Surgeons Library, and lastly Mr V. J. Glanville and his staff at the London School of Hygiene and Tropical Medicine Library.

CHAPTER 1: THE BROWN ANIMAL SANATORY INSTITUTION

This opening chapter summarizes the history of a unique institution that constituted the first medical and veterinary research laboratory in England. Founded in 1871, it was staffed by a succession of able directors, seven out of eight of whom became Fellows of the Royal Society; and it provided for the needs of large numbers of visiting research workers. Though it was primarily a veterinary institution for the treatment of sick animals, and was furnished with a hospital for this purpose, the work carried on in the small research laboratory it housed was directed as much towards the service of human as to that of veterinary medicine. The reputation it acquired for its accomplishments in these fields stood, and still stands, very high; but the springing up of other laboratories towards the end of the century, with their higher standards of construction and equipment and their greater monetary resources, led to its gradual eclipse, culminating in its physical destruction during the Second World War. Both its beginning and its end were the subject of tense financial struggles, leading to litigation on five occasions; and during the first half of its life it was dogged by financial insufficiency.

The management of the Institution was under the control of a small committee, but the final responsibility lay with the Chancellor, Vice-Chancellor, and Fellows of the University of London. It is worthy of note that the University which, up till the change in its constitution in 1898, was a non-teaching body concerned with the examination of external students and the granting of degrees, should have accepted and even striven for the responsibility of setting up and administering a research institution wholly unlike anything to which it had been accustomed. The annual series of lectures imposed on the director by the terms of the Brown bequest may be regarded in fact, though indirectly, as the first example of teaching by the University.

The Institution owed its origin to a charitable trust under the will of Thomas Brown, a citizen of London and Dublin, leaving to the University of London a sum of about £20 000 for the foundation of an Animal Sanatory Institution situated within a mile of Westminster or Southwark. The purpose was 'for investigating, studying, and without charge beyond immediate expenses, endeavouring to cure, maladies, distempers, and injuries, any Quadripeds or Birds useful to man may be found subject to'. The interest on the capital was to be allowed to accumulate for a period not exceeding 15 years from the date of his death, which was in 1852; and if by 19 years the Institution had not been established the trust money was to be handed over to 'the Provost, Fellows and Scholars of the University of Dublin for the time being for the exclusive purpose of founding and maintaining, in the said University of Dublin, Professorships of any three or more of these languages, *videlicet*, Welsh, Slavonic, Russian, Persian, Chinese, Coptic, and Sanscrit. . . '.

The validity of the bequest was disputed, unsuccessfully, first by the testator's next of kin; and then by the University of Dublin on the ground (1) that it was not a charity, and (2) that it was void under the Statute of Mortmain. The case was heard in 1856 before the Master of the Rolls, who adjudged the bequest to be good and valid. The University of Dublin refused to accept this verdict, but their appeal, which was heard in 1857 before the Lord Chancellor and the Lords Justices, was dismissed with costs. The following year the executors of the Will handed over to the University of London the sum of £22 000 invested in 3% Consols.

Under the terms of the Will no part of the Trust Fund could be applied to the purchase of a freehold or leasehold interest in land in England. A part might be used in payment of rent for a site with suitable buildings on it, but not in the erection of buildings on such a leasehold site.

In view of this limitation the Senate of the University appointed a committee in 1865 to consider what practical steps could be taken. In their report the committee pointed out that the annual income of the £28 000 now reached by the capital of the fund would be insufficient to rent land and buildings, to provide a house for the superintendent and his veterinary assistant, to pay their salaries and the wages of their subordinate staff, and to meet the general expenses of the Institution. The committee therefore recommended that an application should be made to Parliament through the Commissioners of Charity to alter the terms of

the Will. The Senate followed this advice, but the Bill was rejected by the House of Lords, and the Government declined to bring it again before Parliament.

This left the University in a quandary. They saw no hope of fulfilling the terms of the Will, and unless they could find some way of doing so they would have to submit to the chagrin of seeing the whole of the trust money transferred to the University of Dublin. The impasse was breached by Dr Burdon-Sanderson who induced a city merchant, Mr John Cunliffe of Lombard Street, to put forward a sum of £2000 to purchase land on which an institution might be founded. This sum was raised to £2700, and with it was bought a site with buildings on it in the Wandsworth Road. The Institution was finally established in 1871 and put under the charge of a committee, of which Dr Sharpey was the first chairman. Dr Burdon-Sanderson himself was elected Professor-Superintendent – the designation of the Director in the Will – at a salary of £400 per annum; and Dr Emanuel Klein accepted the unpaid post of his scientific assistant. The first course of five lectures was given at the Institution in 1872.

Criticism from outside was expressed of the nature of Dr Klein's operations on animals; and from the very beginning the anti-vivisectionists caused repeated trouble by accusing workers in the Institution of inflicting unnecessary pain and suffering on the experimental animals. The Institution was registered with the Home Office for the performance of experiments under the Cruelty to Animals Act of 1876, and Dr Klein and others were granted licences. This meant that all experiments likely to cause pain to living animals had to be performed under an anaesthetic and, if the animal was likely to suffer pain when it recovered consciousness, it was to be killed.

The hospital side of the work at the Institution was under the care of the veterinary assistant. To start with, about 4000 animals were brought for treatment every year, of which 70 % were horses and 20 % dogs, but the number increased till by 1905 it had reached nearly 8000. Thereafter it gradually fell, and by 1939 had sunk to 1000. By then, too, most of the animals treated were dogs and cats. The fall in the total number of animals was due partly to the opening of other dispensaries for treatment, and partly to the replacement of houses in the neighbourhood by flats in which the keeping of animals was forbidden. Most of the animals were treated as outpatients, but a number, varying with the type of animal, were retained as inpatients in the limited accommodation available. The veterinary assistants, of which there were over a dozen during the course of 70 years, were provided with residential accommodation, and received a salary of £100 a year in 1871, rising to £175 in 1914, and to £250 in 1919. The hospital was closed at the outbreak of the Second World War in 1939.

Though some investigations were carried out on animals brought to the hospital, most of the research work was on experimental animals. For many years this was the only institution in London in which operations on large animals were possible. It was therefore visited by numerous surgeons, physiologists and neurologists who wished to study the anatomy and functions of the body in dogs, cats and occasionally horses and monkeys. At one time as many as 21 visitors in a single year made use of the opportunities afforded by the Institution.

Each of the eight superintendents, as they were ultimately called, namely John Burdon-Sanderson, W. S. Greenfield, C. S. Roy, Victor Horsley, Charles Sherrington, Rose Bradford, T. G. Brodie, and F. W. Twort, engaged in experimental work, much of it of permanent value. For example, Burdon-Sanderson experimented with the immunization of cattle against pleuropneumonia, and with Dr Baxter compared the relative value of disinfectants. Greenfield studied anthrax and quarter-evil and prepared a living vaccine against them with organisms attenuated by passage through rodents. Roy conducted experiments mainly on the circulation, and devised a number of instruments such as the cardiometer, the myocardiograph, and the oncometer for purposes of measurement. Victor Horsley's studies on rabies led on to the Muzzling Orders which, when universally applied, resulted in eradication of the disease from the whole country. It was at the Brown Institution that Horsley's work on the thyroid and myxoedema was carried out, and the study of the localization of motor centres in the brain, and of 'chorea' after distemper in dogs. Here, too, Charles Sherrington began some of his most illuminating work on the nervous system, such as that on the knee-jerk, the correlation of antagonistic muscles, and cerebral localization. Rose Bradford worked chiefly on uraemia and the pathology of the kidneys, and Brodie likewise concentrated on the subject of chronic nephritis. Finally Twort discovered the essential substance – mycobactin as it was later called – for the growth of John's bacillus, and gave the first account of the lytic process now known as the Twort-d'Herelle phenomenon.

