

probably irrelevant. Detailed discussions of research projects are also unnecessary; summaries backed by references are all that is required. A brief overview of the career of each author at the start of each contribution, such as the one at the start of the Kitahata autobiography, would also be useful, as would a name index.

A portrait photograph of each author is provided, and a few interesting photographs are interspersed in the text.

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Tarnished Idol: William Thomas Green Morton and the Introduction of Surgical Anesthesia. A Chronicle of the Ether Controversy. Wolfe RJ, San Anselmo CA, Norman Publishing 2001, pp 672, illustrated, \$125 (hardback 0 939495 81 1). Orders to: Norman Publishing, PO Box 2566, San Anselmo, CA 94979-2566, USA. E-mail: orders@jnorman.com.

Although a great reader, I can think of only three occasions during my adult life when a book has kept me awake well into the small hours. The first was a day or two after 14 April 1947 – I still have H K Lewis's receipt – when, while serving in BAOR, I received my copy of Dr Duncum's classic. The second was almost thirty years ago, when I innocently started reading *The Day of the Jackal* in the bath at eleven o'clock one night, and was glued there until, having finished off all the hot water and the book, I was rescued from hypothermia at four o'clock in the morning by an agitated wife awakened by the unaccustomed coldness of the empty quarter of the bed. The third was occasioned by the volume now under review; although this magnificent production, weighing in at 1.6 kg, with its near A4 sized pages, is not a book to be taken anywhere near a bath. We are told that the pages are acid free, but, as will be seen, that refers only to their chemical constitution.

Richard J Wolfe was Curator of Rare Books and Manuscripts at Harvard University's Francis A Countway Library of Medicine for some 33 years, and also Joseph Garland Librarian of the Boston Medical Library for most of that time. Hence, apart from the advantage of his professional skills, he has had access to primary sources that few knew existed. Some seven years ago, he was an editor of and contributor to a ground breaking book on Horace Wells, *I Awaken to Glory*. His chapter, *Who was the Discoverer of Surgical Anesthesia? A Brief for Horace Wells*, touched on evidence suggesting that Morton was not an entirely honest character. When he concluded the editing of that previous work, as he now tells us in the *Afterword* to the book under review (which naturally one reads first): 'he made a solemn promise to himself never, never to become involved in a serious study of W T G Morton or the ether controversy'. He had gained such insights into Morton's unsavoury character that he determined to keep well away, but later he examined some documents relating to Morton's early history, unknown to earlier writers. These were collected by Jackson's attorneys in 1849 with a view to discrediting Morton's attempts to secure an award from Congress, and this 'was the blasting powder needed to dislodge the author from his earlier resolve and spark him to get on with the task'.

His early chapters deal with Morton's forebears, where a family tree would have been helpful to the reader, and with his early life. The years to 1842 were skimmed over in the biography ghosted by Rice, which is used as a framework throughout this book. Mr Wolfe has been able to demonstrate, from the documents mentioned earlier, that during his late teens Morton was,

in his business dealing at least, a nasty piece of work. He had engaged in deals in various parts of the country, (Rochester, Cincinnati, St Louis, and Baltimore), had falsified the books, forged bank drafts, stolen from and swindled his partners, obtained goods under false pretences, and absconded without paying. Warnings had been published in local newspapers, and he had been lucky to escape prison. Returning home chastened, he decided to take up dentistry, an occupation that required little training, and this brought him into contact with Horace Wells, and later with Charles Jackson.

Mr Wolfe covers this period, and indeed the whole of Morton's life, in great detail, analysing the account contained in the biography ghosted by Rice, *Trials of a Public Benefactor*, and comparing it with the reports of the US House of Representatives, the Charles T Jackson papers, and the registries of the relevant counties of the State of Massachusetts. He traces the progress of Morton's applications to Congress, always dogged by Jackson's determination to deny him any credit or reward, and his disappointments. There is much information in the later chapters about Morton's success for some years as a model farmer, until he was overtaken again by his obsession, and about his many land deals.

Mr Wolfe has left no stone unturned, and has not been squeamish about revealing whatever crawled out from underneath. His detailed grasp of the intricacies of the developments must be unsurpassed, and he explores every twist, turn, and cul-de-sac of the maze, enlivening his account with portraits of the many secondary characters involved. With such detailed research and exposition, this should be the definitive work on the Morton-Jackson controversy; but sadly it is not.

