PHILLIP VALLENTINE TOBIAS
14 October 1925 – 7 June 2012
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Phillip Tobias was certainly best known as the doyen of African palaeoanthropology, but his interests and accomplishments ranged far beyond that. He was skilled in cytogenetics, human biology and, of course, human anatomy, as a long-time chair of anatomy at his academic home, the University of the Witwatersrand, Johannesburg. The passion of Tobias also made him a leading figure as a warrior for academic freedom and human dignity in the fight against South African apartheid. His oratorical skills gave him power in the classroom and in public, although he was well-known for often going on too long. Fondly known as ‘PVT’, Tobias was a gracious yet demanding scholar, with a work ethic few could attempt to mimic.

DESTINATIONS AND ACADEMIC DESTINY

Phillip Tobias (known as ‘PVT’) was born in 1925 in Durban, South Africa, of Jewish parents Joseph and Fanny Tobias. PVT was fond of claiming that he had been conceived on the day when the Taung skull (a juvenile Australopithecus africanus) was announced to the world in the Johannesburg Star newspaper (13)†. This thought was characteristic of his cheeky sense of humour, as well as his passion for historical context. He had one older sister, Valerie Pearl, born in 1921. At age 12 he had to endure great tension in the family as his parents divorced. This rocked him to the core for the rest of his life, and may be one of many reasons he never married—along with the fact that he was always too busy to form a relationship.

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with a partner. Following the divorce he found himself in various living situations, including an interlude in Bloemfontein where he went to school and polished his Afrikaans. Back at the coast he did well at the Durban prep school St Andrews, where he helped start a class newspaper that he edited, presaging his prolific publishing career. His CV boasts roughly 1100 publications, including 33 books (Clarke & Kramer 2012), as well as essays and published letters, interspersed with well over 100 scientific research publications.

In his 2005 autobiography, Into the past (13), Tobias writes a lot about his father, although in person Phillip was much more prone to talk about his mother. He states that the reason he chose the University of the Witwatersrand (‘Wits’) over the University of Cape Town was so that he could be closer to his father in Johannesburg. Yet it was at Wits where Tobias got to know the larger father figure in his adult life, anatomist Raymond Arthur Dart FRSSAf.

Tobias’s first research love was not anthropology, and Dart was not his only distinguished mentor. In 1943, Tobias entered the University of the Witwatersrand Medical School. Under the influence of Raymond Dart, Alexander Galloway and Joe Gillman, all in the anatomy department, the initial spark for his research career was kindled. Thus he eagerly opted to do a medical BSc and BSc honours in anatomy. He had been spurred on to study medicine, and in particular genetics, as he wanted to find a cause and cure for diabetes, which had tragically taken the life of his sister Val at the young age of 21. Under Gillman’s direction, Tobias completed a PhD study on the chromosomes of gerbils. This led to the publication of his first book in 1956, Chromosomes, sex cells, and evolution in a mammal (1).

Tobias was a student leader in every sense of the word. In 1944 he was honoured as a ‘University Scholar’. From 1948 to 1951 he served as president of the National Union of South African Students (NUSAS), which he revived from a low with vigour. His associations with NUSAS demonstrated his political concerns and principles that he carried with him all his life. The difficult days of apartheid were beginning and the National Party was pushing for segregation of the South African universities, and Tobias pushed back with public protests and impassioned speeches.

**EARLY ACADEMIC ADVENTURES**

The interests and endeavours of Phillip Tobias are by no means limited to palaeoanthropology. In 1951, Raymond Dart suggested that Tobias join the French Panhard Capricorn Expedition to the Kalahari, where he would conduct anthropometric research on the San peoples and analyse their adaptations to their harsh environment. Tobias initially felt inadequate in anthropometry, and he was to be the youngest member of the team and also expected to be the expedition’s physician; yet, he was the one who needed a doctor when his asthma flared up. The expedition was successful, resulting in a number of publications for Tobias, including a 1978 edited volume entitled The bushmen (8). In the introductory chapter, he pondered: ‘Should the process of what anthropologists call acculturation be deliberately encouraged and accelerated by the governments and agencies concerned, or should things be left to take their own course?’

Decades later, with the occasional San individual attending his university, Tobias was fond of sitting back in his chair with his hands behind his head, glancing up to the right, and pulling out vignettes of the Kalahari expedition from his remarkable memory.

