

Sir Wilfrid Le Gros Clark

The Making of a Paleoanthropologist

Bernard Wood

Introduction

One of Elwyn Simons' many talents is mimicry. Mimicry can be cruel and devastating or kindly and respectful; Elwyn's imitations of Sir Wilfrid Le Gros Clark are transparently of the second variety. For many these imitations are the closest they will ever come to "seeing" Le Gros Clark "in the flesh." For Sir Wilfrid Le Gros Clark (henceforth I will refer to him as "Le Gros" for that is how he was almost universally referred to when he was alive) died on the 28th June 1971 aged 76, having retired from the Dr. Lee's Professorship of Anatomy at Oxford in 1962.

Elwyn was a graduate student of Le Gros' from September 1956 to 1959. By that time Le Gros had been a Fellow of the Royal Society (i.e., an FRS) for just over twenty years and he enjoyed an international reputation as a neuroscientist, a primatologist and as a paleoanthropologist. He had been elected President of the International Anatomical Congress in 1950, he was elected President of the Anatomical Society of Great Britain and Ireland in 1951 and in 1955 the first edition of *The Fossil Evidence for Human Evolution: an Introduction to the Study of Palaeoanthropology* had appeared. He was also firmly embedded into the British scientific establishment, for a year before Elwyn's arrival in Oxford Le Gros had been knighted by Queen Elizabeth II. Anatomists are only rarely recommended for a knighthood, but Le Gros had evidently made sufficient impact as a scientist to be honored in this way. In other words Elwyn interacted with Le Gros at the height of the latter's powers and influence.

But despite Le Gros' eminence remarkably little has been written about him. He wrote in a guarded way about himself in the form of ten autobiographical essays collected together in a book with the whimsical title *Chant of Pleasant Exploration* (Le Gros Clark, 1968) (when I quote from this I will refer to it as "CPE"). This was published by the Scottish publisher Livingstone as part of a

Bernard Wood

Center for the Advanced Study of Hominid Paleobiology, George Washington University,
2110 G St NW, Washington, DC 20052
bernardawood@gmail.com

rather dry series of biographies of distinguished medical men with names like Sir George Buckston Browne and Sir Arbuthnot Lane. I would be surprised if the print run of CPE had exceeded a few hundred copies. In an introduction to the book Le Gros writes that three of the essays are based on lectures he had given and he aptly describes CPE as a “medley of autobiographical fragments” (CPE, p. vi).

Despite his urbanity, Le Gros was a shy man. For example, although he had been associated with Hertford College in Oxford for 35 years, initially in 1934 as a Professorial Fellow (for some reason lost in the mists of time, since the 17th century, Dr. Lee’s Professors of Anatomy have always been made Professorial Fellows of Hertford College) and then as an Honorary Fellow from 1962 until his death, when I contacted the Fellows Librarian at Hertford College they could find no photograph, group or otherwise, that included Le Gros. There is information about his professional career in the official biography that is prepared for all recently deceased Fellows of the Royal Society, usually by another Fellow. Le Gros had the misfortune to have his obituary written by his nemesis, Solly Zuckerman. This was published two and half years after Le Gros’ death and it is fair to say that Zuckerman made the very best of the opportunity to “damn with faint praise” and the bibliography included in Zuckerman’s obituary is incomplete.

In this contribution I provide some biographical context for Le Gros’ interest in, and contributions to, primatology and paleoanthropology. I address the following questions. When and how did Le Gros become interested in human evolution? How central was this interest professionally? What were Le Gros’ views about human evolution and how did those views change over time?

Family Background

The family name “Le Gros Clark” is an amalgamation of the English family name “Clark” (it most likely originated because one, or more, of his ancestors had been “clerks”) and the name of a family that probably originated in Guernsey, for there is evidence of several “Le Gros” lineages in the Guernsey records. Wilfrid (whose namesake was sanctified for helping in the 7th century to introduce the practices of the Roman Catholic Church into Northeastern England) was born on the 5th June 1895, the youngest of three sons of the Reverend Travers Le Gros Clark, a Church of England clergyman. The three brothers were evidently a close-knit group, sharing common interests in natural history and in exploring the outdoors. Le Gros claimed his middle brother Cyril was the “practical” one (CPE, p. 244) and credited the eldest brother Bill with “the most acute intellect of us all” (CPE, p. 243). Curiously, we are only told the nickname given to his eldest brother during the First World War. The name “Bill” came about because Le Gros’ eldest brother sported a bushy moustache

like the one worn by “Old Bill” a fictional character that featured in Bruce Bairnsfather’s famous cartoons about life in the trenches in the First World War.

