



Photograph by Ella Mollo

SIR CYRIL BURT

CYRIL LODOWIC BURT

1883-1971

I

THE death of Sir Cyril Burt on 10 October 1971 has removed one of the leading British pioneers in the development of psychology as an applied scientific discipline. Psychology established its independence from its ancient philosophical parentage in the latter half of the nineteenth century. First in Leipzig, then in the United States and in Europe, including Great Britain, psychological laboratories were set up, and psychological journals founded. Psychology became no longer a merely speculative philosophical pursuit, but an embryo science with its specialist societies, with its own techniques and expert practitioners, and with a growing body of empirically established data. By the beginning of the twentieth century these developments were in progress in most advanced western countries, and the study of the human mind, which Aristotle first systematized more than two thousand years ago, was being placed on entirely new foundations. The first decade of the twentieth century was the most revolutionary decade in the history of psychology, certainly since Aristotle's death. It was in this decade that Cyril Burt made his debut as a psychologist. He had the intellectual gifts, and the consuming sense of purpose, as well as the opportunities, to take advantage of this situation, and in this country it is to him, more than to any other man, that the applications of psychology, particularly in the fields of education and child development, are due.

II

Cyril Lodowic Burt was born in London on 3 March 1883. His father, also named Cyril, was at the time of his son's birth a young house physician, twenty-six years of age, at the Westminster Hospital, and lived in Petty France near St. James's Park. The Burt family came originally from the Somersetshire area. Dr. Burt's mother was a Barrow, descended from Newton's mathematical tutor at Cambridge, Sir Isaac Barrow. Of her six children five emigrated to Canada, the United States, or Australia, leaving only Cyril the elder in this country. He married a Miss Evans from Monmouth, of Welsh descent, and

Cyril Lodowic was the first of two children, his sister, Marion, who later qualified in medicine, being born eight years after in 1891. The family did not remain long in London, as Dr. Burt's health began to deteriorate. A spell in Jersey in 1890, where Cyril went to a dame-school for a couple of months, did not effect a cure, and in 1892 Dr. Burt decided to leave London for a rural practice at Snitterfield, near Stratford-upon-Avon, in Warwickshire. There, in a small village of a few hundred inhabitants, set in the midst of a beautiful, historic countryside, remote and isolated, as the Trevelyans who owned the manor refused to allow the railway to run through their property, the Burt family resided for twenty-seven years. The practice was never a prosperous one. Dr. Burt's predecessor, who had been at Snitterfield for forty years, was keener on hunting than on medicine, and the practice had been neglected. In 1893 Dr. Burt earned only £193 in fees, and to run a practice and a large house (which now houses a firm of four medical practitioners) together with a three-acre garden, he had to employ a domestic servant, a gardener-groom, and keep a horse and trap. Though the practice soon improved and extended to neighbouring villages, including Claverdon, where the Galtons lived, Dr. Burt was too dedicated a doctor to press for fees from impoverished villagers who needed medical attention. So money was always tight, and financial stringency was to worry Cyril throughout his educational career, which was made possible only by his own success in winning scholarships.

From 1892 to 1895 Cyril went to King's School, Warwick. He did well there, winning many prizes, often coming top of the form, and finally gaining a scholarship to Christ's Hospital, then still located in the City of London. The preparatory school regime was a strenuous one, for Snitterfield was six miles from Warwick, and the journey was difficult. Rising before seven, by candle-light in winter, Cyril would leave home by dog-cart at 7.45 a.m. and rendezvous at a cross-roads two miles away with a farmer who was driving his own son to the same school. The return journey was made by train to Claverdon, followed by a one and a half mile walk, and a lift in a baker's cart back to Snitterfield. There was still homework to be done for the next day, and Cyril was not physically robust. Hence the decision to send him away to boarding-school when he was twelve years old.

Snitterfield, no doubt, left a permanent stamp on Burt's tastes and character. The isolated life of a small village forced him to be remarkably self-sufficient. Though the greater part of

his working life was spent in London, he always remained somewhat detached from the social life of the metropolis. He acquired, and never lost, a deep love of nature and natural objects, and he enjoyed, nearly to the end of his life, walking in London parks, if nothing more rural offered. And in the home itself he became devoted to his young sister, eight years junior to himself, a devotion which remained to the end of his life, and which found expression in a continuing and extensive correspondence. Through this relationship he early acquired an insight into the childish mind, and an extraordinary facility for rapport with young children, which proved of great value later professionally. Both the Burt parents were cultivated people, who encouraged literary, historical, scientific, and artistic interests in their children. Cyril showed himself adept at reading, could sketch and paint with some talent, and above all he was an enthusiastic musician, learning to play the piano and the organ, composing songs, and enjoying singing. Perhaps equally important was the interest and insight into clinical practice which he obtained by accompanying his father on his rounds during school vacations. It was on these rounds that he became acquainted with members of the Galton family, including, so we are told, the great Sir Francis himself.