The work carried out by many of the distinguished visitors covered a great variety of subjects, such as the healing of wounds by first intention, different methods of anastomosing portions of the intestine, experimental production of gallstones in dogs, and of hepatic cirrhosis in cats, effect of castration on the nutrition of the prostate, haemorrhagic infarction of the liver, infectious diseases – scarlet fever, diphtheria, vaccinia, sheep-pox, and others – blood disorders, cancer, leprosy, tsetse-fly disease, several investigations into the physiology of the nervous system and the innervation of different muscles and the viscera, and Edward Mellanby's experimental production of rickets in dogs.

The number of visitors was at times so great that the work had to be staggered to avoid gross overcrowding. Sherrington considered that the number of scientific workers at any one time should not exceed five, partly because of limitations of space and partly because there was only one technical assistant to serve their needs. Equipment was very poor. Not till 1900 was a microscope purchased; and both Victor Horsley and Sherrington had to provide much of their private apparatus for their own use and for that of their visitors. It is surprising that under such conditions work of a high standard and of lasting value was performed.

When it opened in 1871 the Institution held a capital of £33 000 invested in 3% Consols, yielding an income of rather under £1000 per annum. During the next few years the capital was transferred to 3½% Metropolitan Stock, thus raising the annual income to nearly £1200. This, however, was a very small sum with which to pay the salaries and wages of the staff and the frequent demands for structural repairs. Expenditure often exceeded income, and but for grants from various

Government bodies, the Royal Society, and the Grocers' Company, and for a small number of gifts and legacies, it would have been impossible to sustain the work that was actually performed. During the First World War a debit balance of £400 was converted into a credit one of over £600, and from then onwards the financial state improved. This resulted mainly from the almost complete cessation of visitors to the establishment, there being several more convenient and better equipped laboratories in which to do research. By 1930 a credit balance of £1000 was reported by the auditors, and the Senate decided to raise the Director's salary to £500 a year (£450 salary and £50 in lieu of residence), and to allow him to spend, over a period of four years, a sum of £2000 with which to purchase special apparatus for conducting experimental inquiries into the effect of electromagnetic waves on ultramicroscopic viruses.

Ever since 1919 Dr Twort had been receiving a grant of £600 a year from the Medical Research Council, so that his salary from 1931 onwards was actually £1100 a year. In 1936, after three years' notice, the Council withdrew this grant, which was only on an annual basis. Instead, with the Senate of the University, the Council devised a scheme whereby the University agreed to raise Twort's salary to £700 a year and the Council to provide, ostensibly for the purposes of his work, £300 a year, thus bringing his total income up to £1000 a year – only £100 less than before. Twort rejected this offer and on the advice of an untrustworthy solicitor brought an action against the Crown, accusing the Medical Research Council of a breach of contract. This ill-conceived action was summarily dismissed by Mr Justice Goddard in the King's Bench Division of the High Court of Justice. Twort's salary therefore remained at the £500 received from the University; and had it not been for financial help from the Royal Society and private benefactors Twort would have found it very hard to live.

When the Second World War came in 1939 the Animal Hospital was closed down, Twort took on outside commitments, and work in the research laboratory practically ceased. On five occasions the Institution incurred bomb damage from enemy action, and by 1945 was in such a state of dilapidation that it had to be written off. Later, the London County Council made an Order for its compulsory purchase, and in 1950 paid the Court of the University £4700.

The question now arose of what was to be done with the Brown Bequest. Professor Twort's post came to an end in 1945 and, as there were no charges to be met, the capital rose rapidly at compound interest till by 1966 it was over £86000. Various bodies were interested in obtaining the money, but not till the University of Dublin, realizing that the terms of the Will were no longer being complied with, laid claim to it, was the University of London compelled to act. It was no longer possible to fulfil the conditions laid down in the Will, and a *cy-près* scheme had to be substituted. After discussion with the Charity Commissioners an application was made to alter the terms of the Will. The scheme envisaged a sharing of the capital equally between the two universities. The income of the London share was to be used, under the guidance of the Royal Veterinary College, for maintaining a research fellowship in any of the chief branches of veterinary medicine. After an unsuccessful attempt to secure three-quarters of the capital sum, the University

of Dublin agreed to the proposal of equal shares. The application came before the Chancery Division of the High Court of Justice in 1969. The *cy-près* scheme was accepted by the Court, and received the seal of the Department of Education and Science on 10 August 1971. After sharing the costs of the action with the University of Dublin, the University of London was left with a capital sum of £49 000, sufficient to provide an income of about £2750 a year.

Thus ended, somewhat ingloriously, an Institution whose accomplishments were as great as the terms of the Will under which they originated were bizarre.

CHAPTER 2: THE WILL AND EARLY LITIGATION OVER IT

On 14 December 1846 Thomas Brown, M.A., LL.B., a citizen of London and Dublin, made a Will leaving a sum of money to the University of London for the purpose of establishing an Animal Sanatory Institution. The Will was peculiar in many respects, as is manifest from the extract that follows.

Extract from Will of late Thomas Brown, 14 December 1846

After various recitals and dispositions not relating to matters affecting the University, the Testator proceeds as follows:

... And whereas there is standing in my name in the Books of the Bank of England a sum of Twenty Thousand and upwards of Three per cent Consolidated Government Annuities; Now I will and bequeath to the Chancellor, Vice-Chancellor and Fellows of the University of London and their Successors in said University the said Stock in three per cent consolidated annuities, and all residue of personal property not consisting of lands, houses or other real estate, and belonging to me at the time of my decease, and available after defraying the charges and payments duly required for the proving of this my last Will and testament, and administering thereto agreeably to the dispositions hereinbefore contained, expressed and declared, for the founding, establishing, and upholding an institution for investigating, studying, and, without charge beyond immediate expenses, endeavouring to cure, maladies, distempers, and injuries, any Quadripeds or Birds useful to man may be found subject to; for and towards which purpose of founding, establishing and upholding such Animal Sanatory Institution within a mile of either Westminster, Southwark, or Dublin, as may at the time for making a decision as to locality by the Chancellor, Vice-Chancellor and Fellows for the time being of the University of London, or the governing majority thereof, be then thought most consistent and expedient, I will and bequeath exclusively all such rest, residue and remainder of personal property belonging to me at the time of my decease, and not consisting of lands, houses, or other real estate; and I will and direct that all available interest to accrue on said residue shall be let to accumulate and remain, along with all the principal of such residue in the English Three per cent Consolidated Government Annuities, for any length of time lawful for such increase, not exceeding the term of fifteen years from the time of my death, and shall be all principal and interest then or afterwards applied solely to the object of founding, establishing and upholding the Animal Sanatory Institution as aforesaid. I further will and direct that dominion over the property of and for the Animal Sanatory Institution to be thus founded shall become vested in the Chancellor, Vice-Chancellor and Fellows for the time being of the University of London, and that the governing majority of these authorities for the time being of the University of London, on their duly declaring their acceptance of the trusts of this my Will, shall after being vested with such dominion appoint and have some person connected with the said University of London, and responsible with security, for receiving the half-yearly dividends and applying them respectively for to make addition to the principal. And I will and direct that such duly appointed Receiver shall be entitled to retain to himself the sum of Ten Pounds sterling British Currency out of each succeeding half-yearly dividend on and after his producing to the governing majority for the time being of the Senate of the said University of London vouchers or proofs of his having