Le Gros’ early childhood was spent in Hemel Hempstead, in Hertfordshire, where his father was the parish priest at St. Mary’s Church in what was then still a small market town some 30 miles north of London. By the time he was seven years old the family had moved to a village called Newnham on the northern bank of the River Severn where for a short time his father was the vicar of the parish church. Newnham is in the county of Gloucestershire in England, but it is close to the Welsh border and is quite isolated. Two years later Le Gros’ mother died and the family was uprooted once more when his father accepted the living as the rector of the church in the small village of Washfield, near Tiverton, in Devon. Washfield’s proximity to Dartmoor (the wildest of three areas of moorland in the West of England; the others are Exmoor and Bodmin Moor) provided the Le Gros Clark boys with many opportunities for hikes and exploration. One of their favorite pastimes was to go off for several days at a time hiking along the banks of the rivers of South Devon tracing them from their source on Dartmoor to the sea.

We learn nothing about Le Gros’ parents in CPE. In fact neither of his parents is mentioned by name in any of the ten autobiographical essays in the book.

Education

The education of the Le Gros boys followed the pattern of the sons of professional families in England in the early part of the 20th century. Le Gros went as a “boarder” to a “preparatory school” called Wells House (in his youth Sir Edward Elgar taught music there, but the school is now defunct) in Malvern Wells, a small town at the foot of the Malvern Hills. Later he followed his brothers to Blundell’s School, which is a “public school” outside of Tiverton. Confusingly in England, “public schools” are actually fee-paying private schools. Blundell’s is noted more for its sport, notably rugby, than for its academics. Le Gros excelled academically and apparently had neither interest in, nor aptitude for, sport.

Le Gros suggests his father had always planned for him to be a medical doctor and in 1912, at the early age of 17, he had been admitted as a medical student to St. Thomas’s Hospital Medical School in Lambeth, London. He had family connections there for his paternal grandfather, Frederick Le Gros Clark, who went on to become the President of the Royal College of Surgeons of England had been a distinguished consultant surgeon at St. Thomas’s Hospital and his maternal grandfather, Edward Clapton, had been a consultant physician at St. Thomas’s Hospital.

Like Blundell’s School, St. Thomas’s Hospital Medical School had a reputation for sport, especially rugby, but Le Gros seems to have been at the more studious end of the spectrum for he writes that while still a medical student he

had read Charles Darwin's account of his travels in the *Voyage of the Beagle*, Thomas Henry Huxley's recollections of his voyage on H.M.S. Rattlesnake, Henry Walter Bates' account of his journeys in the Amazon between 1848 and 1862 and Alfred Russel Wallace's account of his even longer sojourn exploring the natural history of the Malaysian Archipelago. I somehow doubt whether this was the usual reading fare for a St. Thomas's Hospital Medical School student, even in the second decade of the 20th century. Le Gros wrote that his study of human anatomy led him to "further studies of the relationship with Man with lower animals, in particular his relationship to apes and monkeys that have their natural habitat in equatorial forests and jungles" (CPE, p. 8). His Anatomy Professor, F.G. Parsons, may also have played a role in shaping Le Gros' career for Le Gros wrote that Parson's "own interests were in the field of comparative anatomy and evolutionary morphology, subjects that particularly interested me as a student" (CPE, p. 38).

Physical anthropology and paleoanthropology had very different origins in the UK than in the USA. In the UK at this time there were no professional physical anthropologists other than Professors of Anatomy and if there was a center of human evolution research it was the Royal College of Surgeons of England. That had by far the largest collection of modern human and comparative skeletal material in the UK. When an archeologist uncovered the remains of, for example, Romano-British burials, these would be offered to either the Anatomy Department of the local Medical School or failing that to one of the Royal Colleges of Surgeons, and if the site was in England this would be the Royal College of Surgeons of England in Lincoln's Inn Fields in London. Many Anatomy Departments, especially those like Edinburgh, which are close to major ports, had substantial collections of crania from the UK and from the British colonies. When I was last in the Edinburgh Department I went round the old "skull room". This was fitted out like a Victorian library with a gallery and ladders for accessing the shelves, but instead of books the shelves housed several hundred modern human skulls. Most of the substantial collections of modern human skeletons now held at the Natural History Museum in London are on "permanent loan" from Anatomy Departments or from the Royal College of Surgeons of England. A Professor of Anatomy in the first half of the 20th century was expected to be familiar with what at the time was still a very meager fossil record for human evolution.