Christ's Hospital, where Burt was a pupil from 1895 to 1902, brought a total change of scene. This famous school, founded in 1552, where Coleridge and Lamb had both been pupils, was set in the heart of the city of London. It was not until 1902, the year Burt left, that it moved to Horsham. Burt's tastes were already intensely intellectual, and, partly because throughout his life he suffered from extreme short-sightedness, he had no talent for sports, and a dislike for gymnastics. In spite of this his schooldays were enjoyable. The tough regime, which started with before-breakfast preparation at 7 a.m. and finished with evening preparation lasting till 8.15 p.m., seemed to suit him. He was a lively youngster, and 'Little Bertie', as he was inevitably called, was quite a favourite, and made several good friends. His education was conventionally classical. 'So far this term', he writes in one letter home, 'we have finished VIII Iliad, IX book of Vergil, the II book of Thucydides, Juvenal's X satire, sampled Cicero's De Oratore, and are engaged on Sophocles' Electra and Demosthenes' Orations. In addition we do several Greek and Latin proses a week, and Latin hexameters and Greek iambics (about 20 lines of each kind of composition a week). Our composition usually consists of a piece of Addison

or Scott, and for verse Shakespeare or Tennyson. Very often we have to do it without any dictionaries or help at all.' If Burt in later life was a master of lucid English, the explanation no doubt lies in the education he received. But Burt's reading was by no means confined to the classical curriculum. His wide intellectual curiosity was already manifesting itself, and at the age of 15 he had already read and summarized the famous article on Psychology by James Ward in the XIth edition of the *Encyclopaedia Britannica*. London, too, was a stimulating place culturally, and a grandfather and aunt saw that he visited many of the museums and galleries. His schooldays culminated in a scholarship to Jesus College, Oxford, where his Welsh ancestry on his mother's side no doubt recommended him.

When Burt went up to Oxford in 1902 his original intention was to read natural science as a foundation for a career in medicine. But the college insisted that a classical scholar should study classics. In his second term at Oxford he is still talking of switching to science before or after taking 'Greats', and adds, 'By the way, if I specialised medically, I should perhaps find lunacy most interesting: I should feel at home in an asylum too.' But as it turned out he went through with Classical Moderations and Literae Humaniores, obtaining second classes in each examination, failing no doubt to achieve firsts because his interests were already too wide. It was not long before he was attending not only McDougall's lectures on visual sensations and other problems of psychology (for a time as McDougall's only student), but Gotch's demonstrations on the brain and nervous system in the physiological laboratory. He heard Sir Francis Galton deliver his Herbert Spencer lecture, and Karl Pearson deliver the Robert Boyle lecture on Eugenics. And he came across Pearson again at a college society talk on the subject of 'correlations and lines of closest fit'—all topics well outside the conventional 'Greats' curriculum. As part of his psychology specialization McDougall, aware of his interest in Galton's work, set him a project on the standardization of psychological tests being undertaken for the anthropometric survey sponsored by the British Association. This involved further meetings with Pearson, correspondence with Galton, and his first contacts with Spearman. The foundations for Burt's later work were already being laid while he was still an undergraduate. Much in Oxford life, however, did not appeal to him. At times he felt lonely, and out of sympathy with the 'contemptible' behaviour of some of his fellow students. Only later in McDougall's

laboratory did he meet Jack Flugel of Balliol, who became a lifelong friend and, in due course, a colleague at University College. Burt's limited finances imposed severe restrictions on his social life. His college scholarship was worth only £80 per annum, and the supplementation from a Grocers' Company grant and from a beneficent governor of Christ's Hospital only just enabled him to make ends meet, with occasional help from his father. Oxford, nevertheless, was an all-important phase in Burt's career. Apart from the contact with McDougall, then at the height of his powers, and indubitably one of the great figures in the psychology of the time, Burt acquired the philosophical sophistication which he always regarded as the best foundation for psychology.