duly appropriated the preceding half-yearly dividend in making addition to the principal, and without further deduction than for the regular charge for brokerage, and for his own fee as aforesaid. And I will and direct that any such appointed Receiver may and shall in case of neglect or violation of trust be removed, and, as in all cases of vacancy of such Receivership, a successor be appointed by the Chancellor, Vice-Chancellor and Fellows of the University of London for the time being or the governing majority thereof. I will and desire that, previous to the Animal Sanatory Institution as aforesaid being opened for the reception of animals and cure of their ailments, a Superintendent or Professor of the Institution and its business shall be appointed by the Chancellor, Vice-Chancellor and Fellows for the time being of the University of London or the governing majority thereof, and that such or any subsequent Professor or Superintendent shall be removeable by the like authority for neglect or violation of duty or propriety; and that in every other case of a vacancy occurring in the office of Professor or Superintendent of said Animal Sanatory Institution, a successor for such office shall be appointed by the Vice-Chancellor and Fellows for the time being of the University of London or the governing majority thereof. And I will and direct that the Professor or Superintendent of the said Animal Sanatory Institution shall have a residence adjacent thereto besides a salary, and that he shall annually give on the business of the said Institution at least five lectures in English, and free to the public, at some place to be appointed by the governing majority of the Senate of the said University of London; and I further desire that kindness to the animals committed to his charge shall be a general principle of the Institution to be founded as aforesaid. And I also will and desire that the Chancellor, Vice-Chancellor and Fellows for the time being of the University of London or the governing majority thereof may at any time, if they shall choose, appoint a Committee of their own body or of medical men for to control the number and cases of diseased or injured animals to be taken charge of, and to decide about the purchase of diseased or injured animals or their carcasses for the promotion of science, as well as for to determine about any contingency not hereinbefore provided for relative to said Animal Sanatory Institution. And I will and direct that any such controlling Committee, if appointed, shall be so only from year to year, and that as to any of the rules, orders or regulations of such Committee, there may be privilege of appeal to the Chancellor, Vice-Chancellor and Fellows of the University of London; and also that in case of such controlling Committee not being reappointed, all such controlling powers shall remain wholly vested in the Chancellor, Vice-Chancellor and Fellows for the time being of the University of London or the majority thereof. And I further will and direct that my acting Executor or Executors shall apply to the Court of Chancery in England for to appoint a fit and responsible person to receive the dividends occurring on the principal as aforesaid, and to, under similar allowances, apply them for to make additions to the principal, in case that the Chancellor, Vice-Chancellor and Fellows for the time being of the University of London shall refuse or omit for the space of twelve months after my decease to duly appoint a person to act as receiver and agent for said purposes agreeably to the directions and provisions hereinbefore on this head expressed and declared. And in case that the Chancellor, Vice-Chancellor and Fellows of said University of London or the governing majority of the Senate thereof for the time being shall decline to accept and act under the trust as aforesaid, or shall eventually omit to have such Animal Sanatory Institution founded and established within the space of nineteen years from the time of my death; or in case that the said Animal Sanatory Institution shall anyhow not continue to be conducted *bona fide* for said purpose, agreeably to the conditions aforesaid, then and in such case I will, devise, and bequeath the whole of the property or properties by me hereinbefore bequeathed and designated therefor, to the Provost, Fellows and Scholars of the University of Dublin for the time being for the exclusive purpose of founding and maintaining, in the said University of Dublin, Professorships of any three or more of these languages, *videlicet*, Welsh, Sclavonic, Russian, Persian, Chinese, Coptic, and Sanscrit, that the Provost and Senior Fellows for the time being of the said University of Dublin shall choose to establish there in my name, and shall obtain a statute therefor comprising some condition of efficiency. And I desire that such Professors shall be elected by the Provost and Senior Fellows of the University of Dublin for the time being, and be under the control of the government of the said University. And I also will and desire that the Provost and Senior Fellows at any time of said University shall have power and authority to alter arrangement as to such Professorships in so far as to, under same conditions as aforesaid therefor, substitute Professorship or Professorships of one or more of

said Languages different than as previously selected and appointed, provided and on condition that any such alteration and substitution shall be with the consent of the Provost and at least two-thirds of the Senior Fellows for the time being assembled at a board and concurring in such resolution, and also with the concurrence of the then Visitors of the said University of Dublin. And whereas different Professorships have from time to time been founded in the University of Dublin, some in particular of late years, including one for the Irish Language; and whereas I could not be certain but that the authorities of said University might be intending or be otherwise led to further establish Professorships therein; Now in the event of the right to my conditional bequest as aforesaid lapsing to the University of Dublin, and in case that the then authorities thereof shall during the space of twelve months after the right of said University thereto shall accrue, neglect to assert that right, or shall not continue to uphold such right, under and according to the provisions, restrictions and conditions hereinbefore appointed and declared with relation thereto, then and in such case, I will and bequeath all properties, funds and moneys included in said conditional bequest to the University of Dublin, unto the Chancellor, Vice-Chancellor and Fellows of the University of London in trust for the providing and maintaining of three or more Professorships severally or conjointly in such College or Colleges affiliated, or that shall be affiliated, with said University of London as the Chancellor, Vice-Chancellor and Fellows for the time being or the governing majority of the individuals composing for the time being the Senate of the said University of London shall see occasion to prefer and shall deem it expedient to select and determine on. And I will and direct that the Chancellor, Vice-Chancellor and Fellows for the time being of said University of London shall have right to choose and determine about the general subjects and nature of such Professorships respectively, and that they shall, as soon as convenient and agreeable to their corporate constitution, forms and rules then duly appoint individuals to such Professorships respectively, and shall in like manner fill up vacancies occurring therein by death, resignation or removal for neglect or violation of duty or propriety, such selection of College or Colleges and such appointments being to be with the concurrence of such College or Colleges respectively, and such Professorships being to be in my name, and the holders thereof being, besides the receiving and instructing of private pupils, to give annually on their respective subjects lectures free to the public; and such Professorships being further, as to all matters not herein arranged and prescribed, to be subject to the regulation and control of their so-selected College or Colleges respectively, with the acquiescence of the Chancellor, Vice-Chancellor and Fellows for the time being of said University of London or the majority thereof agreeably to their corporate constitution. . . .

Briefly, it will be seen that the main purpose Thomas Brown had in mind was the establishment of an institution designed partly for the treatment of sick animals, partly for research into the nature and causation of animal diseases, and partly for education of the public. The conditions of the Bequest were such that the location of the institute had to be within a mile of Westminster, Southwark, or Dublin; and that, if the University of London had not established it within nineteen years from the date of his death, the money was to be transferred to the University of Dublin – that is to say Trinity College, Dublin – for the founding of professorships mainly in certain ancient eastern languages.