The Great War: Service in the RAMC and its Sequelae

The First World War, also called by those who participated in it the Great War, had a major impact on Le Gros' generation and the Le Gros Clark boys were no exception. Unusually for a family with three sons they all survived the war, but all three were deeply affected by their experiences. His own wartime experiences, as well as those of his brothers in both the First and Second World

Wars, evidently greatly influenced Le Gros and I believe that these experiences are part of the reason for the eventual rift between Le Gros and Solly Zuckerman.

At the outbreak of the war in 1914 Le Gros was a second year medical student. Medical students were discouraged from enlisting in the armed forces - indeed they were "instructed" to continue their education so they could later be of use as doctors in one of the three services. Le Gros' two brothers, however, joined the army immediately, but under very different circumstances. His older brother, Bill, was "in the middle of his undergraduate career full of brilliant promise at Balliol College (in Oxford), and joined a Public Schools infantry battalion of the Middlesex Regiment as a private" (CPE, p. 42), whereas Le Gros' younger brother Cyril had joined the Officer's Training Corps at Blundell's School and so was commissioned as a junior officer in the Somerset Light Infantry. Somerset is the adjacent county to Devon, and the county town of Somerset and the base of the Somerset Light Infantry, Taunton, is relatively close to Tiverton and to Blundell's school.

Le Gros qualified as M.R.C.S. and L.R.C.P. (at this time most licenses to practice medicine in England were given by the Royal College of Surgeons of England and the Royal College of Physicians of London - a newly qualified doctor was a Member of the Royal College of Surgeons, but only a Licentiate of the Royal College of Physicians) in 1916 and immediately joined the Royal Army Medical Corps as a medical officer. After some basic training he was attached to a regiment that was sent to France early in 1918. However, he contracted and became seriously ill with diphtheria and had to be sent home to England to recover. But he was soon back in France posted to "No. 8 Stationary Hospital" at Wimereux in northern France, where he spent the rest of the war. Although the Great War was to end at the eleventh hour, of the eleventh day, of the eleventh month, of 1918, the last few months of the war saw no respite to the horrors of trench warfare on the "Western Front". Le Gros writes with typical reticence that "the work imposed a fairly heavy strain, particularly during the desperate fighting of the last German offensive of 1918 when convoys of wounded arrived in rapid succession day and night" (CPE, p. 44) and he admits with typical British understatement that my "memories of my work as a medical officer in France, where I had to deal with many terrible mutilations of the wounded during the last phase of fighting before the armistice, were not happy ones" (CPE, p. 8). He claims that "after the armistice there followed a short period of my life for which there is a curious blank in my memory" claiming that "I do not recall my return journey from Germany, nor have I any conscious memory of being demobilized in 1919" (CPE, p. 45).

But the armistice was a bitter relief for the Le Gros Clark brothers, for on the day the armistice was signed his much admired eldest brother was wounded and lost the sight in both eyes. Earlier in the war, in 1915, his middle brother Cyril had been badly affected by a syndrome called "shell-shock". After recovering in hospital Cyril was transferred to the Indian Army, but on the way out to India his troopship was torpedoed in the Mediterranean and he was lucky to escape with his life. Cyril later joined the Sarawak Civil Service (the Civil Service

administered colonies like Sarawak) and eventually became the Chief Secretary, effectively the head of the Government and second only to the Rajah. But after the Japanese over-ran Sarawak Cyril along with other administrators was interned in prison camps. He was apparently responsible for saving the lives of several of his staff, but he was found guilty of a trumped-up charge and was transferred to a particularly harsh prison camp in North Borneo. The Australian Army invaded North Borneo just before the Japanese surrendered, but literally days before the Australians would have rescued them, all the prisoners, including Cyril, were killed. Thus, both of Le Gros' beloved brothers suffered terribly in the course of the two World Wars and as well shall see below Le Gros himself, while not physically wounded, was far from unscathed.