His Oxford years were followed first by a year taking a Teacher's Diploma, during which he was attached to Clifton College for teaching practice ('a completely perfect place' in his view), and then by the award of the John Locke Scholarship, which enabled him to spend some months at the University of Würzburg, then, under Külpe's leadership, the centre of one of the most important movements in the German psychology of the day.

The Würzburg episode, though brief, was highly significant in Burt's development. For the first time he was able to study psychology intensively and uninterruptedly, for ten hours a day, with no break even on Sundays. He absorbed vast quantities of German psychology, and realized that many of the English books, and English lectures, were 'ridiculously behind-hand'. He became acquainted with the Gestalt movement in its very early beginnings, and learnt about the new discoveries of Meumann, Stern, Freud, and others. He met personally some of the leading figures in European psychology; Külpe himself, of course, von Frey, the expert on sense-organs, Karl Bühler, and Michotte from Louvain who came to Würzburg on a visit. He became immersed in a cosmopolitan atmosphere which he found delightfully stimulating. He was able to visit other neighbouring centres, the new Institute at Frankfurt-am-Main for example, which was at the time only two years old, and where he got many ideas on the equipment and accommodation needed for an up-to-date department of psychology. At Würzburg he not only strengthened his friendship with Flugel, whose stay there almost coincided with his own, but became acquainted with a young Cambridge graduate, C. W. Valentine, later Professor of Education at the University of Birmingham,

who remained one of his most intimate friends. In 1908 Burt returned to England to take up his first paid post at the University of Liverpool.

III

The lectureship in experimental psychology at Liverpool was one of the first such posts to be established in this country. The moving figure was Professor C. S. Sherrington, who held the Holt Chair of Physiology from 1895 to 1913. The lectureship, which carried a salary of £150 per annum, was first filled in October 1905 by Dr. W. G. Smith, who a year later moved to Edinburgh; he was followed by Dr. H. J. Watt, who left for Glasgow in 1908. Burt's appointment dated from October 1908, when he was elected assistant lecturer in Physiology, and lecturer in Experimental Psychology for three years. The appointment was renewed for a further three years from October 1911, but Burt resigned in the middle of the summer term in 1913. Burt lectured not only to medical students, but to students from the departments of education and social science, and before he left he had attracted a number of research students. His lectures were accompanied by experimental demonstrations, some of them of such an enterprising nature that they became known as 'Burt's musical-hall turns'. His lectures embraced not only the experimental psychology of the sense-organs, but also more adventurous topics such as hypnosis, Freudian psychoanalysis (then a complete novelty), sexual differences, and, of course, questions relating to heredity and general intelligence. It was in this last area that Burt's researches focused. He made the decision, from which he never deviated in the course of his long working life, to make the psychology of individual differences (differences in ability and personality, and the genetic and social influences determining them, together with the means of assessing and evaluating them) the main focus of his endeavour. His Liverpool years were marked by the publication of four outstandingly important papers,¹ two on tests of general intelligence, one on the inheritance of mental characteristics, and one on the mental differences between the sexes. In the papers

¹ 'Experimental Tests of General Intelligence', *Brit. J. Psychol.* iii. 94-177. 1909; 'Experimental Tests of Higher Mental Processes and their Relation to General Intelligence', *J. Exp. Ped.* i. 93-112. 1911; 'The Inheritance of Mental Characteristics', *Eugen. Rev.* iv. 1-33. 1912; 'The Mental Differences between the Sexes' (with R. C. Moore), *J. Exp. Ped.* i. 273-84, 355-88. 1912.

on tests of general intelligence he demonstrated that intelligence could be more effectively measured by more complex tests than the sensory tests then commonly in use, and he developed a series of verbal tests involving reasoning (opposites, analogies, syllogisms, sentence completion) in which he made use of his Oxford training in logic, tests which have formed models for many subsequent intelligence tests. By the use of mathematical methods derived from the work of Spearman and Karl Pearson he confirmed Spearman's finding of an hierarchical order of inter-correlations and argued that this implied 'that all the functions of the human mind, the simplest and the most complicated alike, are probably processes within a single system'. By means of repeated testing of the same subjects he concluded that proficiency in the tests rested not upon training but mainly on innate ability. The conclusion that 'mental capacities are inherited' he stuck to throughout his life. His last, posthumously published, article was on 'Inheritance of General Intelligence',¹ and in it he wrote 'the contention that differences in (general intelligence) depend largely on the individual's genetic constitution appears incontestible'. In his investigation of sexual differences, carried out in collaboration with a schoolteacher, Mr. R. C. Moore, in a Wallasey school, Burt concluded that 'with few exceptions innate sex-differences of mental constitution are astonishingly small—far smaller than common belief and common practice would lead us to expect', and that 'differences in emotional capacities are larger than differences in reasoning capacities'.