His next academic adventure that helped shape both his career and reputation was what he later called the happiest year of his life, and it was not in South Africa. Tobias spent
most of 1955 working in the Duckworth laboratory, a physical anthropology centre at Cambridge, UK, on a post-doctoral Nuffield Senior Travelling Fellowship. He made frequent visits to the Natural History Museum in London, deciding that if he were to become a palaeoanthropologist, he would study as many hominid (now hominin) fossils as he could. Among the fossils he examined carefully was a mandible from Kanam (Kenya), which was peculiar in having a protruding chin, a characteristic of modern humans. Tobias obsessed over the chin for many years, as he had a distinctively protruding chin himself. He concluded that the Kanam specimen had a pathological overgrowth that mimicked a chin, and eventually published his findings in 1960 in *Nature* (2). Thus the die was cast, and Tobias tied his love of genetics to fossil research to become an eminent scholar of evolutionary theory.

From England Tobias sailed to the USA on the *Queen Mary* in 1956. There he visited 30 university departments and museums, and at the various venues delivered many guest lectures on his fossil work and well-received talks on the San and human variation. The visits included the University of Michigan anatomy department, which later would offer him a professorship. He was tempted to accept the offer as South Africa slipped into apartheid, but decided to stay and fight the institutionalized racism he so loathed from within the country.

Back in South Africa, it was not long before he joined another expedition, at least this time in southern Africa. Desmond Clark, who was to become a paragon of African archaeology, invited Tobias to take part in the Gwembe Valley Survey of the Plateau Tonga in what was then Northern Rhodesia (now Zambia). As with the San, Tobias studied the Tonga people, who were to be displaced by the Kariba Dam. He noted the distinct morphological contrasts of the Tonga and San, continuing his fascination with modern human biology.

Tobias’s early love of genetics never vanished and certainly influenced his insight into evolutionary theory. He initiated the inclusion of human genetics into the anatomy course, and this led to the establishment of the Human Genetics department at the University of the Witwatersrand. The first genetic counselling clinic in South Africa was established by him as well. A careful look at the voluminous papers he published reveals the breadth and depth of Tobias’s research in human biology and physical anthropology. His clear thinking and writing have helped South Africans realize the fallacies in the concept of race. More recently he delineated the correlates of secular trends in growth and development of southern African peoples, and introduced the ‘negative secular trend’ (7). Such research is immediately relevant and vital for his native country. Tobias’s research has had considerable impact and relevance, and has led to immense respect and numerous accolades from his peers. Thus it was most fitting that, in 1987, he was awarded the Balzan International Prize, the first ever offered in the field of physical anthropology.

**PALAEOANTHROPOLOGY**

When Tobias led a student expedition to the Makapansgat fossil site in what was the Northern Transvaal of South Africa, he began an illustrious career in palaeoanthropology and by all accounts rekindled Dart’s fascination with early human ancestors (figure 1). Palaeoanthropology is the field for which Tobias is best known. His early flair for the subject, along with his anatomical expertise, led Louis Leakey to invite him to describe the famous *Zinjanthropus* skull from Olduvai Gorge in 1959. Tobias’s analysis and description of the skull, which he reassigned to a new species called *Australopithecus boisei*, was published
in 1967 as a monograph that still stands as one of the classics of palaeoanthropological research (5).

New specimens of early hominins continued to emerge from Leakey’s excavation at Olduvai Gorge, including some curiously distinct fossils. Tobias’s cautious and careful analysis of the fossils, along with the work of Louis Leakey and John Napier, led to the naming of a ‘new’ species of hominin, *Homo habilis*, nicknamed ‘Handy man’ (4). Raymond Dart had been invited to provide the species name, and Tobias was relieved that it had not been something much longer, as Dart was wont to do.

As Dart had experienced with the naming of *Australopithecus africanus* in 1925, the scientific community was not yet ready to accept a new hominin taxon. Tobias fought for its acceptance for 15 years, employing the tactics of arduous research and elegant analysis. Today *Homo habilis* is widely accepted, and anthropologists worldwide enjoy the detail and thoroughness of Tobias’s massive two-volume book presenting the complete description and analysis of the Olduvai *Homo habilis* fossils (12). All of the final typescript, as well as many earlier versions, were typed by hand by his assistants Heather White and Valerie Strong. Each workday they would type away, and then the next day Tobias would come in with revisions to be retyped, as well as his own additions that he had typed at home on his own beloved manual typewriter. Nevertheless, the meticulous nature and keen insight of Phillip Tobias ensure that this work will be another long-standing classic.

Like Dart before him, Tobias was recognized as a leading authority on the evolution of the hominin brain, and one should note the important book he wrote on that subject in
1971, *The brain in hominid evolution* (6). One of the most startling revelations about the brain of early man comes from Tobias’s intimate knowledge of the impressions that the brain leaves on the inside of the skull. The brain casts of *Homo habilis* suggest that this earliest representative of our genus had the neural capacity for spoken language, based on the expansion of both Wernicke’s and Broca’s areas. Only a scholar of Tobias’s calibre could recognize and successfully defend such an interpretation. He was fond of proudly touting the ‘temerity’ he had in pushing such a conclusion.

