

To enter Christ's Hospital as a LCC scholar, more than academic merit was required. The boy had to be suitable for a boarding school life and the school had to be assured that Hal's parents satisfied its stringent, low income requirements. In his application, Harry Gray had indicated that his only annual income was a salary of £180 and that he had no investments. Also, he stated that he paid an annual rental of £27 for his house and that his occupation was telegraphist. These declarations were confirmed by countersignatures of the minister, two churchwardens and three householders of his parish. Further, he signed a prepared statement that

... the petitioner is in need of assistance towards the maintenance and education of his child, as evidenced by the answers to the interrogatories on the other side [of this document], and he beseeches your Worships, in your usual Charity to Widows, Orphans and Families who stand in need of Relief, to grant the Admission into Christ's Hospital of Louis Harold Gray ... there to be Educated and Maintained among other poor Children and instructed in the Christian Religion, according to the principles, doctrine and discipline of the Church of England.

The school grounds and buildings were spacious and modern (all having been newly constructed for the transfer of the boys' school in 1902 from its original site in London). The school's centre is a large imposing quadrangle with a Chapel, Concert Hall ("Big School"), the Science School and Dining Hall along its sides (Fig. 2.1). In the Chapel, there are 16 large (14 × 8 ft or 4.3 × 2.4 m) and most striking panels, the work of Frank Brangwyn. They denote scenes from the History and Expansion of Christianity and impressed the Duke of Windsor, although they elicited one severe criticism from him, which is mentioned later. These paintings were acquired mainly through the urging of Professor Henry Armstrong, whose important indirect influence on Hal is described below.

Hal was assigned to the house called Maine B (named after Sir Henry Maine an Old Blue (OB), or former pupil of CH, and Regius Professor of Civil Law at Cambridge (Fig. 2.2). Sir Henry was a most distinguished nineteenth century comparative jurist and legal historian). In each house, about 50 boys lived, together



Fig. 2.1 The main quadrangle of Christ's Hospital, Horsham. The three principal buildings are (*left to right*) the Chapel, Dining Hall (with a water tower behind it) and the Science Laboratories, designed by Professor Henry Armstrong (By courtesy of Christ's Hospital)



Fig. 2.2 The boys and housemasters of Maine B, 1920, in front of Maine's main entrance. Hal is the third boy from the *right* in the *third* row from the front. The Rev L.H. White (Buggy), who is wearing a clerical collar, is in the *second* row (By courtesy of Christ's Hospital)

with a senior and junior housemaster, a matron and domestic staff. There was then a total of about 850 boarders at CH, Horsham and it was the second largest British boarding school after Eton College. Living conditions at CH were simple, if not primitive. The boys slept in two large dormitories. In each dormitory, there was one partially separated sleeping cubicle for a senior boy and about 25 other beds. These beds had come from the London school and were simple painted iron frames, with wooden slats on which rested a horse hair mattress, without any springs. A steel settle was beside each bed for storage of pyjamas, etc. (These dormitory furnishings remain in use at the present time, 2016.) The boys spent much time in a large Day Room with windows on three sides. This room's main features were four long tables and benches, where evening homework was done and where they relaxed during the rest of the day, when not in classrooms or on the playing fields. Some games were played in the Day Room, such as cards and a unique form of table tennis on the tables, where hard, direct shots had to predominate over more subtle angled or spinning shots, playable on normal-shaped tables, which were wider and shorter. Other popular recreational activities pursued there were chess, reading, draughts and stamp collecting. On each house's ground floor there were also changing rooms, with assigned places for sports clothes, showers for use after games and a boot room.

All meals were taken in a large, central Dining Hall. This Dining Hall in 1918 allegedly had the second largest unsupported roof in Britain, constructed with wooden beams, and it contained a vast, monumental painting by Antonio Verrio, chief painter to King Charles II. This painting, commissioned by Samuel Pepys, a governor of CH, in 1684, is about 85×16 ft (or 26×5 m) in size and one of the world's largest paintings. The monarch is shown signing a document creating the Royal Mathematical School at Christ's Hospital in 1673. The King is surrounded by dozens of courtiers, other worthies and boys and girls from the school. (During Hal's schooldays, the girls of CH were educated in another school, at Hertford, north of London and about 85 miles (or 140 km) from Horsham. They hardly ever interacted with the boys.) Many single portraits of persons associated with the school were also on the Dining Hall's panelled walls.