During his time in Liverpool Burt resided at the Liverpool University Settlement in Nile Street. This settlement had been established in 1906 'to assist in the provision of means of education and recreation for the people in the poorer districts of the south end of Liverpool, to inquire into the social condition of the poor, and to consider and advance plans calculated to promote their welfare'. Burt deliberately took up residence there to enable him to acquire a first-hand background knowledge of social conditions, and it was here in particular that he first got interested in the problems of juvenile delinquency and first saw the need for vocational guidance. The settlement under the inspired leadership of the warden, Frederick Marquis (later to become Lord Woolton), attracted a brilliant group of young residents, which included V. H. Mottram, the physiologist,

¹ 'Inheritance of General Intelligence', *Amer. Psychol.* 27. 175-90. March 1972.

P. M. Roxby, the geographer, and Olaf Stapledon, philosopher and writer. Burt always regarded his years there as one of his most valuable educative experiences.

IV

The Liverpool period came to an end on Burt's appointment as psychologist, part-time, to the London County Council. This appointment, largely the result of the initiative of Dr. C. W. Kimmins, the L.C.C.'s chief inspector, was the first appointment of a professional psychologist in this country. It was approved by the Council's Education Committee on 27 November 1912. Burt's resignation from Liverpool University was reported to the Faculty of Science on 28 April 1913, and Burt commenced work in London on 10 May 1913. His terms of reference were (1) to carry out periodic psychological surveys of children in the Council's schools, (2) to examine and report on individual cases of subnormality, delinquency, and special giftedness, and (3) to study the psychological aspects of any specific educational problem that might from time to time arise (e.g. selection for grammar schools). This complex task Burt was required to perform unaided and in a half-time post. His achievements during this London period can only be described as miraculous. He seemed to know precisely what to aim for, and how to achieve his aims. He showed none of the uncertainties of the young investigator breaking new ground. The amount of work he got through was phenomenal, and the data he collected served as material for analysis almost for the rest of his life. He very soon sized up the nature of the problems with which he was confronted, and in an interesting letter to Dr. Kimmins, dated 17 March 1914, he summed up the situation as he saw it with remarkable perspicacity. 'I have come to realize in a very concrete way that a psychologist who is doing educational work is really starting a new and independent science. Educational Psychology is not merely a branch of applied psychology. Medicine is not simply applied physiology. The medical investigator has been forced by practical exigencies to build up an independent science of his own, of work, not in the physiological laboratory, but in the hospital and by the bedside. Similarly the educational investigator cannot merely carry over the conclusions of academic psychology into the classroom. He has to work out almost every problem afresh, profiting by, but not simply relying on his previous psychological training. He has to make short cuts to

practical conclusions, which, for the time being, leave theory or pure science far behind. Education is thus not a simple field for the illustration and application of what is already known: it is, as you say, a great field for fresh research. And the result of this research will eventually be a new science. This, of course, is not a new view, but it is one which is often overlooked.' In his first report on his work, covering the period up to the end of October 1914 Burt records that he had examined, personally or with the help of teachers, rather over 2,000 children, of whom about 600 were subnormal or defective, that he had commenced work on a revision of the Binet Intelligence Test, and on the construction of 'pedagogical tests', and that he had begun a number of special investigations, including one on the influence of the spacing of print in children's books (this led to a memorandum on 'The Printing of School Reading Books', and was the beginning of a lifelong interest in typography), and others on the influence of loss of sleep on schoolwork generally, and arithmetic in particular, on the influences of the home environment, of playground classes, of physical exercise, of the Montessori system, and methods of teaching spelling.

All this was undertaken as a half-time psychologist, and Burt's other activities included, before the war, part-time teaching at Cambridge; during the war, when his short-sight precluded military service, work in the Central Statistics section of the Ministry of Munitions; and after the war, from 1922 to 1924, part-time work at the newly established National Institute of Industrial Psychology under C. S. Myers, where he carried out research and laid down procedures in the field of vocational guidance.¹ In addition there were various supernumerary assignments, for example the secretaryship of the Psychological War Research Committee of the British Association, and membership of the psychological research sub-committee of the Cinema Commission of Inquiry organized by the National Council of Public Morals, which sat under Spearman's chairmanship from 1920 to 1922. Burt produced a long memorandum on the effect of the cinema on children, concluding that 'in comparison with the incalculable number of films that are manufactured and released the delinquency resulting is almost infinitesimally small'.