After his demobilization from the army in 1919, Le Gros spent the next year as a Demonstrator in the Department of Anatomy at St. Thomas's Hospital Medical School under his old Anatomy Professor, F.G. Parsons. In that year he took and passed the examinations to become qualified as surgeon (this transferred him from Membership to Fellowship of the Royal College of Surgeons of England and instead of being addressed as "Dr. Le Gros Clark" he would have been addressed as "Mr. Le Gros Clark"). He wrote that during that year he engaged himself "in the pursuit of anatomical and anthropological research" (CPE, p. 8). But he was far from content. He wrote enigmatically of "personal and intimate tragedies that affected me deeply" but he provides no clue as to what they were. He went that "it was in such a mood of moral perplexity that I was overcome with an intense longing to escape from the artificialities of civilization by losing myself somewhere in one of the remoter parts of the world" (CPE, p. 8). Within a few weeks of making this decision Le Gros, at the age of twenty-five, was appointed on a three years contract to the post of Principal Medical Officer to the Sarawak Government. The post involved substantial administrative responsibility "supervising the Government Medical Service of Sarawak" (CPE, p. 58). He left from Liverpool for Sarawak on the 10th October 1920 and he stayed at his post in Kuching until the end of his three-year contract in 1923.

An Anatomical Career

In the last year of his three-year contract in Sarawak Le Gros was encouraged by Professor Parsons to make what proved to be a successful application for the post of Professor of Anatomy at St. Bartholomew's Hospital Medical School ("Barts") in Charterhouse Square in the City of London. After six weeks leave which Le Gros used to court his future wife, Frida Giddey, he started at Barts in September 1923. Even by the standards of 1923 Le Gros' publication record was "thin" (a case report in the "Lancet" written when he was a student, a seven-page report about 18 Eskimo crania prepared when he was Demonstrator in Anatomy at St. Thomas's Hospital Medical School, and a



Fig. 1 Professor Le Gros Clark in 1934, the first year of his Oxford Professorship, making a retirement presentation to one of his staff. Thanks to John Morris and to the staff of the Oxford Anatomy Department

histological analysis of sensory skin receptors) is a modest publication record in anyone's book, but considering the latter two papers were written and published in the same year he managed to pass his Final F.R.C.S exam it is a considerable achievement.

The focus of the next eight years (1924–32) of his published research output was largely devoted to the comparative neuroanatomy of the primates (tree shrews and tarsiers) he had collected while in Sarawak. After six years at St. Bartholomew's Hospital Medical School in 1930 he was invited to succeed his mentor as Professor of Anatomy at St. Thomas's Hospital Medical School and then in 1934 he was invited to take over as the Dr. Lee's Professor of Anatomy (and effectively the Chair of the Anatomy Department) at Oxford University (Fig. 1).

Among the many advantages of Oxford University over a London Medical School was that Le Gros was surrounded by eminent scientists instead of eminent clinicians. This was a "heady" time for Oxford preclinical and medical science for his professorial colleagues included Charles Sherrington, Howard Florey, Robert Robinson and Cyril Hinshelwood; four of his professorial colleagues went on to win Nobel Prizes. The Professor of Geology was William Sollas and Le Gros friendship with Sollas may have helped regenerate Le Gros' interest in paleoanthropology. Despite all these academic advantages of

Oxford, and perhaps because of the brilliance of his fellow Professors, Le Gros and his family took some time to settle down. So much so that in 1939 he had been successfully courted by University College London (UCL) and just before the outbreak of the Second World War Le Gros had accepted the Chair of Anatomy at UCL. He and his wife were engaged in looking for a suitable house when the Second World War broke out, but by mutual consent Le Gros and the Provost of UCL agreed that the arrangements for him to move should be set aside in view of the exigencies of wartime.

By the time Le Gros moved to Oxford his studies of neuroanatomy had moved from the descriptive to the experimental and in a series of papers published between 1933 and 1935, including two in the *Philosophical Transactions* and one in the *Proceedings of Royal Society*, he had managed to generate a topological map of the ways the main sensory areas of the cerebral cortex map onto the thalamus, one of the deep nuclei of the brain. It was this work and his meticulous comparative microscopic morphology of the brain that earned him at the comparatively young age of 40 election to the Fellowship of the Royal Society in 1935.