As J F Fulton wrote in his introduction to the annotated catalogue of books and pamphlets bearing on the early history of surgical anaesthesia published in 1946,¹ (one of Mr Wolfe's frequently cited sources): 'In surveying the early history of surgical anaesthesia, it is essential to maintain complete objectivity'. This, Mr Wolfe has found himself unable to do. Rather, he has appointed himself counsel for the prosecution of Morton, about whom he can find little good to say. His discovery of Morton's early commercial backslidings, and his belief that the leopard cannot change its spots, which he supports by a quotation from Shakespeare's *Richard II*, act 1, scene 1 (not 2), (the effect of which is spoiled by printing it as a monologue rather than a dialogue), has blinded him to the need for objectivity. As a result, Morton is painted wholly black, and such acts as could be interpreted favourably are given a pejorative motivation. So what kept me awake into the small hours on this occasion was the fruitless search for a straightforwardly favourable comment. And if Morton is black, then Jackson has to be white – there is no room here for shades of grey – with the result that Mr Wolfe is less analytical than the situation calls for.

Of course a leopard cannot change his spots, nor would he want to, since they fit him ideally for his environment. Morton, if not spotted genetically, may well have been conditioned, by life with a bankrupt father and a land-dealing mother, to enter and survive in the American jungle so acutely described by such writers as Frances Trollope and Charles Dickens. Though, to some extent, he did change his spots. Brought up as he was, what did he know about the niceties of medical ethics, until enlightened by Bigelow? A devoted son, husband, and father, determined to provide for his family, he saw himself as a businessman, an entrepreneur, not as a member of a learned profession; nor did Bostonian standards apply throughout the United States. In Cincinnati, the scene of some of Morton's youthful villainies, 'physicians became merchants, clergymen became bankers, lawyers became manufacturers'.²

Jackson's claim to priority was based on his assertion that he accidentally discovered the anaesthetic effects of ether inhalation when he used it as an antidote to chlorine gas, which he had breathed in around 1842; later he re-dated this to 1837 or 1838. After Morton's demonstration on 16 October 1846 he collected a few signed statements from acquaintances whom he had desultorily tried to persuade to give it a clinical trial during the preceding four, or nine, years. Compare this with John Snow, who, during the three months after 28 December 1846, when he first witnessed the administration of ether, laid down, by experiment and demonstration, the basic principles of the physiology, pharmacology, and technology of inhalation anaesthesia. Compare Jackson's immobility also with Morton, who not only risked everything when embarking on his first public demonstration, but experimented with ether, engaged in the design and improvement of inhalers, and campaigned publicly for the acceptance of surgical anaesthesia. But the fact that he sought publicity sticks in Mr Wolfe's throat. He cannot, nor did Jackson in his time, see the importance of the entrepreneur in securing the adoption of anything new.

In one of the few statements of Jackson's brother-in-law, Ralph Waldo Emerson, that is remembered today, he said: 'If a man ... make a better mousetrap than his neighbour, tho' he build his house in the woods, the world will make a beaten path to his door'. Well, perhaps a few mousetrap buffs might, but the world will come only if the man promotes it vigorously, and it is seen that there is money to be made from it. Many a good idea has withered on the vine for want of appreciation of its commercial potential. Samuel Morse, for whose development of the electric telegraph Jackson claimed credit, and took him to court over it, spent ten years promoting it at his own expense before he began to reap even a meagre reward.³ Jackson built his house in the woods, and no one came. Morton put a large sign outside his. In fact, Morton's great contribution, apart from his demonstration of the feasibility of general anaesthesia, was that he saw that there was money to be made from it. Richardson reports, (although one would never draw attention to this in public), that even John Snow, after meeting a druggist bustling along with a large ether apparatus under his arm, thought to himself: 'If he can get an ether practice, perchance some scraps of the same thing might fall to a scientific unfortunate'. In our own time, when it was at first believed that five would be adequate for the needs of the whole country, the presence of the computer in so many homes is due entirely to the entrepreneurial activities of Clive Sinclair and Alan Sugar, who, in the early 1980s, saw that there was money to be made from it. Mr Wolfe, while allowing Morton his just due: 'He *did* introduce ether anesthesia to the world, and proving it was not without its concerns and risks' insists that it is his motives and methods that should be impugned. But it was those motives and methods that were needed to ensure the wide adoption of surgical anaesthesia.