The most important outcome of Burt's L.C.C. years, however, were four classic volumes, which remain among the

¹ For further details see Hearnshaw, L. S., 'Sir Cyril Burt and the N.I.I.P.', *Occ. Psych.* 46. 35-7. 1972.

masterpieces of British psychology—*The Distribution and Relations of Educational Abilities* (1917), *Mental and Scholastic Tests* (1921), *The Young Delinquent* (1925), and *The Backward Child* (1937).¹ These volumes represent the high-water mark of Burt's achievement. They are storehouses of data, techniques, ideas, and conclusions, and combine technical expertise and statistical rigour on the one hand with human insight and judgement on the other. Even today they are readable, interesting, and far from outdated.

The report on educational abilities was the first harvest from the L.C.C. psychologist. It consisted of a survey of the abilities of the entire elementary school population of a single representative London borough firstly to ascertain the number of educationally backward children needing special treatment and the number of potential scholarship winners capable of proceeding to secondary schools, and secondly to obtain data on the relationship between different educational abilities. To answer the latter question Burt developed further the methods of analysis he had devised while at Oxford and Liverpool, and came to the conclusion that 'school achievements are due to mental qualities of two kinds, firstly a general ability entering into all school work; secondly special aptitudes for particular subjects'. He believed that 'the high agreement of the estimated coefficients with the intelligence correlations suggest that general intelligence is an important, though not the only factor in general educational ability. Other important factors are probably long-distance memory, interest and industry. It is doubtless not a pure intellectual capacity; and, though single, is not simple, but complex.'

Mental and Scholastic Tests contained in addition to a revision of the Binet-Simon scale, and a battery of tests of educational attainment (which remained in use for many years), a number of valuable technical appendices and statistical memoranda. The two great books on delinquency and backwardness, respectively volumes I and II of a treatise on 'The Sub-normal School Child', focused on to these specific problems all Burt's gifts of clinical and social insight, of psychological erudition and technical expertise, and emphasized the multiple influences, genetic and environmental, at work to produce the sub-normal child.

¹ Though *The Backward Child* was not published until 1937, it was essentially the product of Burt's L.C.C. period.

In 1924 Burt was persuaded by Sir Percy Nunn to apply for the chair of Educational Psychology at the London Day Training College, which was then jointly administered by the L.C.C. and the University of London, but in 1932 transferred, as the Institute of Education, wholly to the University. Nunn was anxious that the training in psychology should be as practical as possible, and in consequence the L.C.C. clinic was moved to the College. Burt also continued for some years to work in the Council's schools for three days a week, so there was a smooth transition from his old to his new duties. The move to the L.D.T.C. was indeed a logical one, which gave Burt the opportunity to begin the analysis of his data, and which provided him with the stimulating company of colleagues such as John Adams (the Principal of the College), Percy Nunn (Professor of Education), H. R. Hamley, and others, as well as an able, mature group of research students, which included men later to become well known, for example, R. B. Cattell, William Stephenson, F. J. Schonell, A. G. Hughes, and H. E. Field. Burt was teaching in an area in which he had become an acknowledged expert, and he was at the centre of the progressive movement in education, to which he himself had made major contributions. His standing was recognized by the frequent calls for contributions to the committees of the Board of Education, in the evidence he submitted to the Joint Committee of the Board of Education and the Board of Control on Mental Deficiency, and by the large part he played in the initiation of child guidance clinics in this country in 1927. These years at the L.D.T.C. were in many ways the peak of Burt's career.