Daily morning Chapel services and Sunday Evensong were compulsory for all boys. Also, there were additional short evening prayers held in the individual houses, for the school has always described itself as a "religious, royal and ancient foundation" and has continually observed these tenets. Although Harry Gray had willingly signed an acceptance for Hal to be "instructed in the Christian Religion, according to the principles, doctrine and discipline of the Church of England," this clause was voluntary. In the school at that time, there were some Roman Catholics, non-conformists and a few Jews, who for the most part also had to attend the school's religious services.

The entire school marched when they went from their houses to Chapel or to meals, with each boy's house as a separate squad. While marching (weather permitting) to lunch and the evening meal, they were accompanied by music, 6 days a

week. For the lunch parade, music was provided by the school brass band and in summer evenings, by buglers. There was a longstanding musical tradition at the school, with high standards maintained and frequent concerts given. The band also performed at the end of the school year, in an elaborate farewell ceremony of Beating the Retreat. Also every year close to St Matthew's Day, 21 September, the full band and a contingent of about 400 of the more senior boys of the school, but sometimes all 850 pupils, travelled by train to London. (This tradition arose to mark an annual meeting at this time for the administrators of CH, and three other Royal Hospitals, to be reconfirmed in office, or for new administrators to be appointed for the forthcoming year.) On arriving in London, a drum major and the school band led the pupils and all marched through the City of London from their railway station to a service in a City church. This service was attended by the Lord Mayor, Aldermen and Sheriffs, in all their ceremonial uniform finery. Then the pupils marched to the Mansion House, official residence of the Lord Mayor, where they were entertained with refreshments. The City's dignitaries were again in attendance at the Mansion House and each pupil individually received a newly minted silver coin in person from the Lord Mayor. Finally, the boys marched back to the station. Some senior girls from the Hertford School also participated. The St Matthew's Day visit to London and its Lord Mayor, and distribution of new coins, is one of the very many traditions which have always closely connected the school with the City and Corporation of London (and through other ceremonies, etc., with the City's Livery Companies). All these traditional activities continue to the present day. So by becoming a member of Maine B, Hal experienced a totally new way of living as a school boarder. He became aware of one of his new school's traditions on arrival, when receiving his new uniform. Later, he gradually learned of its many other customs, slang and traditions.

Most of Christ's Hospital's schoolmasters in Hal's days were bachelors and almost all were graduates of Oxford or Cambridge Universities. They tended to be strictly conservative in outlook and politics, with about seven of the approximately sixty teachers being Anglican clergymen. Because of the ongoing war, very few were young and many were beyond the normal retirement age. The headmaster was the Rev. Dr Arthur Upcott, who retired in 1919, a year after Hal's arrival. He was a typical Victorian-establishment figure in appearance, with a full beard, and he was a characteristic Victorian in his opinions. Dr Upcott was very strict, with undiluted remoteness and never invited pupils to his home, except once when they were new boys. His only direct personal communication with pupils was with the sixth formers, who at Housey were called Grecians. Public flogging of boys, as a severe punishment, was then a regular occurrence, happening about once a year. However, on one memorable occasion in 1918, Dr Upcott gave a morning sermon on personal purity. Then, after lunch, aided by two school sergeants (retired Army NCOs and employed by the school), he caned six boys publically. Immediately after the flogging they were formally expelled. However, expulsions were rare and normally occurred after sexual offences, or running away. One boy caught smoking around this time, having stolen a housemaster's cigarettes, was caned by a school sergeant but not expelled. Such harsh practices were not followed only at Christ's Hospital,

but they were carried out in most public schools at that time. Doubtlessly, the young and impressionable Hal was strongly influenced by his experiences during Dr Upcott's headmastership. He had been present when the six were flogged and expelled. But there were sometimes lighter aspects of the sergeants' duties. They visited each classroom during the second lesson of the day to record absent pupils' names and deliver messages or summons from the headmaster. On one memorable day, Sgt Fuggles, wishing to pass on a summons from the headmaster for a boy named Dyer, asked a master, "Sir, 'ave you got Dyer 'ere?"