In determining where the balance of credit between Morton and Jackson should lie, it is vital to consider the sequence of events. Because Mr Wolfe's approach is thematic rather than chronological, and at times discursive, this is not easy, but it is instructive to construct one's own time-line. From this it becomes evident that the crucial period in the relations between the two was from 23 October to 13 November 1846. Here there is room only for a bare account; but firstly, it must be appreciated that the events of the last quarter of 1846 were taking place against the background of the explosive take-off, after ten years of development, lobbying, public demonstrations and inducements, of Morse's electric telegraph. Here was one source of Jackson's discontent. He did not want to be left behind again.

It is not disputed that in June 1846 Morton entered into a contract with Grenville Hayden that he should, for a salary, take over the running of Morton's very successful and lucrative practice, in order to allow Morton to have more time to continue his experiments into the anaesthetic effects of ether. Also, Eddy, the lawyer, testified that Morton first enquired from him in early October about the feasibility of a patent, before his first public demonstration at the Massachusetts General Hospital on 16 October, which Jackson did not attend. Morton approached Eddy again on 21 October. Eddy enquired whether Jackson had played any part, as he had heard. On 22 October Jackson declined to be involved. He said he had not assisted Morton with his experiments, and did not want his name associated with the discovery. On 23 October Eddy urged Jackson to associate himself with Morton in the patent, and began to draw up the specification. This, having been read and approved by Jackson, was copied to Morton. On 27 October the patent papers were executed, receipt being recorded at the Patent Office on 10 November. On 12 November the patent was granted to Jackson and Morton, and the final seal was attached three months later.

Obviously the patent document is essential evidence in the adjudication of the ensuing dispute, but Mr Wolfe gives us only a broad description of it. He does not provide the full text, from which we could make up our own minds, but cites several publications where it can be found, none of them readily available to the ordinary reader. Fortunately it was reproduced by Dr Duncum as Appendix No.1 to her history of inhalation anaesthesia, of which Mr Wolfe appears to be unaware. Also, he does not tell us that since 1946, if not earlier, the US Patent Office has been unable to produce the original document.

The preamble to the patent specification states: 'Whereas, I, Charles T Jackson, of Boston, in the state of Massachusetts, chemist, have in conjunction with Wm T G Morton, of the said city, dentist, invented or discovered a new and useful improvement in surgical operations on animals, and likewise the said Morton is desirous of procuring a patent for the same, and whereas I am desirous of benefiting him, and not to be interested in any patent, I do, therefore, in consideration of one dollar, assign, set over, and convey to Morton all the right, title, and interest, in the said invention and discovery'.

In the patent specification, the applicants refer to themselves in the plural, with no indication that they are not equal participants. For example, 'we do hereby declare that the following is a full and exact description of our said invention or discovery'. Also, 'From the experiments we have made we are led to prefer the vapours of sulphuric ether to those of muriatic or other kind of ether ...'. Furthermore, it is implied that they had jointly gained considerable experience in the use of ether as a general anaesthetic: 'In order to render the ether agreeable to various persons, we often combine it with one or more essential oils having pleasant perfumes'. Also: 'We sometimes combine a narcotic preparation – such as opium or morphine – with the ether'.

But on 22 October Jackson had denied any connection with Morton's experiments. Either he was lying then, or when he signed the patent application. What does Mr Wolfe say about all this? Nothing; and whether his silence signifies embarrassment or approval we cannot tell. Not a word even when, on 13 November, the day after the granting of the patent, Jackson wrote to his friend Elie de Beaumont in Paris, claiming the entire discovery as his own. Surely the two-word epithet applied by Mr Dulles in 1956 to the best prime minister we had at that time, succinctly impugning both his uniplicity and his legitimacy, could have been applied with even greater justification to Jackson 110 years earlier. But Mr Wolfe makes no

attempt to analyse this sequence of events, passing off Jackson's action with the explanation that: 'It grated on Jackson's professional pride and ethical viewpoint that anything so beneficial to humanity should be regulated or restricted by letters patent'. But Jackson, in the preamble to the patent, had stated clearly that he was desirous of benefiting Morton. The obvious explanation, and the only one that makes sense, and is borne out by his actions up to that time and after, is that until 23 October at the earliest, Jackson had no idea at all of the importance of the discovery. Even on 27 October, when he signed the patent application, he had no conception of its significance. Only during the next two weeks did the penny drop, and it dropped with a resounding clang. Only then did he start to clamber on to the bandwagon, stamping on Morton, and trying to kick him off, as he did so.