V

In 1931 C. E. Spearman, who had been in charge of the psychology department at University College, London since 1907, retired, and Burt was a natural successor. The department had from its beginnings under Sully been concerned with the kinds of problem Burt was interested in, child development, individual differences, the nature of intelligence, and statistical methodology. Spearman had built up a strong research tradition, and the post seemed to provide Burt with the opportunities he needed for working on his accumulated data. The move, nevertheless, had its disadvantages. Inevitably the headship of a general department of psychology, the largest in the University, necessitated a wider approach, and Burt was involved in general,

less specialized lecture courses. Inevitably the head of the department was drawn into, not only college, but also University, committee work, and Burt, in spite of his dislike of committees, had to take his turn as Chairman of the Board of Studies, Chairman of the Board of Examiners, and convener of the higher degrees sub-committee. The move to some extent lifted Burt from the close contact with the schools which had provided him with his main footing in real life and the bulk of his research data, so that he became as time went on increasingly academic. It removed him, too, from the close association with a congenial and sympathetic group of colleagues into a much less sympathetic environment. So more and more Burt tended to keep to himself, and go his own way. Particularly after the war the facilities provided for the department of psychology in accommodation, and in secretarial and technical assistance, were totally inadequate to cope with the large increase in student numbers. Burt groaned under the load, and retreated as much as possible to his own home, where he could get on in peace with his own work and with the kind of assistance to students he regarded as worth while, the detailed written comments on their essays and exercises which he provided so lavishly.

Matters were made more difficult, first by his marriage, and secondly by medical disabilities. In April 1932, when he had just turned 49, Burt married a schoolteacher, Joyce Woods, twenty-six years younger than himself, and temperamentally very different. The marriage, which was without issue, can hardly be described as successful. Burt had become too habituated to a bachelor life to adjust to the married state. His work always came first, and social distractions, which his wife enjoyed, made little appeal to him. Until the outbreak of war, his wife's medical training kept the marriage together, but after the war had begun, their ways increasingly diverged, and they finally separated in 1952. Burt's medical disabilities date from the end of 1941, when he was diagnosed as having developed Menière's disease. The symptoms of this disease, in particular giddiness and nausea, are distressing and disabling, and ultimately Burt's hearing, first in the left ear, then, later, in the 1960s, in the right ear, was affected. This further isolated him from society and from participation in practical affairs.

Nevertheless the years up to the outbreak of war were years of substantial achievement. He became widely known as a broadcaster, the series of talks *How the Mind Works*, which he edited, and to which he contributed, in particular achieving

general acclaim. In 1935 the Heath Clark lectures, which he had delivered in 1933 at the London School of Hygiene and Tropical Medicine, were published in book form with the title *The Subnormal Mind*. The lectures provided a synoptic view of all types of subnormality and abnormality encountered among children, with a discussion of their causes, diagnoses, and practical treatment. Having completed this book, and *The Backward Child* (1937), already referred to, Burt increasingly turned to mathematical and statistical studies. Though not by training a mathematician, he had become interested in statistical analysis while still an undergraduate at Oxford, and he had early been influenced by the work of Galton, Pearson, and Spearman. The first fruits of this renewed mathematical activity were to be seen in the long chapter on factor analysis in *The Marks of Examiners* (P. Hartog and E. C. Rhodes, 1936). This was followed by a whole series of statistical and mathematical articles, continuing until his death, by a large-scale book, *The Factors of the Mind* (1940),¹ and after the war, the launching of the *British Journal of Statistical Psychology*, of which Burt was editor, first in association with Godfrey Thomson, and then on his own, from 1947 to 1959. This concentration on mathematical psychology, an abstruse and difficult area, which was only within the competence of a minority of psychologists, tended somewhat to set Burt apart from his psychological colleagues. Though his contributions to factor analysis were considerable, and highly regarded by mathematicians, there was, and still is, a widespread feeling among psychologists that the mathematical superstructure had overshadowed the empirical foundations, consisting of rather unreliable psychological data, imperfectly grounded in theory. Burt himself regarded 'factors' simply as 'principles of classification' not as causal explanations, and this seemed to make them of more interest to the mathematician and logician than to the psychologist.

In 1940 Burt's department was evacuated from London to Aberystwyth, and there it remained until the end of 1944. Burt enjoyed this period, which, he wrote, 'brought back conditions I have always preferred—the chance to live intimately with a tiny group of colleagues and students, as members of a harmonious family'. It enabled him, moreover, to escape from a great deal of committee work and administration. Burt's knowledge and skills were, of course, in constant demand during the war.

¹ A second edition of *The Factors of the Mind* with additional material was almost completed by Burt before his death.

He made many contributions to all the armed services in matters of selection and training, and advised the Ministry of Information on a variety of matters. But he did all this not by attending meetings, but by inundating the various ministries with memoranda. When, at the end of 1944, he was back in London, it was not so easy to escape, and heavy demands were made on him, not only by the Defence Departments, but also by the Civil Service Commission, which was beginning to be interested in psychological methods of assessment. Burt contributed a great deal to the application of scientific validation to the new methods of selection being applied both in the armed services and the civil service.