Another duty of Dr Upcott may have had as profound an effect on Hal, for the First World War was nearing its end when Hal entered CH. Immediately after the Sunday Evensong service, with the whole school still in Chapel, Dr Upcott read out the names of all Old Blues who had been killed in war service since the previous Sunday. At the same time, buglers sounded the Last Post outside. Many were killed within weeks of leaving school and often those present in the Chapel, especially masters and their wives, had known well the newly announced dead. A most poignant example was a former house-captain of Maine B (not known to Hal) who visited the school, wearing his uniform of a newly appointed Army second lieutenant and was killed exactly 1 week after the visit, on the day after his arrival in France. All this was deeply felt by Dr Upcott. As one of Hal's contemporaries in Maine B (P. Youngman Carter) wrote, "Upcott took his weight of grief like an aging Atlas as he read out the Roll of Honour after Sunday Evensong. Although old and tired, he never actually broke down in Chapel, but even the youngest of us present suffered at his visible distress." For 2 years after the end of the hostilities, the announcements of war deaths continued, during Hal's most junior years at CH. In all, there were 364 such deaths of former CH boys and their average age was 22. Four hundred and two Old Blues obtained a military distinction during that war, including two who were awarded the VC. Hal's strict pacifism, after his schooldays, was possibly strongly influenced by these experiences in addition to his father's beliefs. Although Dr Upcott was very harsh by the standards of the twenty-first century, he was apparently much less severe than his predecessor as headmaster, the Rev. Richard Lee, for as one of his obituaries put it, "Upcott was not a master of Draconian discipline as Lee had been." Even so, Dr Upcott's nickname was "The Butch," short for "the Butcher." This was because of his use of the birch. (After Dr Upcott left CH his successor as headmaster was Dr William Hamilton Fyfe, a humanitarian and in many ways with diametrically opposed views on life and headmasterly practice. On taking up his post, Dr Fyfe found a package of birches left by Dr Upcott and immediately ordered them to be burned.)

Hal's senior housemaster, whose home was right next to Maine B, with a communicating door, was the Rev. Leonard H. White, a married man, with a small dark pretty wife. He was the senior chaplain and taught German, but had a poor accent. Mr White was tall, aloof, stern and a gaunt bearded man who inspired a kind of affectionate awe and kept Maine B in good order. But he had a glass eye and a sense of humour. One evening he appeared at the house's prayers with a black eye, obtained while chopping wood and explained this, adding that "Mrs White did not hit me and I am lucky it was not my good eye." Sometimes his wall

eye would be exploited in class after he issued the order, "Boy, stand up" and two boys would stand. His nickname was "Buggy" because he was an enthusiastic student of natural history and especially bugs. Buggy directed the school's Natural History Society and when he went on walks he often took with him a butterfly net, disguised as a walking stick. Buggy's nature study excursions with boys were much appreciated, especially those which delayed bedtime for juniors, when they would go out in the dark after evening prayers to inspect trees that previously had some molasses smeared on their trunks to trap insects. Because of Buggy, there was much interest amongst Maine B boys for studies of insects, birds, photography and geology, all encouraged by the school's Natural History Society. In his early days in Maine B, Hal was involved in nature study and soon he became a keen member of the Society. His interest in photography remained long after his schooldays and it became an important tool in his adult work. Apart from inspiring its members to be curious about nature, the Society also enabled contact between boys who studied different subjects and so did not meet in classes. Buggy was tone deaf and once caused hilarity when he conducted a service and intoned the Vesicles. Thereafter, he recited them. He was a popular housemaster and one of his traditions on the last evening of term in December was to supply chestnuts for roasting on a Day Room fire and recite to the house Charles Dickens's *A Christmas Carol* in two instalments, with appropriate accents for Scrooge and other characters. One of Hal's junior housemasters was Mr H.L. Price, who played rugby for the Harlequins Club and once gave a boy four strokes of the cane, after he had broken a window during a ball game.