Two years after Thomas Brown's death, which was in 1852, the University of London took steps to file a Bill in the Court of Chancery against the Executors of the Will to obtain a decision on its validity, which was being contested by the next of kin, and to have the estate administered under the direction of the Court. In 1856 the suit was transferred from the list of causes of the Vice-Chancellor of the Court to that of the Master of the Rolls. As Trinity College, Dublin, was also contesting the Will, the suit was ordered to stand over till the Attorney-General and Trinity College were brought before the Court. The cause was eventually heard on 13 November 1856 before the Master of the Rolls, who decided that the Bequest

was a perfectly good gift, a gift peculiarly connected with what was useful, and for the advantage of mankind; and therefore declared that it was a good charity.

Against this verdict the Dublin authorities gave notice of appeal. The objections they raised were:

- (1) that the Bequest was not a charity, and
- (2) that it was void under the Statute of Mortmain, because it pointed to a foundation acquiring the purchase of land.

The appeal was heard on 29 April 1857 before the Lord Chancellor and the Lords Justices of Appeal. Both objections were disposed of. The Lord Chancellor declared that the case had been correctly decided by the Master of the Rolls, and that the appeal was so thoroughly without foundation that it must be dismissed with costs. To this, one of the Lords Justices added: 'I have no recollection of an appeal more unjustifiable, or more plainly void of sense and reason; and were it not dismissed with costs, it would be privately unjust, and mischievous against the Public.'

Before the money was paid over to the University of London the executors of the Will wished to have the sanction of the Court. The necessary petition was brought before the Master of the Rolls, who made the Order as prayed. After the executors had paid the costs and duties, the balance, amounting to £22 600 invested in 3% Consolidated Stock, together with a draft for the sum of £113. 8s. 9d. in cash, was transferred, early in 1858, to the University of London. The Senate appointed the Registrar to be the Receiver under the provisions of the Will, and instructed him to make an annual report on the state of the fund. In due course he laid on the table before the Senate the Security Bond into which he had entered jointly with Philip Worsley and William O. Manning for the sum of £1000. With the validity of the Will established by legal sanction, and the transfer of the Trust Fund to its possession, the University were now in a position to go ahead.

Apart from allowing the capital to accumulate at compound interest, the Senate apparently took no action till 1865 when they instructed their solicitors to prepare a case for submission to the Law Officers of the Crown upon the following questions:

- (1) Whether a portion of the sum bequeathed by Mr Brown could be applied to the purchase of land in the neighbourhood of Westminster or Southwark consistently with the Statute of Mortmain, and
- (2) whether the Senate could expend the fund, or any portion of it, with a view to the establishment of an Animal Sanatory Institution before the expiry of 15 years from the date of the Testator's death.

These questions, in an expanded form, were put by the Treasury to the Attorney and Solicitor General, who expressed the opinion

- (1) that the University were bound to continue the accumulation of the Trust Fund till the expiration of 15 years from the Testator's death; and
- (2) that no part of the Trust Fund could be applied to the purchase of a freehold or leasehold interest in land in England; but a part of the fund might be dispensed in payment of rent for a site with suitable buildings, though not in the erection of buildings on such a leasehold site.

Faced with this impasse, and knowing that, unless it could be forced or got round in some way, the money would have to be handed over to Trinity College,

Dublin, the University appointed a committee to consider what steps should be taken next. News of the difficulty soon got round, and the Principal of the Albert Veterinary College, Queen's Road, Bayswater, put forward the suggestion that the Animal Sanatory Institution might be erected on land leased by the College in the West End of London. The College would put up the necessary buildings on the understanding that they would be taken on a long lease at a rental not exceeding 10% of the outlay incurred for the purchase of the land and the erection of the buildings.

Another letter, this time from the Treasurer of the Royal Veterinary College, proposed a meeting between representatives of the Senate and the College to consider an arrangement whereby the objects of Mr Brown's Will could be carried into effect through the medium of the College.

The Senate referred both these letters to the committee they had appointed on the Brown Trust. In their report in 1866 the committee turned down these offers on the ground that both the Albert Veterinary College and the Royal Veterinary College were situated more than a mile from Westminster and Southwark; and also on account of the partial surrender of independence that the University would suffer by forming a connexion with either of these two bodies.

They pointed out that under the terms of the Will it would be impracticable, out of the annual income of £900 now provided by the capital of £28000 to rent land and buildings, to provide a house for the Superintendent and his veterinary assistant, to pay both their salaries and the wages of subordinate staff, and to meet the general expenses of the Institution. Instead, they proposed a scheme for the higher education of veterinary practitioners, whose general and professional qualifications, they considered, were inferior to those of practitioners in France and Germany. To this end they suggested the award of two scholarships annually, each of £100, to be tenable for three years. This would use up £600 a year of the Fund; of the remaining £300 most would probably be required for the remuneration of examiners, some of whom would have to be brought over from the Continent. Any surplus might be allowed to accumulate till there was sufficient to found a third scholarship; or might be expended in the form of special awards to third-year students who had shown distinguished attainments or carried out original work of value in some branch of veterinary medicine or surgery. In this way they sought to fulfil Mr Brown's wishes. The committee hoped that the scholarships would attract some medical graduates to take up the study of veterinary medicine. They therefore advised the Senate to apply to Parliament through the Commissioners of Charity for permission to change the terms of the Will.

The Senate took this advice, and received a letter from the Charity Commissioners expressing general assent to the proposal, but

(1) wishing to alter its terms so that more than two veterinarians at a time should benefit from the Bequest, and

(2) considering it advisable to inform Trinity College, Dublin, of the proposed measures.

With this second proposal the Senate agreed, but suggested that the first should be submitted to the Committee on Examinations in Medicine to draw up a curri-

culum of study, and a scheme of examinations for conferring certificates of proficiency in veterinary medicine and surgery, with scholarships for such candidates as evinced distinguished merit.

The Charity Commissioners accordingly wrote to Trinity College, Dublin, and after a delay of some months received a reply from the Registrar stating that the Provost and Senior Fellows objected to the scheme the Commissioners intended to promote, maintaining that, if the University of London did not intend to abide by the terms of the Will, the Trust Fund should be handed over to Trinity College, Dublin. They refused to assent to any proposal that involved an abandonment of the contingent rights the College might have under the Will, and therefore would oppose any Bill that might be introduced into Parliament for altering its provisions.

Nevertheless, the Bill was duly framed and presented to Parliament. There it met with some opposition and was rejected by the House of Lords. As the Government declined to bring it again before Parliament, the Charity Commissioners regretted that they could take no further action in the matter.

Faced with this second impasse, the Senate again referred the subject to the committee it had set up, asking them to consider and report on the most advisable scheme for carrying out the provisions of the Trust. The committee was enlarged by the addition of four members, and in 1868 was re-appointed, consisting then of a total of 14 members. In 1869 the Senate decided to seek the opinion of Sir Roundell Palmer and Mr Wickens, and appointed a special committee to draw up the questions to be put to them. As a result, presumably on the recommendation of these two advisers, the committee were authorized to prepare a statement on the present position of the University in relation to the Trust and, by deputation to the Privy Council, to solicit the co-operation of the Government in overcoming the difficulties impeding the action of the Senate.