Le Gros set about the task of modernizing the Oxford Anatomy Department and making new additions to the staff. One of the first of these was the appointment of Solly Zuckerman as a Junior Demonstrator. Le Gros acknowledged the important role played by Zuckerman in the process of modernization and nowhere in Le Gros' autobiographical essays is he other than generous about Solly Zuckerman. Indeed, it is worthwhile quoting one passage at length to make it clear that the antipathy shown by Zuckerman towards Le Gros Clark cannot be blamed on any lack of generosity on Le Gros' part. He wrote that Zuckerman "was of considerable help to me in the reorganizing and replanning of my Department" (CPE, p. 134) and later he states "Zuckerman remained a member of my staff for ten years: active in research himself, he had an unusual capacity for organizing teams of young research workers concentrating their attention on problems of common interest. In view of the success of his scientific career in later years, I feel happy that I was able to grant him the facilities he needed for his earlier endocrinological work in my Department, for it was this work that gave him a foothold in the long ladder of success that followed" (CPE, p. 134). This was written by the man whom Solly Zuckerman's biographer John Peyton described as being "gloomy and resentful by nature" (Peyton, 2001, p. 25). I suggest that what Zuckerman might have found objectionable about this quote was that he (Zuckerman) would not want to acknowledge that anyone other than himself was responsible for his success.

Interest in Human Evolution

Did Le Gros' undergraduate study of human anatomy kindle his interest in human evolution, or rekindle it? He entitled the eighth of his autobiographical essays "The Antiquity of Man" and he introduces it by recalling that "in my

early youth my brothers and I visited Kent's Cavern at Torquay" (CPE, p. 185) and he writes of his fascination at the discovery of a hand axe embedded at the base of a six foot-high stalagmite, commenting that this must mean that the hand axe was very ancient. Kent's Cavern is now a tourist attraction and eminently accessible, but when Le Gros and his brothers explored the caves they had just been purchased by Francis Powe who used them as a carpentry shop and wood store. Even to be aware of the importance of the caves suggests that the Le Gros Clark boys were well informed about their local prehistory.

Le Gros' first published excursion into physical anthropology was the analysis of 16 adult crania taken from graves in North Greenland that had been donated to St. Thomas's Hospital Medical School (Le Gros Clark, 1920). It is well organized, clearly written and quantitative: in other words it had all the hallmarks of Le Gros' later more substantial publications. By 1928 he was evidently familiar enough with the literature to take Pycraft to task for assigning "Rhodesian Man" to a novel genus, *Cyphanthropus*. Le Gros showed that Pycraft's interpretation of the pelvis was erroneous, and went on to declare with respect to the cranium of "Rhodesian Man" that "I find it impossible to believe that a comparison between the Rhodesian skull and the skulls of Neanderthal man will justify the creation of a separate genus for the former" (Le Gros Clark, 1928, p. 207). This was the first sign of Le Gros' sensible sensitivity to the erection of unnecessary species and higher taxa.

In 1935 Le Gros presented a paper at The International Congress of Anthropological and Ethnological Sciences. This suggests that he had a parallel interest in human evolution in addition to the experimental neuroscience that in the same year had brought him an FRS. It is a *tour d'horizon* that extends from tree shrews to modern humans. He considers the possibility that "the resemblances between Man and the anthropoid apes are . . . the result of parallel evolution" but suggests that "in the sum of his anatomical characters man is closely approached only by the anthropoid apes" and that a "searching analysis of human morphology leads to the inevitable conclusion that in the structure and form of the brain, the skull, the dentition and other systems, the human stem must have passed through a phase of evolution in which it so closely resembled the known anthropoid apes that it is necessary to postulate an anthropomorph ancestry for modern Man. This is not to say, of course, that in the line of human descent there was ever a form which showed the characteristic specializations of the modern anthropoid apes" (Le Gros Clark, 1935, p. 3). In this, and in other respects, Le Gros' analysis is remarkably "modern". There is little sign of "emphasis being placed on the now discredited idea of orthogenesis" which is one of the accusations leveled at Le Gros by Zuckerman in his Royal Society biography (Zuckerman, 1973, p. 222).