For all members of the house, discipline was strict. Although nominally, Buggy the senior housemaster was in charge, by far the greater part of maintaining order was in the hands of the six, or so, monitors, chosen by the senior housemaster from the most senior boys and led by the house-captain. They could inflict minor public punishments, such as running a mile under supervision, standing in a corner, or standing while doing homework and in general they gained the respect of boys under their control. All punishments were recorded in a book presented weekly by the house-captain to Buggy, for his review, but serious offences were reported directly to Buggy and if necessary he would cane the miscreants. With discipline mainly in the hands of the monitors, bullying was a possibility and it occasionally would occur, especially if the senior housemaster was ineffectual or indifferent. Fortunately for Maine B, Buggy kept a close watch on his house and it was free of such misuse of rank. As Hal rose in seniority he was remembered as being, fair-minded and kindly to the young squits (a Housey slang name for the youngest pupils). There were lighter sides to the monitors' relations with their juniors. On weekend evenings after "lights out" a monitor would read to the juniors in the dormitory, but on other nights the monitor's own homework would be done, while he remained in the dormitory to supervise the juniors, till they fell asleep. The readings were from popular literature, such as the writings of Stephen Leacock or Edgar Rice Burroughs, Tarzan's creator. Monitors also enjoyed privileges, such as going to bed later than others, having a swab (the school slang for a junior boy assigned to do menial tasks, such as running errands, preparing a fire, cleaning the fireplace,

sewing on buttons, making beds, polishing shoes, preparing cadet force equipment, etc.) The swabs received a shilling and a half per term (now 7½ p) from their monitor for their services. Also, each monitor had an individual table in the Day Room and bookshelf, in contrast to the other boys who made do with an assigned place on one of four long tables and an individual locker for their schoolbooks and possessions. The house-captain and his deputy each had a study, offering some privacy and containing a fireplace. Their studies occupied two corners of the Day Room. Coal and wood were supplied to heat them. Discipline in classrooms was the responsibility of the masters, and in keeping with the general standards, it was harsh. Hal was caned only once during his whole high school career, after doing the wrong homework and the incident was later described by Hal's wife. The normal punishment for this offence was a detention, but unfortunately on the day assigned for the detention he was to be visited by his parents. To have an hour taken out of his afternoon with them was to be avoided at all costs. So Hal asked if the detention could be changed to a caning. His teacher, Mr A.E. Johnson, who taught physics agreed. Hal was ordered to bend over a chair, but his punisher's aim was so bad that Hal's hand was struck and a large weal resulted. Hal did not complain, but his mother saw this and became exceedingly angry. However she realised that she was powerless to do anything about it. Mr Johnson's nickname was "Ganot," after the author of a famous physics text book, for frequently when asked a question he would reply with his staccato speech, "Look it up in *Ganot*." This remarkable text book was first published in French in 1859, followed by many translations and further editions, with the last published, 51 years later. Hal's wife, who knew the history of Hal's caning and much later met Mr Johnson, found he was not what she expected and said, "When I met 'Ganot' he was a perfectly ordinary person."

Although the new boys brought with them the accents of their region, there was no social discrimination because of this and all traces of their home region's (and social class) accent steadily disappeared, soon being replaced by a typical upper-middle class accent unconsciously learned from their teachers and the elder boys. Elocution lessons were not needed to accomplish this. The school provided all clothes, including pyjamas. The parents' responsibility was to furnish only "a Bible, comb, tooth brush and handkerchiefs." Hal's matron, Miss Lucy Braithwaite, was a motherly woman, yet also described as "fairly fierce" and feared by Buggy. She well understood her new young charges, who were sometimes very homesick. Her responsibilities were to attend to simple health problems (such as chilblains and minor bowel malfunction) and when necessary to refer boys appropriately to the school's full time doctor, who had a well equipped infirmary, several nurses and other staff at his disposal. There was a surgical theatre in the three story infirmary building. Also she inspected the junior boys each evening, after they washed, to ensure cleanliness and presumably to recognise certain illnesses. Further she conducted weekly inspections of their hair for possible lice infestation. The matron also supervised the domestic cleaning staff and ensured that the boys received clean clothes regularly and that their garments were repaired, when necessary. However, boys were expected to sew on their own buttons and quickly learned to do so. In Hal's first two terms at Housey the worldwide "Spanish" flu pandemic of

1918–1920 raged. The school doctor, Dr Gerald E. Friend, and his colleagues coped well. He persuaded all parents to agree to their sons being inoculated (then a very novel procedure for flu) and there were no deaths. However, very many were ill, resulting in reduced hours for lessons, no sports for the worst fortnight and daily temperature taking for all. Dr Friend was not only a capable clinician but also a researcher, who recorded and published detailed, ground breaking records of boys' growth (their heights and weights) and innovated improved diets.

