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SPECIAL ARTICLE

John Snow, Thomas Wakley, and *The Lancet*⋆

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Prologue

Few doctors gain fame as pioneers in one field; fewer still in two. Our contemporary, Sir James Black, is one of the latter: a Nobel Laureate, he developed two families of drugs – beta-adrenergic blocking agents, and H_2 inhibitors. John Snow is another: a pioneer of inhalation anaesthesia, he also proposed [1] then clarified [2] a role for faecally polluted matter in the spread of cholera. This latter discovery is stamped on the medical memory by the alleged termination of a cholera outbreak in an area just east of Regent Street when on 7 and 8 September 1854 Snow persuaded the St James's parish vestreymen to remove the handle from the water-pump in Broad (now Broadwick) Street. (In fact the outbreak was nearly over before the pump handle was removed! [3].)

Nevertheless, the 'Broad Street pump-handle affair' serves as a dramatic *coup de théâtre* and is seared into medical folk-lore while his definitive work on the Lambeth, and Southwark and Vauxhall, companies' water supplies lies largely unknown outside the ranks of the epidemiological *cognoscenti* (and often within their ranks as well!) and was largely ignored selling only 56 of the 300 copies printed leaving poor Snow to lament: 'I spent more than £200 in hard cash and realised in return scarcely as many shillings' [4, p. xxii]. The way of the prophet is hard indeed. This article will consider Snow's anaesthesia work most particularly as seen through the eyes of *The Lancet*, then owned and edited by Thomas Wakley and the premier journal-cum-medical newsletter in the English language. Since this meeting of the Association of Anaesthetists of Great Britain and Ireland is in Belfast I will start with a short description of the first operation under ether anaesthesia in Ireland on New Year's Day 1847.

The first ether anaesthesia in Ireland

The British and Foreign Medical Review is long defunct but it was a leading journal in its day. Like many periodicals it appeared on news-stands before its stated date of issue. Those who read Saturday's *Lancet* or *BMJ* on Friday, Tuesday's *Hello Magazine* the previous week-end, or February's *Playboy* in January will be familiar with this marketing ploy. So it was that the *Review* for January 1847 was circulating at Christmas 1846. One reader was Edward Hutton a surgeon at the Richmond Hospital in Dublin. Hutton was drawn to two letters from Boston, a long one from Dr John Ware and a short one from the surgeon, John Collins Warren, who had excised a neck tumour under ether anaesthesia on 16 October. There followed a long extract from an article by Dr Henry Jacob Bigelow Jr., published in *The Boston Medical and Surgical Journal* (forerunner of *The New England Journal of Medicine*) in November which reported several major operations using ether anaesthesia and giving unambiguous precedence to the Boston dentist, William Thomas Greene Morton, who had in fact anaesthetised Warren's patient [5]. The editor of the *Review*, Dr (later Sir) John Forbes, included as a postscript his own eye-witness account of Robert Liston's two pioneering operations under ether anaesthesia at University College Hospital London on 21 December, the first such in Europe [6].

Meanwhile, back at the Richmond Hospital a mid-arm amputation was listed for 31 December The patient was Mary Kane, an 18-year-old from County Meath with suppurative arthritis of the elbow-joint following the prick of a thorn from a hawthorne branch. She was not a patient of Hutton but of his colleague, Dr John MacDonnell (Fig. 1). MacDonnell was from Belfast, younger son of Dr James MacDonnell who was the principal mover and shaker in founding in the 1790s the Belfast General Dispensary and Fever Hospital (ancestors of today's Royal Victoria Hospital) and much more besides [7, 8]. Hutton showed the *Review* to MacDonnell who postponed the operation for 24 h and used the time to construct a crude ether dispenser which he tested on himself 'rendering myself insensible for some seconds, five or six times'. On Friday, 1 January 1847, he proceeded with the amputation under ether anaesthesia assisted by his hospital colleagues and in front of 'several eminent

physicians and surgeons of Dublin' and an opportunistic class of students who happened to be on site. The patient felt nothing until she came around in time to see MacDonnell 'put a thread in my arm' [9]. Eight days later he could tell the Surgical Society of Ireland that 'I now looked on the patient as perfectly safe … I have never seen any case turn out so completely favourable' [10]. Such was the first case under ether anaesthesia in Ireland: it was 11 days after its first use in London, 10 days after Paris, but 3 weeks before Berne, 4 before Vienna, and 6 before The Hague. No longer would a surgeon, in the familiar words of Celsus, 'need to be void of all tolerance and pity and entirely deaf to the shrieks and outcries of his suffering patients'.