This concludes the account of the early litigation over the Will and the subsequent attempts to fulfil its provisions in accordance with the restricting obligations laid down.

CHAPTER 3: ESTABLISHMENT, STRUCTURE AND EQUIPMENT OF THE INSTITUTION

The period of 19 years since the Testator's death that was allowed for the establishment of the Animal Sanatory Institution was drawing rapidly to its close. The University had practically abandoned any hope of fulfilling the terms of Thomas Brown's Will, and in April 1870 decided to postpone further discussion on the Trust.

In July 1870, however, the prospect suddenly brightened with the offer of Dr John Burdon-Sanderson to provide a sum not exceeding £4000 for the purpose of establishing the Brown Institution on condition that the Trust would be administered in accordance with the Will, and that he should be appointed Professor Superintendent – hereinafter referred to as Superintendent – with an adequate remuneration. In support of this came a letter from 12 signatories urging

the nomination of Burdon-Sanderson as Superintendent of the Institution. The Senate agreed to accept this offer, and asked the committee to instruct their solicitors to apply to the Court of Chancery for its approval of a scheme for carrying the Trust into effect in accordance with Burdon-Sanderson's terms. For this purpose the committee prepared a scheme, but the Senate, after considering their report, found it impossible to accept. What the reason was for their rejection is not given in the Minutes of their proceedings on 1 November 1870; and conjecture without supporting evidence does not seem to be justified.

The next move came again from Dr Burdon-Sanderson, who was apparently responsible for inducing Mr John Cunliffe, a city merchant of Lombard Street, to put forward a sum of £2000 for purchasing land on which an institution might be founded. This offer was reported to the Senate in January 1871 by two of the trustees, Dr Richard Quain and Professor William Sharpey. In their communication they said that they had already opened a treaty with the London, Chatham and Dover Railway for the purchase of a site in Battersea Fields. The cost was £1200. The money for carrying out the transaction would have to come from the balance of £800, and the residue would then be available for erecting buildings and premises. The Senate decided to accept this endowment and conveyance of land subject to the approval of the legal advisers of the University.

Difficulties arose over the purchase of the Battersea site; and in April Professor Sharpey and Dr Quain informed the Senate that they had found a much better site in Belmont Place, fronting the turnpike road from Vauxhall to Wandsworth, 5 minutes walk from Vauxhall Railway Station. The two houses standing on it would be suitable for the residence of the Superintendent and his subordinate officers.

Again the Senate agreed, and in June received a letter from their solicitors saying that the lawyers had approved the new site and the legality of the acceptance of the land as premises. To meet the increased cost of the Wandsworth site, Mr Cunliffe added another £700 to his previous gift of £2000. Before the end of the month Professor Sharpey and Dr Quain reported that the title to the property had been approved; and that Mr Lowe and Mr Heywood, both Members of the Senate, had each contributed £100 towards the expenses of the purchase.

At the request of their legal advisers the University asked (1) Dr Quain and Professor Sharpey to convey the property to the University and their successors upon Trust; and (2) the committee to arrange for the conveyance; and also to frame a scheme for the management of the Institution and the adaptation of the buildings existing on it. Furthermore, the committee were asked to recommend a suitable person to be appointed as Superintendent; and the Registrar was directed not to invest the next half-year's dividends in the Fund, but to pay them into a separate account with the Bank of England.

In June the Vice-Chancellor reported to the Senate the conveyance by Professor Sharpey and Dr Quain of the Wandsworth Road site to the University, and a Declaration of Trust as to £200 Consols retained as a guarantee fund. These deeds were duly executed and the Seal of the University was affixed to the conveyance in his presence.

Professor Sharpey, as Chairman of the Brown Institution Committee, presented in July 1871 a plan of the new buildings to be erected, and of the repairs to the existing buildings. The Senate agreed to these proposals, and authorized the Registrar to sell out as much of the 3% Consols as would produce the sum of £2250. Additional expenditure was incurred in 1872, for which sufficient stock was sold to raise £1500.

Structure of the Institution

Little information exists on the buildings that occupied the site at the time of the opening of the Institution in 1871. In accordance with the plan submitted by Professor Sharpey, the two houses facing the Wandsworth Road were repaired; and new buildings were erected in 1871 and 1872. Writing in 1876 Burdon-Sanderson gave a short description of the Institution as it then was. The principal block faced a well-drained exercise yard, and comprised a five-stalled stable for horses, four excellent loose boxes, and a stable for cattle. On the other side of the yard was a dog house. In addition there were two other stables, one of which was used for pigs; the other, a considerable distance from the rest, was for the reception of animals affected with contagious diseases.

During the first few years of its existence the accommodation proved satisfactory for the treatment of horses, dogs, and other smaller animals; but when the committee decided that the Institution could be of most value to the community by concentrating on the study of those diseases of stock that were of special economic importance, i.e. the contagious diseases of animals, it was evident that improvements would have to be made. The committee therefore welcomed a proposal by the architect, Mr John Slater, in 1877 to undertake a major alteration of the premises. His plan was to pull down the two houses and replace them by a single house situated in the middle of the site, having a good-sized garden at the rear. In place of the two houses he would build a row of six shops with yards behind them extending back 60–70 feet from the Wandsworth Road. It was estimated that the ground rents of these shops would bring in an aggregate of £72 a year, and that there would be a saving of about £30 a year on the rates and of £20 a year on repairs. The total cost was calculated to be £575, of which £120 a year would come from the savings and from the ground rents.

The Senate agreed to this scheme and authorized the Management Committee to go ahead. The tender for the new residence was accepted, and a payment of £837 made to the builder on its completion in 1878, the money being obtained by selling out capital stock. A further £306 was spent later; and when the building programme was finally completed in 1880 the total expenditure incurred came to a sum of £1223. 18s. 3d. Sale of material from the demolished houses brought in £235; £275 was provided out of current income; and the remaining £713 was found by selling out capital stock.

Unfortunately no photograph of the Institution appears to have been preserved. A plan of the buildings is, however, available. From the accompanying Figure it will be seen that the six shops facing the Wandsworth Road were divided into two lots of three by an open passage leading to what may be described as the