When Captain R.F. Scott was planning his South Pole Expedition in 1911, he received a letter from a Housey pupil, asking for a place in the Expedition Team. The boy insisted that he would be suitable because he slept in a Christ's Hospital dormitory and so was very well prepared for extremely cold weather. There was much interest at CH in this expedition, for one of its members was Lieut Francis Drake, RN, an OB. Boys at Housey who wished to aid Capt. Scott had subscribed to pay for a sledge, a Siberian dog named Giliak, which was renamed Bluecoat, and a pony called Hackenschmidt. Dormitories were often cold in winter, although there was a rudimentary circulating water radiator system and chilblains were common. Hal always maintained, as he mentioned to his son Crispin, that because of this dormitory experience he was "impervious to cold." In 1953/1954, Hal spent a very harsh winter working in a temporary office/laboratory building that was an unheated former hospital emergency ward. He survived with a feeble coke stove, but he needed to be continuously wrapped in a thick winter coat, gloves and scarves during the coldest days.

All boys, who were not monitors or swabs, had simple daily domestic duties, called trades, assigned during their second and subsequent terms. These trades were typically sweeping or dusting a specified area of the Day Room, or a Dining Hall duty such as preparing place settings, serving food, etc. During, and for a while after, the First World War (1914–1918) the school meals were very poor, reflecting the government imposed rationing, partially introduced in 1917 for all of Britain. This was a result of a German war blockade involving submarine activity. Rationing and the growing of food crops on all available pockets of land in Britain were prompted by observations of malnutrition in some poor communities. Rationing proved successful, in greatly reducing this malnutrition and none in Britain ever starved while there was rationing of food. However because of a slow economic recovery, some items continued to be rationed until 1920. Even in that year, the CH's food remained poor, though adequate. At school, Hal ate corned beef for breakfast up to four times a week, with dripping or a cube of oily margarine and bread. Alternatively there was porridge with a spoonful of marmalade and occasionally a sausage, kipper or herring. At the evening, meal cake was offered only on Sundays. Always there were unlimited amounts of whole wheat bread and a little jam and butter. If Hal was very hungry, he would eat bread and mustard, as he recounted to his son. But sometimes all this simple living would be offset for a short time when a special house tea was organised by Buggy, providing a delight for the boys. Its funding was sometimes the gift of a generous Maine B Old Blue who was visiting and occasionally it came from other sources. In the summer, the tea would include strawberries or raspberries and cream, and in winter canned salmon and

peaches. Sometimes, food, such as home-made cakes, was sent by parents from home in postal packages and this too was very much appreciated. Such “tuck” from home was normally shared amongst small groups of friends and the occasional fruit cakes sent by Hal’s mother were much prized. Another common supplement, for use with the unlimited whole wheat bread available at every meal, was for several boys to club together to buy a pot of jam and then share it. The most popular was apple and blackberry, simply because it was the cheapest at 4½ pence a pound. Hal and Victor Harley were members of a jam club, in their earliest years at school, when food was often particularly meagre.

Recreation was sparse, but many sports were practised. Team games between house teams (rugby in winter, cricket in summer) were compulsory except on Sundays (Fig. 2.3). Rugby was played in any weather, except during continuous rain or on snow laden pitches. The organisation of team games was the responsibility of the house-captain and there was much house spirit exhibited when teams were playing in inter-house competitions. Boys lined the pitch to cheer on their teams, as they did when the school’s first rugby team played against other schools on some Saturday afternoons. Other obligatory sporting activities were swimming, gymnastics, cross-country running, PT (physical training) and, for those aged over 14 and so old enough to be members of the OTC (Officer Training Corps, an Army Cadet Corps), shooting with old Lee-Enfield rifles. Every weekday, all boys had 10 min of mid-morning outdoor PT, followed by a mug of milk and two locally made whole-meal biscuits. Some other sports’ facilities (athletics and fives) were available and their use encouraged, though these two activities were always voluntary. In summer evenings, there were self-organised and less formal games, such as a popular form of cricket (asphalt cricket) using a tennis ball and a narrowed wooden cricket bat, played on the large paved playgrounds next to the boarding houses. Enthusiasts of soccer and asphalt hockey also arranged their own matches. On Sunday afternoons,



