

## The contributions of J. C. Boileau Grant to the teaching of anatomy

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**Abstract** J. C. B. Grant (1886 - 1973) as been hailed as one of the greatest teachers of anatomy in the English language. Except for those who attended his lectures at Manitoba, Toronto and Los Angeles, his reputation rests on three textbooks, the first editions of which he produced between 1937 and 1943 and which, collectively, have run to 30 editions. Salient aspects of Grant's life and of these three fine books are reviewed and appraised and, unusually in modern times, tribute is paid to him as a writer, not of research works, but of textbooks.

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Wherever anatomy is studied, the name of Grant and the three remarkable texts which bear that name are well known. In 1991, 18 years after his death, the Faculty of Medicine of the University of Toronto established a J. C. B. Grant Memorial Award and Lecture. The first of this new eponymous lecture series was delivered on 2 July 1991; it doubled as the keynote address to the 10th International Symposium on Morphological Sciences under the presidency of the eminent embryologist, Keith L. Moore, at the University of Toronto, where Grant spent 26 years as Head of the Department of Anatomy. The Faculty of Medicine conferred upon this author the honour of being the first recipient of the J. C. B. Grant Award and Lectureship. Although most of that lecture was published elsewhere,<sup>1</sup> South African medical colleagues (many of them reared on one or more of Grant's textbooks) may be interested to learn more about Grant's life and contributions to the study of anatomy.

Canada's most distinguished teacher of anatomy is respected, not only in the English-speaking world but also, through translations of his textbooks, in countries where Italian, Japanese, Portuguese, Spanish and Turkish are spoken. Within the space of 7 years, there flowed from his facile pen and artistic brush, the 1st editions of his *Method of Anatomy, Descriptive and Deductive* (1937),<sup>2</sup> his and Cates's *Handbook for Dissectors* (1940)<sup>3</sup> and *An Atlas of Anatomy* (1943).<sup>4</sup> Each work has survived, through edition after beautiful edition, for more than half a century. Grant's *Method* is now in its 11th edition, the *Dissector* in its 10th and the *Atlas* in its 9th. These are records which bid fair, ultimately, to rival the monumental Gray's, Morris's and Cunningham's anatomy texts, which have been in existence since 1858, 1893 and 1902, respectively.

What manner of man was it who could produce three great anatomical texts in the space of a mere 7 years?

Many of the biographical details that follow have been taken from an article<sup>5</sup> by Emeritus Professor C. L. N. Robinson (formerly Clinical Professor of Surgery at the University of British Columbia) (1988) and from an obituary<sup>6</sup> by the late J. S. Thompson (a former head of

the University of Toronto Anatomy Department) and the late Dr R. G. MacKenzie (who wrote a history of the Department of Anatomy of the University of Toronto). The author is also indebted to Professor Keith Moore and Dr Ken McCnaig.

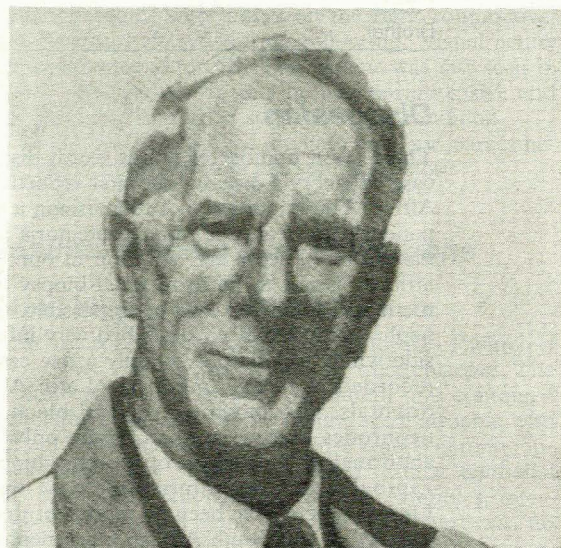


FIG. 1.  
John Charles Boileau Grant (1886-1973).

### The career of Grant

Born in Edinburgh, in 1886, Grant trained at the city's famous medical school during the Edwardian period. He graduated in 1908, just 3 years after Robert Black Thomson, who was to become the first professor of anatomy at the University of Cape Town in 1911.<sup>7</sup> In Grant's class was William Boyd, who was to become an eminent pathologist; the two friends were later to marry two sisters, Catriona Christie to Grant and Enid Christie to Boyd. Their anatomy teacher was D. J. Cunningham, and Grant's class must have been one of the first to use Cunningham's *Textbook of Anatomy*, which had appeared in 1902. This work was Scotland's response to the Sassenach Gray's *Anatomy*, which had emerged in 1858 from St George's Hospital in London.

Grant began his career as an anatomist as a demonstrator under Cunningham from 1909 to 1911. He moved south to take up a similar position under Professor R. Howden at the University of Durham. Howden edited or co-edited every edition of *Gray's Anatomy* from 1901 to 1926, so Grant's background in Britain was securely set amid great writers of anatomical textbooks. Amphibiously, he swam in the waters of Cunningham and walked in the land of Gray.

Grant's military service as a medical officer in World War I was marked by conspicuous gallantry and devotion to duty while under attack. He was mentioned in dispatches while with the Grenadier Guards in 1916, and a year later received the Military Cross. In 1918, while serving with the Black Watch, he received a bar to the Military Cross.

On his demobilisation in 1919, he returned to the study of anatomy at Newcastle upon Tyne. In the same year he moved to Canada to take up the Chair of

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Anatomy at the University of Manitoba. He was 33 years of age. During the 11 years that Grant held the Manitoba chair, he travelled widely in northern Canada and made anthropometric studies of Indian people. He was being true to the marriage between anatomy and physical anthropology of which Sir William Turner (1823-1916) had been the broker at Edinburgh.