A year later we see further evidence that Le Gros is thinking deeply about the difficult task of interpreting the fossil record. In a paper entitled "Evolutionary parallelism and human phylogeny" he warns that because of parallelism "systematic position . . . can only be established by a complete anatomical survey, and the systematist is liable to fall into serious error if he confines his attention to

one part of the body” (Le Gros Clark, 1936, p.4). In the same paper he nails his colors to the possibility of a more speciose interpretation the of the human fossil record because “there is no doubt that in the early stages of his evolution Man produced a number of different types, not all of which survived the struggle for existence” (*ibid*, p. 6). This clearly recognizes the possibility of cladogenesis. The first substantial review of the fossil evidence for human evolution came in a 1940 paper entitled “Palaeontological evidence bearing on human evolution.” It is evident, even to the point of using the same illustrations, that this article was the starting-off point for his *Fossil Evidence for Human Evolution* which was published 15 years later. At this time the only South African fossil evidence with which he was familiar was the Taung child’s skull. He refers to a 1936 paper in which he, Cooper and Zuckerman describe the difficulty of identifying the lunate sulcus of an endocranial cast of a chimpanzee (Le Gros Clark *et al.*, 1936). He does not dismiss the possibility that creatures like Taung could be ancestral to Man, but suggests that if this is the case that “it must be accepted that the differentiation of man is to be referred back to a correspondingly early phase of the evolution of the higher primates” (Le Gros Clark, 1940a, p. 211). He also warned that the then published interpretations of the fossil evidence from South Africa may be based on “preliminary observations without an adequate comparative study” that takes “into account the variability shown in the teeth and skulls of modern anthropoid apes” (*ibid*, p. 210). Ten years later he repaired that deficiency by comparing the dentition of the australopiths from South Africa with a comparative sample of several hundred higher primate dentitions. In 1940 Le Gros also re-enters the debate about hominin taxonomy and unambiguously argues that *Sinanthropus* should be sunk into *Pithecanthropus* (Le Gros Clark, 1940b). In the same paper he warns that characters that were (and still are) being cited as characteristic of an early hominin taxon, such as the platymeric femora of *Pithecanthropus* that might have a nutritional rather than a genetic basis.

The last two of Le Gros’ assessments of the significance of the South African fossil evidence before his conflict with Zuckerman were six years later, in the equivalent of a cross between a modern day “News and Views” article and an extended book review (Le Gros Clark, 1946) and three years after that, in 1949, in the first edition of the *History of the Primates* published by the British Museum (Natural History) (Le Gros Clark, 1949).

In his *Nature* review Le Gros puts Robert Broom’s recently published monograph “The South African Fossil Ape-Men: The Australopithecinae” (Broom and Schepers, 1946) into context. Le Gros makes the point that the monograph provides the first opportunity for scholars to “assess independently the significance of these remarkable fossils” (Le Gros Clark, 1946, p. 863) for although many of the discoveries he refers to were made in the late 1930s the war effectively made them inaccessible to all but South African scientists. As a neuroscientist Le Gros is rightfully critical in his review of Schepers’ claim that he (Schepers) could “delineate no less than twenty-six separate cyto-architectural areas and to compare them in their relative extent with those of modern apes and man (*ibid*, p. 864).” Le Gros goes on to suggest that “cortical

physiologists may likewise feel inclined to demur at some of the inferences regarding function such as speech, abstract thought and motor skill which, it is suggested, can be drawn simply from the examination of a cast of the inside of the skull” (*ibid*, p. 864). But otherwise he unambiguously swings his considerable influence and reputation behind many, if not most, of Dart’s earlier and Broom’s recently published assessments. He concedes that perhaps if one only had access to the dental evidence then it might be possible to dismiss the South African fossil evidence as belonging to “a group of extinct apes, somewhat similar to the gorilla and chimpanzee, in which the (human) characters had developed (possibly independently) along lines almost identical to those of human evolution” (*ibid*, p. 863). However, he goes on to suggest “some most important fragments of limb bones allow, and even make probable, a much more startling interpretation of these fossil remains” (*ibid*, p. 863). Le Gros gently chides Broom that because “so much depends on this limb material for a proper assessment of the Australopithecinae” his description of the postcranial material of *Plesianthropus* “is tantalizingly brief (it is confined to 34 lines!)” (*ibid*, p. 864). Le Gros paid particular attention to the postcranial remains attributed to *Paranthropus* and made two main points, which to my shame, I was not previously aware of. First, he stressed the discrepancy in size between the modern human-liked sized upper limb remains and the diminutive talus which he described as “a remarkably small bone” that is “well short of the minimum recorded for modern ...mankind” (*ibid*, p. 863). Second, he stresses the medial extension of the articular surface of the head indicating “very considerable mobility of the sub-talar joint” (*ibid*, p. 863).