The early influence of Robert Broom FRS, another paragon of South African palaeontology, also played its role in the development of Tobias as a world leader in palaeoanthropology. It is thus appropriate that in 1966 Tobias initiated the excavation and research programme at the fossil site of Sterkfontein, near Johannesburg, where Broom found the first adult fossil of *Australopithecus africanus*. This excavation has yielded the largest single sample of that early hominin, as well as the first known example of *Homo habilis* from southern Africa. It is the longest running fossil excavation anywhere in Africa.

In 1988 the Taung fossil site was reopened at the southeastern margin of the Kalahari Desert, under the general direction of Tobias for a seven-year period, with this author (J. K. McKee) as field director. Although Tobias was not particularly adept in the field, these excavations attest to his leadership and initiative in the field of palaeoanthropology, and led to a better understanding of the context of the Taung juvenile.

**THE BELOVED PROFESSOR**

One would not think that a man so busy with research would have time for students. However, Tobias steadfastly retained his ultimate care and dedication to his students. He started off as a lecturer in anatomy in 1951, rose to senior lecturer in 1953 and reluctantly assumed the professorship and chair of Witt’s Department of Anatomy in 1959. Throughout his tenure, students were his inspiration and primary focus (figure 2). He would have his staff photograph each of the students, and he would memorize the names and faces of 200-plus students each year—and remembered most of them many years later. At graduation time, he would call some of the parents to make sure that he got the pronunciation of their surnames correct.

The Department of Anatomy and Human Biology was clearly shaped by the Tobias influence. Thousands of students have learned from *Man’s anatomy*, written by him with M. Arnold (and with later input of J. C. Allan) (11). Tobias set up an exquisite self-study museum for students. He introduced the concept of ‘living anatomy’, in which students can relate the surfaces of their own bodies to what they learn in dissection. There was also time set aside in the anatomy course for learning anthropometry, passing on the skills he learned in studying the San and Tonga populations.

The Staff–Student Liaison Committee is an example of Tobias’s care for students and his eagerness to become familiar with their concerns. The time and thoughtfulness he gave to students on an individual basis, as well as the inspiration that flowed from his lectures, will always be fondly remembered by those who had the privilege of passing through his department. This has been appropriately recognized through the establishment of the Phillip V. Tobias Medal for Distinguished Teaching (McKee 1991).

As he told Bernard Wood in a 1989 interview: ‘In the end, it is perhaps people who are my hobby, work, and fascination all rolled into one.’ Every one of his students and colleagues knew that and felt it (Wood 1989).
Aside from being a head of department, and later dean of the Wits Faculty of Medicine, one of Tobias’s passions was the Institute for the Study of Man in Africa (ISMA). This institute was founded in honour of Raymond Dart, as proposed by Leonard Freed in 1956, and was based in the Wits anatomy department upon the retirement of Dart in 1958. ISMA covered a variety of topics beyond evolution, into human biology, culture, archaeology, health and more. There would be periodic lectures and an annual keynote lecture published by the institute, including Tobias’s *Dart, Taung and the ‘Missing Link’* (10). Tobias kept it thriving for many years, but the institution unfortunately did not survive Tobias’s passing.

The vision Tobias had for a thriving anatomy department reached beyond Wits. He founded the Anatomical Society of Southern Africa, and served as its first president. It started off slowly with annual meetings, sometimes with Wits providing the only research presentations, but went on to be a robust and vibrant platform for sharing discoveries through the entire range of anatomical topics.

Other organizational accomplishments included establishing the first heredity counselling service in South Africa, and serving many years on the Council of the Royal Society of South Africa (as president 1970–1971).

In 1985 Tobias teamed Wits with the University of Bophuthatswana (in the South African homeland that included the Taung fossil site) to organize the Taung Diamond Jubilee. This involved laying the groundwork for a pyramidal monument to be placed at
what was then thought to be the approximate spot were the Taung *Australopithecus* fossil had been discovered in 1924 (figure 3). The ground was cleared so that the president of Bophuthatswana, Lucas Mangope, could land in his helicopter for the unveiling. Tobias wanted everything to be perfect for the event, so, despite the sweltering summer heat at the edge of the desert, he dressed in a formal suit. He later recalled being both horrified and miffed when Mangope got out of his helicopter in a bright white safari suit.

The Taung Diamond Jubilee also involved an academic conference, one of many that Tobias loved to organize. He was known for calling staff members late at night to clarify accommodation details for the incoming guests. There were many conference presentations on what was then the latest in palaeoanthropological findings and research. One of the guests was Donald C. Johanson, discoverer of the famous Lucy skeleton of *Australopithecus afarensis*. Tobias remained sceptical about the taxonomic status of the proposed East African species, as people had been sceptical about *Homo habilis*, and got into a debate with Johanson. Later, people described the debate in various ways, but all could agree it was highly spirited.