Fig. 2.3 Maine B's 2nd XI cricket team in 1920. Hal is in the middle row, second from the right hand end. Victor Harley is seated on the ground at the left (By courtesy of Christ's Hospital)

boys were totally free to wander the extensive grounds within the "ring fence." This part of the school estate enclosed about two square kilometres of mainly grassland used for playing fields, but also some woodlands. Walks outside the ring fence were permitted for senior boys with prior permission, but the juniors also frequently did so, in groups with a master. Hal enjoyed these walks, because of his interest in nature and there were other advantages. Relations were good with the neighbouring farmers and their wives and often the boys would return with windfall apples. During all of Hal's adulthood he enjoyed frequent long country walks. Sundays also included compulsory religious studies' homework and a 30 min period set aside for letter writing to parents and others. Apart from two Chapel Services and meals, Sundays were otherwise free. Visits were allowed by parents twice a term, but young Hal was rarely visited, for his mother was nursing a sister at home during his early school years. This aunt had been a lady's maid and finally died of cancer. So he saw his parents almost only during the school holidays. Boys received weekly pocket money of 4 pence for juniors and 6 pence for seniors. This was kept and doled out by the senior housemaster. For this, parents were requested to provide 10 shillings (£0.50 in modern currency) termly. The school authorities recommended that juniors spend their pocket money with the following priorities (though they did not enforce this): 1 penny for the weekly Chapel collection, 1 penny for a stamp used for a letter to parents and 2 pennies for sweets, etc. A small tuck shop was available for sweets and other such luxury purchases. Some pupils came from exceedingly poor backgrounds and there is a record of one boy's family being unable to afford even this small sum for pocket money, so the housemaster provided it from his personal funds. Although other boys suspected this, the recipient never suffered as a result. Dr Fyfe, Hal's second headmaster at CH, once said that, "At one time there were at CH a Bishop's widow's son and the son of a compulsorily unemployed burglar." One of Dr Fyfe's concerns was that boys should be suitable for a boarding education, in addition to having academic ability. So he arranged that for each place available about three candidates would be interviewed, by himself with other masters. He wrote, "All [interviewees] were asked why they wanted to come to CH and most answered 'Better edjication, Sir.' On being asked what he meant one replied 'Better 'edmorster, Sir. I can still hear the ribald laughter of my colleagues. This boy was admitted.'"

Housey uniform was always used for travel to and from school, usually by train to London, or other towns. There was an unenforceable rule that these Housey clothes were also to be worn during the holidays. This was probably introduced to accommodate those from poor families who could not afford an unnecessary alternative set of clothes. In fact, the knee breeches and long stockings are very practical garments, although the long coat less so. Housey clothes were also distinctive and dignified. However, both Hal and his friend Victor Harley wore their school cricket clothes (grey flannel trousers and white shirt) at home during holidays. In this way their parents, and doubtlessly others, did not need to buy them extra clothes, used for only a few weeks each year. In Reading and Newbury, where scholarships provided for about a dozen boys from each town to attend CH, seeing boys wearing Housey clothes in the streets was not unusual, but elsewhere it could attract some

attention. Also in Reading there was another school, the Reading Bluecoat School with a similar uniform and founded in 1646 by an Old Blue Richard Aldworth, so boys in Housey dress there would be accepted as totally normal.