In *History of the Primates*, Le Gros summarizes his own assessment of the South African fossil evidence and this is worth quoting in full: -

“The question now arises, what is the proper place of the *Australopithecinae* in the classification of the higher primates? Clearly they belong to the Hominoidea, and clearly they show much closer resemblances to Man than does any of the living or fossil apes so far known; but should they be grouped with the *Hominidae* or the *Pongidae*? The answer to this question is still a matter for controversy, and no doubt depends ultimately on what criteria are employed for defining these two families. If the absolute size of the brain is regarded as the most important criterion, the *Australopithecinae* are to be regarded as apes of a very advanced type showing in the details of their anatomy a remarkable approximation to the *Hominidae*, and no close relationship to the modern anthropoid apes. On the other hand, if more emphasis is laid on the criteria of skull structure, dental anatomy and the details of the pelvis and limb bones, there can be no doubt that the *Australopithecinae* should be grouped with the *Hominidae* and regarded as exceedingly primitive types of mankind. Taxonomic difficulties of this sort, of course, and bound to arise as discoveries are made of fossils of a seemingly transitional type, and, with the increasing perfection of the fossil record, probably the differentiation of Man from ape will ultimately have to rest on a functional rather than an anatomical basis, the criterion of humanity being the ability to speak and make tools. So far as the *Australopithecinae* are

concerned, no stone implements or other evidence of tool making have been found in association with their remains, and unfortunately, a study of the endocranial cast does not permit any legitimate conclusions regarding the power of speech. It may be noted that, at the original site at Taungs, where the first Australopithecine skull was discovered, a number of baboon skulls were found showing depressed fractures on the top, which suggests that they were killed by well-aimed blows with a weapon of some sort, and it has been surmised from this evidence that baboons were systematically hunted for food by the *Australopithecinae*. If this conclusion should be established as the result of further studies, it would indeed make it probable that the *Australopithecinae* were endowed with an intelligence superior to that of the anthropoid apes.

Finally the question arises whether the Australopithecine fossils so far discovered are likely to bear any direct or indirect ancestral relationship to *Homo sapiens*. A careful analysis of all the purely anatomical data brings to light no serious grounds for precluding such a possibility. Indeed it is possible to go further and to affirm that the anatomical characters of the *Australopithecinae* conform very closely to theoretical postulates for an intermediate stage of human evolution, which had been primarily based on the indirect evidence of comparative anatomy. But the place occupied by these fossils in the evolutionary history of Man will be precisely determined only when more adequate evidence is available for estimating their exact geological age. If they date from the latter Pliocene age, they may well represent the ancestral stock from which Man took his origin. On the other hand, if it should be established as the result of further systematic excavations that they are no older than the early Pleistocene, it would then appear probable that they represent late and but little modified survivors of such an ancestral stock." (Le Gros Clark, 1949, pp. 73–74).

This is a remarkably intelligent and insightful assessment of the possible significance of what was then known of the fossil hominins from southern Africa.

Conclusion

Sir Wilfrid Le Gros Clark was a complex man. In many ways he was the epitome of an English gentleman academic; intelligent, reserved, courteous and well liked by the vast majority of his colleagues and students (Fig. 2). I suspect that his youthful interest in things historic and prehistoric helped to whet his appetite for his later involvement in human evolution. From being a skeptic about whether the southern African hominins played a role in human evolution, he became a powerful advocate for paleoanthropological research in South Africa. His voice must have had an important influence on the decision to provide long term, if modest, research support for Robert Broom. Whatever the stimulus for it, Le Gros' interest in human evolution, his support of Dart



Fig. 2 Portrait of Sir Wilfrid Le Gros Clark taken in the mid 1950s around the time Elwyn Simons was his graduate student. Thanks to John Morris and to the staff of the Oxford Anatomy Department

and Broom and his subsequent support of Louis Leakey played an important role in the growth of paleoanthropology. His elegant and concise prose in the two editions of *The Fossil Evidence for Human Evolution: an Introduction to the Study of Palaeoanthropology* (Le Gros Clark, 1955, 1964) and in *Man-Apes or Ape-Men? The story of hominin discoveries in southern Africa* (Le Gros Clark, 1967) opened up the world of paleoanthropology to many students (including the writer) and they still make interesting reading today. Le Gros was also willing to “roll up his sleeves” and collect comparative data. To collect data from “the permanent dentition of 238 gorillas, 276 chimpanzees, and 39 orangutans, and the milk dentition of 89 gorillas, 105 chimpanzees and 29 orangutans” (*ibid*, p. 35) would be no mean achievement for a full-time graduate student, let alone the Head of the Oxford University Department of Anatomy and an FRS.