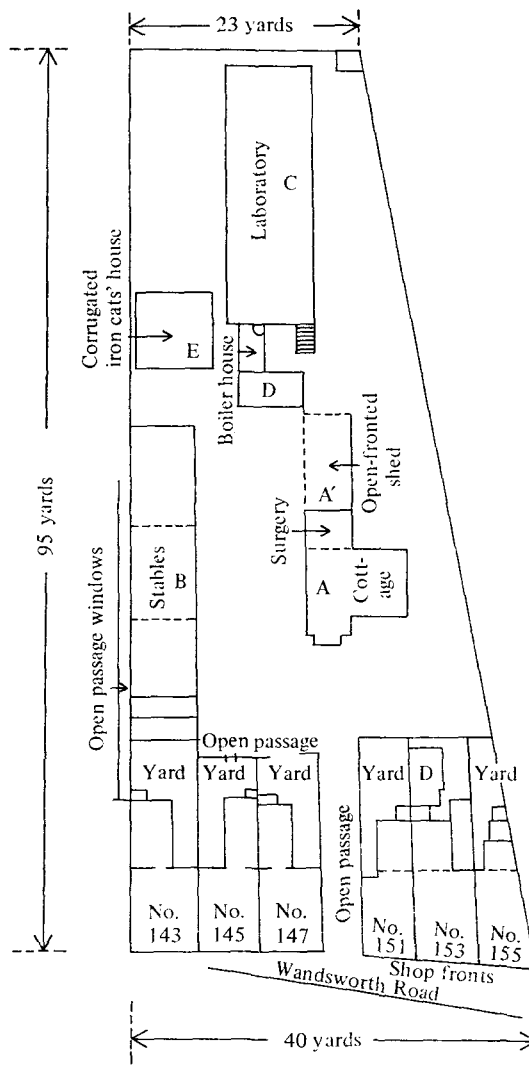


Fig. 1. Plan of The Brown Institution, 149 Wandsworth Road, London SW8.
Scale of 1 in. = 60 ft, ground area is approximately $\frac{5}{8}$ acre.

grounds of the Institution. Beyond the shops and at right-angles to them were the stables and what were probably animal houses occupying a length of 130 feet. Parallel to these were the main laboratory, separated by the boiler house and destructor from a shed, the surgery, and the caretaker's cottage. The laboratory measured about 80×30 feet and, according to a note in the Senate Minutes of 1909–10, consisted of a basement, which at that time was out of repair and unused, and a ground floor divided into five rooms, two large and three smaller, capable of accommodating 12 workers. The surgery, in which presumably the animals were treated, was roughly 15 feet square. The total area occupied, including the houses and shops, was about five-eighths of an acre.

The Institution was divided into two departments: one for the treatment of sick and injured animals, both inpatients and outpatients; the other for scientific research. Since no adequate description of the building is given, it is by no means clear where, for instance, the inpatients were housed, where surgical operations were performed, or where post-mortem examinations were carried out. Minor alterations appear to have been made from time to time, and repairs had frequently to be undertaken. It is surprising that, under what must be regarded as comparatively primitive conditions, nearly 50 000 animals, mainly horses and dogs, were treated during the first 20 years of the Institution's existence.

The cottage in the plan was presumably the new house referred to by the architect. It provided accommodation for the Veterinary Assistant, the combined stableman and porter, and the housekeeper. Whether the Superintendent ever resided in it is doubtful. As a rule he seems to have been provided with a yearly sum of £50 in lieu of lodging.

In 1890 the Superintendent, Mr Victor Horsley, reported the buildings to be quite inadequate; and pressed for the erection of an operating room, special operation wards, a crematory furnace, and better equipment of the laboratory. Again in 1898 John Rose Bradford, who was then Superintendent, complained that the laboratory was in great need of internal repairs; but it was not till 1911–12 that structural alterations were made, including a new operating shed, an animal house with cages, and a new furnace and destructor. The total cost was £800. Meanwhile, in 1903–4, a new main drainage had had to be installed, at a cost of £413, and in 1905–6 repairs carried out to the heating apparatus. In 1904 the Institution was presented with a lethal chamber by a Mrs Steinberger. In 1913–14 arrangements were made for the removal of dead animals, thus obviating the need for an incinerator. In 1915 permission was given to spend up to £50 on new rabbit hutches and renovation of the rabbit house; and in the following year when, as will be pointed out in Chapter 5, money became more plentiful, £200 were sanctioned for repairs to the dilapidated buildings. A new roof was provided for the stables in 1917, and in 1918 the chimney stack was repaired at a cost of £30. In 1918 the Chief Inspectors of Animal Licences insisted on the provision of fresh dog kennels with suitable runs attached. In 1921 the furnace chimney again required attention; it was found to be cracked, and the upper portion had to be rebuilt. At the same time the boiler was declared to be beyond repair. Central heating was no longer possible. Instead, a radiator was installed in the sterilizing room. A supplementary estimate of £50 was approved for repairs to the animal house in 1922. Repairs to the buildings, particularly the roof, were needed in 1925. During the tenure of Dr F. W. Twort, the last Superintendent, a workshop was fitted up in which apparatus could be made for his electromagnetic researches, and two plant houses were added. The stables were repaired once more.

At the outbreak of the Second World War the hospital was closed owing to the departure of the Veterinary Assistant for the Army. In November 1940 the Institution sustained damage from enemy bombs; and again in 1943, when it was agreed that Sir Girling Ball and Sir Henry Dale should inspect it with a view to its being re-opened. For this purpose Dale was offered a sum of £10. The loss of

equipment amounted to £600, which was charged to the County War Damage Suspense Account. Still further damage was incurred in the last week of February 1944, this time by flying bombs. The final destruction of the buildings occurred on 20 July 1944. This marked the end of the Institution's working life. Part of the site on which it was built was requisitioned by the Local Authority for emergency housing purposes; and in 1949 the London County Council made an Order under the Town and Country Planning Act of 1944 for compulsory purchase of the whole area. The purchase was completed in July 1952 at an agreed figure of £4700. Meanwhile, the Institution had received war damage payments amounting in all to a sum of £5543. 3s. 9d.

Equipment

There is little to be said about the equipment of the Institution. It was on the most meagre scale. Indeed it was not till 1900 that £50 was granted for the purchase of a microscope. Nearly all the instruments needed up to the time of the First World War were in private hands. Thus, even 20 years after its foundation, the Superintendent, Dr Charles Sherrington, had to provide for general use his own spectroscope, kymograph, incubator, cardiac perfuser, microtome, and haemoglobinometer. In between the wars when the income of the Institution had for some years exceeded expenditure, Dr F. W. Twort received permission from the Senate to spend £2000 over a period of four years on equipment required for his special researches. Much of this equipment was destroyed in the Second World War. For the remainder, Dr Twort paid the University a sum of £100, and removed what he wanted to his own private laboratory at Camberley. In January 1945 when the Institution was completely deserted, an Inspector of the Metropolitan Water Board rang up to say that he had found a bottle of prussic acid and some bottles containing phosphorus lying about in the ruins. The Registrar of the University thereafter asked Dr Twort to remove all chemicals that might be of danger to trespassers.

In a letter to the Principal dated 31 January 1949 Dr Twort demanded that the Brown laboratories should be reconstructed, and that he should be supplied with the necessary funds to enable him to complete his work. He went so far as to insist that the University had a moral obligation to do this. After consulting Major-General P. H. Mitchener of the Postgraduate Medical Federation and Sir Graham Little, both of whom were members of the Senate, the Principal replied briefly to Twort, pointing out that the contract of service between him and the University had terminated three years previously, and that the University were under no obligation to provide money and facilities for his work. Moreover, the London County Council had served a compulsory purchase order on the site of the Brown Institution, which was therefore not available for re-building. By that time the Senate had decided against putting up a new institute on a different site, and were considering the future of the Trust (see Chapter 13).

CHAPTER 4: ADMINISTRATION, MANAGEMENT AND STAFFING
OF THE INSTITUTION

From the start the government of the Brown Institution was vested in the Chancellor, Vice-Chancellor, and Fellows of the University of London. The management, on the other hand, was in the hands of a committee elected annually. Its terms of appointment were, in general, as follows.