Mr Wolfe spends twelve pages summarising the long, balanced, and ultimately pro-Morton account of the discovery by the lawyer Richard Dana, published in the popular Boston periodical *Littell's Living Age*, and reaches the conclusion in three dismissive paragraphs that it not only does nothing to advance Morton's claim, but damages it. Miraculously, *Littell's Living Age* is now available on the World Wide Web,⁴ so we can all read Dana's article, and form our own opinion, which in this reviewer's case is quite the opposite. It is difficult to believe that Mr Wolfe was reading the same text. Then there was the occasion when Morton found his public standing and his practice virtually destroyed, because someone, purporting to be Morton himself, had threatened to take court proceedings against some patients in his debt. Mr Wolfe refers to this as a 'curious incident'.

In spite of all his shortcomings, Morton was able to inspire loyalty in some influential Bostonians, who were prepared to support him financially in his quest for Congressional recognition and reward. Mr Wolfe is scathing about Morton's expenditure in Washington, entertaining congressmen and suchlike. His comments read wryly in the wake of the Enron scandal. To paraphrase William Harvey, he writes of politics like a librarian, but that, of course, is to his credit. Mr Wolfe provides a great deal of information about Morton's applications to Congress, Jackson's blocking tactics, and the treatment that Morton received from him and the politicians, showing that trawling and digging for dirt, smearing, spinning, equivocation, procrastination, dirty tricks, false promises - even from the President himself, would you believe it, duplicity, triplicity, backstabbing, front stabbing, and stabbing vertically upwards, are not recently introduced phenomena in the District of Columbia.

In his last three chapters Mr Wolfe considers the place that should be occupied by those principally involved in the introduction of general anaesthesia. Rightly, he places Wells first, but devotes much space to the rehabilitation of Jackson. Morton receives short shrift; but without Morton nothing would have happened. It is true that Wells continued sporadically to use nitrous oxide in his dental practice, but for sustainable general anaesthesia an agent was needed that could be given with adequate air. Jackson was not going to do anything, and no one else was looking. It was left to Morton to start the wheel turning.

Fulton and Stanton, after considering all the evidence, concluded that their studies 'all support Osler and Welch in their conclusions that Morton rather than Long, Wells, or Jackson, deserves primary credit for the introduction of surgical anaesthesia'. They go on to say that: 'Morton would undoubtedly have rested his case and not reopened it in the spring of 1847, had he not been forced to do so by Jackson's aggressiveness. There can be little doubt that Morton was justified in defending himself publicly against Jackson's agitated claims and his insidious opposition to every attempt, public and private, to give Morton credit for his

achievement'. Nothing that Mr Wolfe has uncovered about Morton's early years provides a reason for disputing this judgement.

Mr Wolfe omits mention of some significant publications, for example that of the late Richard Ellis on Everett's letter,⁵ which preceded Bigelow's. There are one or two misprints in the text, and one or two places where re-phrasing would have improved clarity. Some readers may find the amount of detail about the Morton family's land dealing excessive, but these might well be valuable to a social historian. Fortunes were being made in real estate, by J J Astor in Manhattan, for example, and W B Ogden and Charles Butler in Chicago. No doubt the Mortons, also, were hoping to strike lucky.

Mr Wolfe is, rightly, a confirmed Wellsian. He rightly considers that Morton was unfair to Wells, and was probably responsible for the slanted account of the unsuccessful public demonstration in Dana's article, which has so overshadowed his contribution. This may well be so, but the injuries done to Morton by Jackson and his lawyers were far greater, and Mr Wolfe may find that by whitewashing them he has defeated his own ends. Readers may come to feel sympathy for Morton, which is the last thing he wants. So let us hope that Mr Wolfe will find it in him to produce a more considered and balanced account in a second edition of this valuable book.

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