The long standing friendship between Le Gros and Elwyn, which began when Elwyn was Le Gros's graduate student, extended well into the latter's retirement. Elwyn would stop in England on his many journeys to and fro from the Fayum and would go and see Le Gros in the Department, and later on at his retirement home outside of Oxford. Elwyn was also host to Le Gros in Morse College when the latter taught a semester at Yale. On the face of it they were an "odd couple": one half the age of the other, one the epitome of urbanity, the other never wanting nor attempting to disguise his origins in the American West. But their common keen intelligence, humanity and shared interest in paleontology transcended these differences. Sir Wilfrid Le Gros Clark gained Elwyn Simon's respect and admiration, and he deserves ours.

Acknowledgment I am grateful to Elwyn Simons for arranging for me to attend and contribute to his Festschrift, and for sharing his memories of Le Gros Clark. I am only sorry that the serious illness of my father prevented me from attending and I am particularly grateful to Erik Seiffert for coping with this last minute change and to Alan Walker for standing in for me. I was not a student of Elwyn's nor did I have the good fortune to be his colleague (but I know many who have been), but I was pleased to be given this opportunity to thank Elwyn for his example as a scholar, for his fieldwork, for his book on "Primate Evolution", for demonstrating that enthusiasm is not the prerogative of youth, for his friendship and fellowship and for (despite his eminence) not being "all puffed up" as the Book of Common Prayer succinctly describes people who are all too conscious of their own importance. Thanks, too, to John Morris for helping me with photographs and other images of Le Gros Clark.

References

- Broom, R. and Schepers, G. W. H. (1946). The South African fossil ape-men, the Australopithecinae. *Transvaal Museum Memoirs*: 1–283.
- Le Gros Clark, W. E. (1920). On series of ancient Eskimo Skulls from Greenland. *J. R. Anth. Inst.* 50: 281–298.
- Le Gros Clark, W. E. (1928). Rhodesian man. *Man* 28: 206–207.
- Le Gros Clark, W. E. (1935). Man's place among the primates. *Man* 35: 1–6.
- Le Gros Clark, W. E. (1936). Evolutionary parallelism and human phylogeny. *Man* 36: 4–8.
- Le Gros Clark, W. E. (1940a). Palaeontological evidence bearing on human evolution. *Biol. Rev.* 15: 202–230le.
- Le Gros Clark, W. E. (1940b). The relationship between pithecanthropus and sinanthropus. *Nature* 145: 70–71.
- Le Gros Clark, W. E. (1946). Significance of the Australopithecinae. *Nature* 157: 863–865.
- Le Gros Clark, W. E. (1949). *History of the primates*. British Museum (Natural History), London.
- Le Gros Clark, W. E. (1955). *The fossil evidence for human evolution: An introduction to the study of paleoanthropology*. The Scientist's Library: Biology and Medicine. University of Chicago Press, Chicago.
- Le Gros Clark, W. E. (1964). *The fossil evidence for human evolution: An introduction to the study of paleoanthropology*, 2nd ed. The Scientist's Library: Biology and Medicine. University of Chicago Press, Chicago.

- Le Gros Clark, W. E. (1967). *Man-Apes or Ape-Men? The Story of Discoveries in Africa*. Holt, Rinehart and Winston, New York.
- Le Gros Clark, W. E. (1968). *Chant of pleasant exploration*. E. and S. Livingstone, Edinburgh.
- Le Gros Clark, W. E., Cooper, D. M. and Zuckerman, S. (1936). The endocranial cast of the chimpanzee. *J. Roy. Anthropol. Inst.* 66: 249–268.
- Peyton, J. (2001). *Solly Zuckerman. A scientist out of the ordinary*. John Murray, London.
- Zuckerman, S. (1973). Wilfrid Le Gros Clark. 1895–1971. *Biographical memoirs of fellows of the royal society* 19: 216–233.