Management of the Institution

The Committee of Management shall consist of the Vice-Chancellor and not less than six other members of the Senate, with the Registrar if he be a medical man, or otherwise with the Assistant Registrar if he be a medical man, and with such other medical men, if any, not Fellows of the University, as the Senate may think fit to appoint. At its first meeting the committee shall appoint from their own body a Chairman for the year, who shall have a casting vote in addition to his vote as a member of the committee. The committee, of whom three shall be a quorum, shall meet at the University of London or elsewhere at least four times in each year, and as much oftener as the Chairman may think is desirable. The time and place of every such meeting to be fixed by the Chairman.

The committee shall frame bye-laws, rules and regulations which shall in every case be submitted to the Senate for confirmation, and shall not be valid until so confirmed. An annual account shall be rendered to the Senate, and audited by them of expenditure of the income derived from the capital sum invested and from receipts from other sources. The committee shall not incur expenditure for any purpose other than the ordinary maintenance of the Institution, and the keeping in repair of its premises, without the sanction of the Senate.

The committee shall regulate the conditions of reception of the animals, the payments to be made for their maintenance, the duration of their stay in the Institution, and the purchase of diseased or injured animals for the promotion of science; and shall determine any contingency not otherwise provided for. They shall pay all dividends and receipts into the account at the Bank of England.

Duties of the Professor-Superintendent

The Professor-Superintendent shall be elected annually, or oftener, by the Senate. He shall be removable at any time by the Senate for neglect or violation of duty or propriety; and shall not relinquish his office without giving two months' notice of his intention to do so. A laboratory with suitable fittings shall be provided for his use, together with a residence and coal and gas. Under the general control of the Committee he shall have entire direction of the treatment of the animals admitted to the Institution, and shall be chargeable for the scientific investigation of their maladies (consistent with the kindness that is a fundamental principle of the Institution); and with the pathological examination of the carcasses obtained for the purpose of scientific study. In carrying out his researches he shall be at liberty to employ an Assistant to be named by himself and approved of by the committee.

He shall be found at the Institution during such times as the committee may consider necessary for the performance of the duties of his office. (That is to say, his appointment was on a part-time basis, as was that of all his successors, with the exception of that of Dr Twort (see p. 173).) He shall keep, or cause to be kept, in writing a regular record of the cases of the animals admitted to the Institution, of the results of their treatment, of the pathological examinations conducted by him, and of all other matters coming under his observation relating to the objects of the Institution. Such records shall be kept in the Institution and

shall be at all times accessible to members of the Senate and of the Committee. He shall also make periodical reports to the committee, as directed by them, embodying the results of his examinations. He shall annually deliver, on the business of the Institution, at least five lectures in English, free to the public, at such place as may be appointed by the Senate. The salary of the Professor shall be £400 a year.

The Veterinary Assistant and others

The committee shall elect a Veterinary Assistant, pay him a salary of £100 a year and, like the Superintendent, provide him with a residence and coal and gas. In addition, the committee shall engage a clerk at £20 a year, a joint resident porter and stableman, a resident house-keeper, and such other servants as are deemed necessary, at such wages and on such conditions as they may consider suitable.

The duties of the Veterinary Assistant are as follows:

He shall devote his whole time to the duties of his office; be responsible to the Professor-Superintendent for the medical care of the inpatients, and see that they are treated with kindness by those employed under him. He shall visit every inpatient daily between 8 and 9 a.m., and at other times of the day as often as necessary. He shall receive outpatients and applications for admission from 9 to 11 a.m. daily, except on Sundays, and at other times in case of emergency. He shall keep a record of all inpatients, and shall carry out investigations relating to the diseases of animals and their treatment under the direction of the Superintendent. He shall dispense the drugs used in treatment, and superintend the preparation of the animals' food. He shall keep accounts of the expenses and charges according to a daily and weekly rate, to be defrayed by the owners, for the ordinary maintenance of the animals, and of special expenses incurred in particular cases.

Admission to the laboratory was to be granted by the committee on the Superintendent's recommendation. No research was to be carried out, or results published, without his approval. Each worker was to provide himself with such instruments as were required for his own exclusive use; defray the expense of material; and pay ten shillings a month in advance towards the incidental expenses of the laboratory.

These were the chief regulations laid down for the management of the Institution. They could be varied or added to from time to time by a Resolution of the Senate, provided that any such variation or addition was consistent with the provisions of the Will.

Dr J. Burdon-Sanderson, F.R.S. was elected the first Professor-Superintendent, to commence work on 5 July 1871. In his turn he named Dr Emanuel Klein as his scientific assistant. The committee proposed that, on account of his high qualifications and reputation as a histologist and pathologist, Dr Klein should be given the title of Assistant Professor, though without salary from the Institution. Who the first Veterinary Assistant to be appointed was does not seem to be stated in the existing records.

It will be seen that the degree of control exercised by the Senate was far greater than would be countenanced at the present day. It was, in fact, a manifestation of bureaucracy that scientific workers nowadays would regard as intolerable. In extenuation, however, it must be realized that the Brown Institution was the first medical and veterinary research institute to be founded in the country, and that the Senate had had no previous experience of the way in which research workers should be treated. Not till the establishment of the Medical Research Committee in 1912, and the Medical Research Council into which it was trans-

formed after the First World War, was virtually complete freedom granted by its wise Secretary, Sir Walter Fletcher, to the administrative heads of its various departments – a freedom that has been sadly encroached upon in recent years.

The scheme of management of the Institution was varied from time to time. The Veterinary Assistant, for example, was to be elected annually and paid a salary of £200 a year. At first, he was chosen by the Professor-Superintendent and appointed by the committee, but later the Senate appointed him and the Secretary themselves. The title of Professor-Superintendent was changed in 1909 to Superintendent alone, on the ground that the title of Professor was not conferred on anyone with a salary of less than £600 a year. By then the Superintendent's salary, which at the beginning was £400 a year, had been reduced to £300.

Dr Twort, the last Superintendent, who was appointed in 1909, remained at this salary till 1924, when it was raised to £400. In 1931, however, after he had held the post of Superintendent, without any pension allowance, for over 20 years, the Senate, in view of his election to the Royal Society and his international standing, increased his salary to £500 a year, arranged for him to receive a pension under the Federated Superannuation System for Universities, and recommended to the Professoriate Committee of the University that he should be given the title of Professor, and made an Appointed Teacher of the University. So far as information is available, Professor Twort was the only Superintendent whose appointment was considered a whole-time one. All his predecessors held part-time appointments, though nothing specific was laid down by the Senate on this particular condition.

In 1911 the Senate appointed a special committee to report on the policy to be pursued by the University on the future of the Institution. In their report the committee said that the Institution needed an annual income of £1900, i.e. an increase of £500 on its current income, and a capital sum of £500 for structural improvements. It recommended that, when funds were available, it should be endowed for purposes of biological research, and a University Chair of Comparative Pathology founded. This last proposal was further considered by the Brown Committee in 1914 in relation to the Report of the Royal Commission on University Education in London. Rejecting a proposal that the Institution should be amalgamated with the Royal Veterinary College or with a medical school, the Committee submitted a scheme for the development of the Institution in the form of a research institute for comparative pathology. Nothing further appears to have been done till 1918, when a special conference was held between the Departmental Committee of the Board of Education and a small committee appointed by the University consisting of Sir Alfred Pearce Gould, Professor Shattock, and Mr Humberstone, the Secretary of the Institution's Committee of Management. At this conference Sir Alfred Pearce Gould put forward a detailed scheme for the foundation of an Institute of Comparative Pathology. In essence, this was to be an upgraded Brown Institution. The Brown Committee modified this scheme, deeming it unnecessary to make provision for a research farm, but recommending the appointment of an assistant to the Professor of Comparative Pathology. It was estimated that an income of £3700 a year would be needed, of which £1000 could come from the Brown Bequest.