On his return to London in November 1944 Burt settled in the large flat in Elsworthy Road, Primrose Hill, which was to remain his home for the twenty-seven remaining years of his life. It proved an ideal residence—spacious, with a splendid outlook over the green slopes of Primrose Hill, and sufficiently near to University College to enable him to walk to work across the parks when he felt like it. Flying bombs were still falling when he arrived, and several came uncomfortably close, but Burt remained remarkably composed. What was unnerving to many, simply provided him with interestingly novel introspective data.

VI

Retirement from his chair in 1950 at first brought little change in Burt's way of life, apart from the relief from teaching and administrative duties. Although the character of his old department changed rapidly and radically with the appointment of an American successor, Burt retained for some time a footing in the child psychology section. He remained immensely busy with meetings, lectures, broadcasts, and the editing of the new journal of statistical psychology, and old students frequently sought his advice. His more important lectures, such as the Hobhouse, Bingham, and Galton lectures, were attended by packed audiences, which indicated that he was still very much a force to be reckoned with. He continued to produce a steady stream of articles, right up to the time of his death, and his published work represents only a small part of his huge output. There were numerous and lengthy reports to publishers on manuscripts submitted to him, the refereeing of journal articles,

book reviews, memoranda to government departments and other organizations, and a vast personal correspondence. He was able to keep up this huge flow because throughout his working life, from the L.C.C. days to the time of his death, he had employed his own private secretarial assistance. His three successive secretaries each remained with him for many years, and were devoted to him. To his last secretary, Miss Grete Archer, who worked as housekeeper and secretary for the last twenty years of his life, is wholly due the excellent order in which his masses of papers were kept.

The 1960s inevitably brought a diminution of outside activities. Burt's deafness increased; in 1962 he fell, while on holiday, and broke a leg; he had a prostate operation in 1967; he began to complain of eye-strain, and of deteriorating powers of concentration and reasoning. His public appearances became less and less frequent; but there was no noticeable falling off of his literary activity, and his clarity and grip were such that it was difficult to think of him as an old man. The deaths of his two oldest and closest friends, Flugel in 1955 and Valentine in 1964, left him a rather lonely and isolated figure, and his former colleague, Dr. Charlotte Banks, became in the end almost his only close professional associate. However, he still enjoyed controversy, he still corresponded voluminously, and he still retained an unabated interest in scientific developments, in the arts, and in affairs. After the war he no longer travelled abroad, which he previously had done regularly, first with Flugel and other friends and then with his wife. But he enjoyed his annual holidays at Malvern, where his parents and his sister had retired and where his sister continues to live, and in his last three years at Bognor Regis. The organization known as 'Mensa', which had been inspired by some broadcast remarks of his in the 50s, and of which he became Honorary President, provided a source of interest, and sometimes of concern; and he became increasingly preoccupied with questions relating to religious belief. In fact an unpublished manuscript of a book on 'The Pros and Cons of a Religious Metaphysic' remains among his papers, and among his published articles during the final years were several on psychic research, including his 1968 F. W. H. Myers a Memorial Lecture, an extremely brilliant and penetrating survey of the data of parapsychology. In a letter written only a month before he died, he said 'My view of the universe is ultimately monistic and mentalistic ("spiritual", the Hegelians would say). In such a universe telepathy, clairvoyance, psycho-

kinesis, etc. would be normal, and indeed what one would expect.¹

Cyril Burt died after a brief illness in University College Hospital on 10 October 1971, and his ashes are interred in Malvern.

VII

Applied psychology in Great Britain begins with Burt. He was the first non-medical psychologist to obtain employment as a psychologist outside a University in this country. His appointment to the L.C.C. in 1913 was, therefore, a landmark. Even a lesser man would have had a minor niche in history for this reason alone. Burt, however, was much more than merely first in the field. He was one of the ablest men ever to work as an applied psychologist in this, or any other, country, and he set standards, scientific and professional, which have influenced profoundly all subsequent work. His erudition was immense. He was indeed about as nearly a polymath as it is possible to be in this age of inevitable specialization. Oxford trained him in classics and philosophy; his family background, and his association first with the Oxford, and then the Liverpool departments of physiology, gave him a grounding in the biological sciences; he was a keen amateur astronomer, with a small telescope of his own, and he kept himself informed of developments in physical theory; he was a self-taught mathematician of considerable power; and in the arts he had an expert knowledge of music and a cultivated aesthetic taste. He had a quick, logical, lucid mind, and great verbal facility, retaining these powers to the very end of his life. These great talents were not unfortunately matched by a very accurate memory, and, although he recognized this weakness, he was still not careful enough in checking all his facts. His autobiographical sketches, and some of his other writings, are, therefore, marred by factual inaccuracies, and this deficient memory sometimes led him into unnecessary controversy with colleagues—for he would tend to defend his version of events against attack.