From Manitoba Grant moved to Toronto in 1930 to succeed J. Playfair McMurrich as Professor of Anatomy. McMurrich had earlier been at the University of Michigan from where, in 1907, he had joined Sir Henry Morris as co-editor of the 4th edition of Morris's *Human Anatomy*. So Grant, nurtured in the milieu of Gray and Cunningham, now found himself surrounded by the ambience of Morris. He appeared destined to become a writer of textbooks.

Grant served the University of Toronto as Professor and Head of the Department of Anatomy from 1930 until his retirement as Professor Emeritus in 1956. During these 26 years he developed his reputation as an outstanding teacher. With his encyclopaedic knowledge, meticulous accuracy and consummate artistry, Grant delivered lectures which are said to have been a delight to attend.

These lectures, according to Robinson, were a demonstration of anatomical art, not to be forgotten. At the end of an hour, he would have filled four blackboards with coloured anatomical drawings; he was more an illustrator than an orator. Thompson and MacKenzie<sup>6</sup> state: 'Year after year his class in Human Anatomy was voted by the students as the most popular in the Faculty.' The memory of Grant as a teacher burned so brightly that the class of 1948, at its 25th reunion in 1973, presented him with a plaque 'in appreciation of his teaching example and stimulation'. Small wonder that J. V. Basmajian<sup>8</sup> described Grant as 'one of the greatest teachers of human anatomy in the English language since John Hunter'. Not only did Grant inspire his students, he inspired numbers of outstanding protégés to walk in his footsteps, people like John Basmajian, James Anderson, Keith Moore, Thomas Leeson, John Duckworth and James Thompson.

When he retired from Toronto, the Executive of the American Association of Anatomists offered Grant a special citation, 'because of his great contribution to the teaching of human anatomy'. He was recognised, too, by the award of an honorary degree by the University of Manitoba.

A palpable aura of reverence and awe surrounded Grant. His was a name to conjure with in schools far beyond the boundaries and shores of Canada. Grant's reputation rests on his lucidly written, wondrously illustrated and rigorously methodical textbooks. This creative impulse became manifest at the University of Toronto over half a century ago.

### Grant's textbooks

The first book to appear was his *Method of Anatomy, Descriptive and Deductive* (1937). As a student under Raymond Dart in the 1940s, I remember with delight the 3rd edition of that book. Two aspects appealed, connoted by the words 'method' and 'deductive' in the title. More than other texts, Grant's *Method* brought out the superb logic of the body's structure. In the 7th edition, he was joined, as co-editor, by one of his eminent protégés, John V. Basmajian, who edited 4 more editions. The latest — the 11th<sup>8</sup> — rejoices in the subtitle *A Clinical Problem-Solving Approach*, which indicates two important emphases in the modern teaching of human anatomy. The same trend is reflected in the subtitle of Keith Moore's celebrated works, *The Developing Human: Clinically Oriented Embryology*<sup>9</sup> and *Clinically Oriented Anatomy*<sup>10</sup> and in S. R. Blecher's<sup>11</sup>

innovative new text, entitled *Your Patient's Anatomy: A Clinical View of Human Morphology*.

The second work in the Grant trilogy was the *Handbook for Dissectors* (1940)<sup>3</sup> by Grant and Cates, now known more simply as *Grant's Dissector*.<sup>12</sup> The trilogy was completed in 1943 by Grant's *Atlas of Anatomy*.<sup>4</sup> When the armed forces declined to accept the 53-year-old Grant's offer to enlist during World War II, he prepared an alternative to the most popular atlases of the day, those monumental German atlases by Spalteholz and Sobotta. The one-volume *Grant's Atlas*<sup>4</sup> proved an immediate success. Grant personally edited the first 6 editions, until his death. Another protégé, James Anderson, edited the 7th and 8th editions. The new 1991 edition of *Grant's Atlas*<sup>13</sup> is the 9th and has been edited by Anne Agur. How happy Grant, who filled blackboards with sweeps of colour, would have been to see the attractive colours that have been added to the artistic renderings of brilliant dissections. How he would have rejoiced to see the radiographic images, including magnetic resonance images, accompanying the matching pictures of anatomical sections. Anne Agur and the publishers, Williams & Wilkins, have produced what is surely one of the most beautiful and most useful anatomical works ever published.

After his retirement Grant continued with his indefatigable activity. He was constantly revising his textbooks. His prowess as a teacher led to his appointment in 1961, when he was 75 years old, to teach anatomy for 6 months each year at the University of California in Los Angeles. The link with UCLA continued for 10 years, until 1970. Three years later, still working on new revisions, he died on 14 August 1973, at the age of 87 years. In the words of Thompson and MacKenzie<sup>6</sup>: 'His quiet wit and boundless humanity never failed to impress. He was, in the very finest sense, a scholar and a gentleman.'

What a monument to Grant the 30 editions of these 3 books collectively comprise, together with the J. C. B. Grant Museum in the Anatomy Department of the University of Toronto. In an age that tends to rate the writers of research works more highly than the authors of textbooks, it is refreshing and fitting that Grant's inestimable contribution to the pedagogy of anatomy should have been thus honoured. The establishment of the memorial lectureship that bears his name honours one of the 20th century's most prodigious and inspiring teachers of anatomy.

I am indebted to Professor Keith Moore and Dr Ken McCnaig for certain reference materials and information.

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