**ANTI-APARTHEID WARRIOR**

Tobias’s studies of the San and the Tonga gave him a deep understanding of the meaning, or lack thereof, of the concept of race and ethnicity—see his 1961 book *The meaning of race* (3). From his student days in NUSAS, where he was first doubted for being Jewish, to his
strong involvement in the Steve Biko murder case, recalled below, Tobias was a leader against apartheid.

Tobias was always impressive in person—he held an aura of great authority. When I first arrived at Wits in 1986, his legend was apparent. Even as he unwittingly drew all over the famous Taung skull with a borrowed mechanical pencil while showing it to new academic staff members, nobody dared say a word. You did not interrupt Tobias. He did not demand respect, but he did command respect by his very nature. It was in 1987 at an apartheid protest that we saw him in his full glory. The then South African minister of education had imposed restrictions on public university admissions of non-white students, so Wits held a protest on the lawn below the Great Hall, with Tobias as the keynote speaker. He railed against the ‘Draconian’ measures of the minister of education, and roused a crowd of hundreds. Toward the end of the speech, helicopters of the apartheid police started circling the university, nearly drowning out his voice until he spoke louder with passion, not to be interrupted. We heard every word to the end. And, we like to believe, so did the minister of education, one F. W. de Klerk, who went on to become the president of South Africa who ended apartheid, later sharing a Nobel Peace Prize with Nelson Mandela in 1993.

Tobias himself was also nominated for a Nobel Prize, though it was disputed whether it had to do with peace or medicine. It certainly had to do with his involvement in the adjudication of the murder in prison of an African anti-apartheid activist named Stephen Biko. In 1977 Biko was arrested by South African security forces, then shackled and beaten in prison. The cause of his death was quite obvious, but remarkably the South African Medical and Dental Council exonerated the doctors who attended to his death despite claims of malfeasance. Tobias was then dean of the Wits Faculty of Medicine and organized a resolution regarding the ‘Biko doctors’. This was widely disseminated and published in Nature by the faculty via Tobias, but was clearly written in Tobias’s inimitable style—to wit, ‘This is all a source of great embarrassment and distress to many doctors in South Africa who are proud of the high ethical standing of their profession, both within this country and abroad’ (9).

PERSONAL LIFE

Aside from his career, PVT found time to be a mere mortal. He enjoyed watching cricket on the ‘telly’ and loved music and theatre. He did some acting in his early years, as did Dart. Properly made tea was a passion of his that he taught to all of his science students. He would invite them over to his flat in Hillbrow (a residential area of Johannesburg) for a scripted philosophical talk and a glass or two of dry sherry which he enjoyed. As a bibliophile, he ended up renting two flats in Hillbrow, the second one for the sole purpose of housing his books. He later moved to a more upscale Johannesburg neighbourhood, along with his household staff and his books, where he remained a pillar of the Jewish community and the academic community at large. He also maintained an office and staff at the Wits Medical School, where he would persist in writing and intriguing guests with his memories of a life well-lived.

Upon his passing in 2012, after a long illness, surviving friends and colleagues found themselves in his will and testament. With meticulous ardour that had characterized his life, he whittled down his book collection, title by title, to those he thought would appreciate the books and read them in remembrance of him. That was our beloved PVT, who touched
Phillip Vallentine Tobias

thousands beyond his academic career, and will continue to touch millions with his multitude of contributions to humanity for generations to come.

PRIZES AND AWARDS

PVT was awarded honorary doctorates from 17 universities and other academic institutions in South Africa, the United States of America, Canada and Europe.

South Africa’s Order for Meritorious Service
1999 Order of the Southern Cross elected foreign associate, National Academy of Sciences USA
1996 Elected Fellow, Royal Society of London
1987 Balzan Prize for Physical Anthropology
1997 Charles R. Darwin Lifetime Achievement Award, American Association of Physical Anthropologists
South African Honorary Fellows of the Society
John Herschel Medal

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The portrait photograph was taken in 1996 by Prudence Cuming Associates and is © The Royal Society. All other photographs are from the author’s personal collection.

AUTHOR PROFILE

Jeffrey McKee is a biological anthropologist who earned his PhD at Washington University in St Louis. In 1986 he was hired by Phillip Tobias as a senior lecturer in the Department of Anatomy at the University of the Witwatersrand, Johannesburg. During his decade in South Africa, he led excavations at the early hominin fossil sites of Taung and Makapansgat, and developed palaeoecological computer modelling techniques to study rates of mammalian evolution and extinction in Africa. Now a professor of anthropology and evolution at The Ohio State University, his research has varied from population genetics to modern human ecology and evolutionary theory, all grounded in his palaeoanthropological work. McKee is co-author of the textbook *Understanding human evolution*, and has published two other books, *The riddled chain* and *Sparing nature*.

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