As a psychologist he was essentially English. The major influences shaping his viewpoint were the psycho-biology of Darwin, Spencer, Galton, and McDougall, the neurophysiology of Hughlings Jackson and Sherrington, and the brand of

¹ Quoted from the obituary notice by Rosalind Heywood, *J. Soc. Psychic Res.* 46. 752. June 1972.

idealistic philosophy propounded by James Ward. In Germany he readily absorbed the teaching of the Gestalt psychologists, who had to some extent been anticipated in this country by Stout, and he looked with favour on many of the central tenets of psychoanalysis. He was markedly unsympathetic to the behaviouristic trends which began to dominate American psychology from the 1920s onwards, and which spread to this country in the 1950s. His work can be regarded as a working out of the programme, first envisaged by Francis Galton, for a psychology of talent and character, rooted in evolutionary biology and genetics, and recognizing the importance of individual differences, and quantitatively based. Towards the establishment and application of such a psychology Burt worked with undeviating consistency. There is a single thread of purpose uniting his first publication in 1909 and his last posthumous papers published in 1972.

This very consistency inevitably brought Burt into conflict with some of his younger contemporaries. Psychological fashions changed; Burt did not. It was fashionable in the first decade of the century to regard consciousness as a valid and central concept. The behaviourists rejected it; their camp followers quietly disregarded it. Burt never ceased to hold that consciousness was a central feature of the human mind, and a key topic in psychology. It was fashionable, too, before the First World War to emphasize the significance of heredity. Under the influence of behaviourism and egalitarianism heredity was supplanted by environmentalist explanations of human differences. Once again Burt stuck to his guns. The evidence, he insisted, pointed to the large role of inheritance. He continued to believe in the value of intelligence tests, and continued to support streaming in education, after these views had come under attack. He believed the evidence was on his side, and he refused to be swayed by sentiment or fashion.

There was much that was admirable in this stubbornness, and in the long run Burt may well turn out to have been right on many of these contentious issues. Nevertheless it must be admitted that Burt was somewhat impervious to the changes taking place in psychology. Not that he was not fully aware of the changes: he was indeed remarkably well informed, but he was comparatively little influenced. Radically new discoveries in psychophysiology, new developments such as cybernetics and information theory, the burgeoning field of social psychology, and even, in an area very near to the centre of Burt's own

interests, the rebirth and reformulation of cognitive psychology in the 1950s and 60s, did not lead Burt to modify the fundamental theoretical groundwork of his psychology. Towards the end of his life, in spite of his great erudition and ability, he began to seem dated, and the younger generation of psychologists ceased to look up to him in the way that an earlier generation had done.

Burt was a great teacher, and the riches of his knowledge and expertise were showered on his students without stint. But though he gave profusely, he was less willing to receive. It was a one-way relationship, and when his pupils had fully matured, they drifted away from the master. So Burt never established a school. His work was carried out from the earliest days to the very end largely single-handed (even when he used his students as assistants), and in the long list of his publications, there are comparatively few joint entries.

In his lifetime he was widely honoured. He was knighted in 1946. He was elected a Fellow of the British Academy in 1950. He received honorary degrees from the Universities of Aberdeen and Reading, and was elected an Honorary Fellow of his old Oxford college, Jesus College. In 1965 in honour of his eightieth birthday two years previously a festschrift, *Stephanos*, was presented to him by former colleagues and admirers. And, a forthcoming event which gave him in anticipation great pleasure, the Sir Cyril Burt School for maladjusted children was opened at Beckenham in Kent just after his death.

These honours were richly deserved. As long as human beings are prepared to study their own nature and behaviour with that combination of insight and scientific rigour which marked his own work, we can be sure that Cyril Burt will be remembered as a great figure in twentieth-century psychology.

L. S. HEARNshaw

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