The boys had ways of relaxing other than sport and other outdoor activities. Plays were produced regularly and there were also musical events. Hal attended the last general school entertainment of Dr Upcott's headmastership. The programme included *The Village Blacksmith* and other songs, two viola solos, a chapter from *Pickwick Papers* read by the headmaster, recitation of a humorous poem written and read by his daughter, Miss Upcott, and finally a one act "musical fairy tale," *Creatures of Impulse*, by W.S. Gilbert. There were also regular presentations of operas by Gilbert and Sullivan, classical music concerts and recitals. The school library was well stocked, but books could only be borrowed by boys aged about 13 or more. House libraries also existed for use by all boys of the house, with a few reference books and otherwise mainly respectable boys' adventure stories, such as those by G.A. Henty, Captain Marryat, John Buchan and Robert Louis Stevenson.

Housey was both similar to, and differed markedly from, other public schools of Hal's days. Its discipline and education standards were typical of (or sometimes better than) all good schools of the time. But it was set apart by its unique uniform and traditions. A further difference was its large intake of working class boys, orphans and children from single parent families with low incomes.

One of Hal's contemporaries described him as a new boy in Maine B, who was "quiet, likable and studious." He was one of four new boys in his year's intake to the house. However, virtually all his friends and acquaintances were boys of about his own age, in Maine B, or whom he met in classes. Contact between boys of different ages was firmly discouraged then and even frequent contact with boys from other houses was frowned upon. The ostensible reason for this was to cultivate house spirit, so other boys were regarded as "deadly rivals," in the words of one of Hal's housemates. Maine B was not especially good at sports in 1918, but over 93 % of boys at CH could swim and Hal was "the first by far" of his house's intake in 1918 to learn to swim, according to a contemporary. He was well built and enthusiastically played sports at school, but never excelled in any particular one. Throughout his life he was active, always enjoying tennis, long walks and swimming, with his wife and others. Like all CH pupils at that time Hal first studied French and later Latin. Later, when a student at Cambridge, Hal learned German to be able to read the many important scientific papers then written in that language. However, his spoken German was never very good. Although competent in Latin, Hal did not like it and was happy to stop after 4 years. His wife recounted that "Hal sang in the bath on the day when they told him 'No more Latin.'" However she added in later life, "his Latin was still very good ... he could translate memorial things." Hal was very successful in his mathematics and science studies and so he specialised in them, as soon as he could.

Although Dr Upcott had many old fashioned ideas and practices, he had made several important, innovative changes during his headmastership (1902–1919). He successfully supervised the transfer, in 1902, of the entire school from inner London to the very extensive grounds and brand new purpose-designed buildings in the

countryside to the south-west of Horsham, Sussex. A former large farm of the Aylesbury Dairy Company had been bought and a few of its buildings continued to be used by the school for well over 50 years, such as cowsheds transformed into swimming and gymnasium facilities and an armoury. Also, Dr Upcott, although a classicist, pioneered the teaching of science and at the start of the twentieth century Housey was pre-eminent among public schools in its teaching. This was mainly the results of efforts of one man, Professor Henry E. Armstrong, FRS (Fellow of the Royal Society). This fellowship was the highest honour attainable by a scientist in Britain. Professor Armstrong was a governor of Christ's Hospital, being the representative of the Royal Society, and he persuaded his fellow governors to include spacious laboratories in the new school to be built at Horsham. This was done and most competent science teachers were appointed, who later taught Hal. One of the most effective was the head of the new science department, Mr Charles E. Browne (known to the boys as Chas, or Uncle Chas) a former pupil, protégé and later colleague of Armstrong. Chas had an important influence on Hal's academic progress. Before Dr Upcott, there was a concentration of classical and mathematics studies for the best pupils, because most scholarships available at the universities of Oxford and Cambridge were in these subjects. During Dr Upcott's headmastership, a greater variety of subjects began to be taught at the top of the school and science, engineering and music studies were made available as choices for Grecians' specialisations. A Manual Training School was also established, where practical skills and handicrafts were taught. They included woodworking, a smithy, a foundry, a metalworking shop, bookbinding and a printshop. These were primarily intended to teach useful manual skills to young boys and allow older boys to pursue these activities as hobbies if they wished. This was never any sort of trade-apprentice training. The music taught at all levels increased dramatically, during Dr Upcott's headmastership. He ensured that swimming and gymnasium facilities were added. Most of these expansions of facilities and subjects taught were then very novel in public schools, most especially the high level of science studies.

Louis Harold Gray

A Founding Father of Radiobiology

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