The Senate approved this report, and forwarded it to the President of the Board of Education with an application for an annual grant of £2700. Again, nothing appears to have come of this at the time, but in 1922 the Principal met Sir Daniel Hall, Chief Scientific Adviser to the Ministry of Agriculture and Fisheries, for lunch at the Athenaeum in the hope of getting for the proposed Institute of Comparative Pathology some of the £850 000 being allotted by the Government for the setting up of a Veterinary Institute. Sir Daniel made it clear that it was hoped to use the money for aligning veterinary science more closely with agriculture. Personally, he wanted the Royal Veterinary College to be moved to Cambridge, but Sir John McFadyean, Principal of the College, objected.

In 1924 the Senate recommended that a Committee on Comparative Pathology should be constituted. This committee was set up with the Vice-Chancellor, Sir Holburt Waring, as Chairman, and Sir William Collins, Professor Dendy, Dr Graham Little, Sir John Rose Bradford, and the Principal as members. This committee apparently never met, and the subject was not broached again till after the destruction of the Institution during the Second World War (see Chapter 13).

In 1920 the Principal prepared a report on the Management Committee. Its present constitution, which had been decided in 1912, he regarded as unnecessarily large, and recommended that it should consist only of the *ex officio* members, i.e. the Chancellor, Vice-Chancellor, and Chairman of Convocation, the Principal, two other members of the Senate, and two medical men who were not members of the Senate. The Senate adopted these recommendations, which were to come into force on 1 January 1921.

In 1922 the future of the University's Physiological Laboratory came under review, and formed the subject of a report by the Physiological Laboratory's Committee. This laboratory had been established in 1902, was housed in South Kensington, and received an annual grant from the London County Council. The committee recommended that the laboratory should be continued under the name of the Wallerian Laboratory of Comparative Physiology, and be housed at the Brown Institution. The Managing Committee of the Institution were against this; and the Senate decided that, as no funds were available for building a new physiological laboratory, it should be closed down at the end of the session in 1923. This was done – much to the regret of the Physiological Society and the staff, whose appointments were thus terminated.

In between the wars the number of visiting workers, which had previously been as high as 20 in a single year, fell to two or three. The Institution presented no serious problems, and no fresh rules or regulations for the Management Committee appear to have been called for. The chief event was a lawsuit brought by Professor Twort, the Superintendent, aimed at the Medical Research Council, for terminating an annual grant of £600 which he had been receiving since 1919. An account of this action will be given in Chapter 12.

Lectures

It will be remembered that under the terms of Mr Thomas Brown's Will the Professor-Superintendent was obliged to give at least five lectures a year in English

free to the public. Except for one or two justifiable exceptions when they had to be postponed, this duty was complied with. The choice of subject and the place of delivery varied from year to year. As a rule, the researches carried on at the Institution were described, sometimes with a broad anatomical or physiological background, and sometimes with their applicability to the prevention or treatment of disease. In London, which was commonly selected, the lectures were given either at the Institution itself, or in the University Theatre, or at the Royal College of Surgeons. In the early days invitations to Birmingham and Owen's College, Manchester, were accepted. Sometimes the lectures were accompanied by a demonstration in the laboratory; and on one occasion a popular lecture was given to working men in relation to the Caius College Settlement in Battersea. A tropical motif was introduced in 1901 when lectures were given on pathogenic protozoa with special reference to the tsetse-fly disease of South Africa. In the time of Dr Twort's directorate the lectures were exclusively on bacteria and viruses and the diseases they caused.

The antivivisectionists

The management of the Institution was not made any easier by the activities of the antivivisectionists. In December 1872 the opinion of Counsel was sought on the limits within which investigations on diseases of animals could legally be carried on by means of the Institution's funds. Counsel's opinion was reported to the Senate in February 1873 and referred to the Committee of the Institution. Unfortunately no account of this opinion is recorded in the Minutes, but from the nature of the subsequent work at the Brown there is little doubt that the limits were drawn fairly wide.

In 1875 objections were raised by a Mr Needham to experiments carried out by Dr Klein. The committee found that Mr Needham's assertions were inaccurate; that Dr Klein did not remove a newt's tail piece by piece; that other accusations were equally untrue; and that the operations were requisite and necessary, and were conducted in the most humane manner.

In 1876, soon after the passing of the Cruelty to Animals Act the Senate applied for registration of the Brown Institution so that experiments could be legally performed and Dr Klein could be granted a licence. The Secretary of State agreed and on 18 July duly registered the laboratory, the stables, and the post-mortem rooms.

In 1883 the Senate answered objections by a Mr Jesse of cruelty in the treatment and vivisection of animals. They pointed out that all operations were carried out under chloroform or other anaesthetic, and that the animals were killed before recovery. In the same year a letter of protest was received from the Antivivisection Society. Some years later, the committee had to rebut statements that investigations were carried out with 'the greatest torment which the victim was capable of enduring', and that other experiments were 'terrible, painful, and revolting'.

A more reasoned attack came in 1902 from a group of prominent signatories, including marquesses, earls, lords, bishops and Members of Parliament, to an

address asking for permission to send a deputation to discuss the carrying out of Thomas Brown's Will. The Senate refused to receive a deputation, but were prepared to consider their views if presented in writing. The signatories asked the Senate to reconsider its decision, which the Senate refused to do, and therefore submitted a written address. The burden of their case was that Mr Brown never intended vivisection to be made on healthy animals for the benefit of man; his aim was the cure of sick animals. They quoted as examples the experiments of Dr Rose Bradford on the kidneys of fox terriers, and of Mr Walter Edmonds on the thyroid of dogs. Further accusations were made by the signatories, and by a Dr Hadwen of Gloucester who had accused Dr Rose Bradford of causing torment to his animals. The Senate refused to continue this correspondence, or to provide Dr Hadwen with further information.

Throughout the first forty years or so of its existence the Brown Institution was continually worried by the Antivivisection Society. The activities of this body caused so much concern to the physiologists that at times an entire meeting of the Physiological Society was given up to considering the problems that this continuous opposition presented.

For the sake of the record the following list is given of the Chairmen of the Brown Institution Committee.

Dr Sharpey	1871-73	Sir Rickman Godlee	1915-18
Dr Richard Quain	1873-90	Professor G. A. Buchanan	1918-19
Sir James Paget	1891-1901	Sir S. Russell Wells	1919-21
Sir John Burdon-Sanderson	1901-03	Sir Holburt Waring	1921-29
Sir William Church	1903-12	Sir Edwin Deller	1930-35
Sir Alfred Pearce-Gould	1912-15	Sir Girling Ball	1936-45