On the very evening of the operation, New Year's Day 1847, nowadays a public holiday, MacDonnell, in his residence (4 Gardiner's Row), wrote-up the case in some 2000 words and sent, or perhaps even personally delivered it, to the editor of *The Dublin Medical Press* at his residence (23 Ely Place) nearly two miles away across the Liffey. The article concluded with the prophetic if somewhat florid words:

> 'I regard this discovery as one of the most important of the century. It will rank with vaccination and other of the greatest benefits that medical science has bestowed on man … it offers … an occasion beyond measure more worthy for *Te Deums* in Christian cathedrals and for thanksgiving to the Author and Giver of all good, than all the victories that fire and sword have ever achieved' [9].

The literature (such as it was) had been read, a workable if crude apparatus extemporised, constructed, and tested on a human volunteer, the operation performed successfully, and the case report prepared, posted, proofed, printed and published in a national journal on 6 January, all in just 4 working days without the aid of fax, e-mail, internet, electronic typesetting, word processing or even telephone. Only 'informed consent', not yet invented, was missing. The energy and urgency of the Victorians rarely ceases to amaze.

Figure 1 John MacDonnell (1796–1892) in later life. From a sepia print in a family album. (Supplied to me by Professor Eoin O'Brien, Dublin, and reproduced by permission of Mrs Louise Shorter, Kilsharvan, County Meath.)

John Snow and Thomas Wakley

The editor and co-founder (with Henry Maunsell) of *The Dublin Medical Press* was Arthur Jacob who shone even at this zenith of Dublin medicine crowded as it was with such luminaries as Robert Graves, William Stokes, Dominic Corrigan, John Cheyne, Robert Adams, Abraham Colles and William Wilde, an impressive *coterie* of eponymous fame who in fact formed only the tip of a larger iceberg. Jacob had impressive credentials. He was the first to describe the layer of retinal rods and cones (Jacob's membrane) and rodent ulcer (Jacob's ulcer) and he held the chair of anatomy at the Royal College of Surgeons in Ireland for 40 years. He was also an inspired commentator and formidable controversialist second only to Thomas Wakley as a medico-political polemicist and he modelled *The Dublin Medical Press* mainly on Wakley's *Lancet*. Wakley had founded *The Lancet* in 1823 and used it as a vehicle for his polemical and often abusive writings which were of a pungency and incisiveness never before or since displayed in medical literature and rarely outside it; only in the vicious but inspired satirical cartoons of Gillray, Cruikshank and Rowlandson does one find an equal. It is now time to bring Wakley on-stage.

Thomas Wakley (1795–1862)

Wakley was born in 1795, the youngest of eight sons of an affluent farmer in Devon [11–15]. He early showed his pugnacious independence by sailing in his early teens as a

cabin-boy with an East Indiaman to Calcutta which exposed him to some of life's brutalities and corruptions and awoke in him a passion for their relief which never left him. In 1815, he entered the medical school of the United Hospitals of Guys and St Thomas's which at that time faced each other across St Thomas Street before St Thomas's buildings were demolished to make way for London Bridge Station in 1862. Qualifying MRCS in 1817, he was even then an impressive figure – tall, strong, handsome and vigorous, a good athlete and boxer, hospitable and gregarious but generally abstemious and a life-long non-smoker. Behind this, however, lurked a stern disciplinarian and moralist exacting and demanding the highest standards of personal and public rectitude and behaviour. His more redoubtable enemies may not always have quailed before his onslaughts but they never underestimated him: 'utterly fearless and determined; a man who could crush an enemy as he would a wasp', said one; 'He was a Nasmyth's hammer', said another; 'The power of the man was apparent ere even a word was spoken', said a third [16]. Always a formidable debater, controversialist and orator, he was already a public figure when he entered Parliament in 1835 as a radical member for Finsbury; and like most Victorian polymaths he had a prodigious capacity for work combining for many years his ownership and editorship of *The Lancet*, his parliamentary duties, and the office of coroner for West Middlesex, one of the greatest reforming coroners in English history. He was also a darling of the Trade Union movement, hero to the Tolpuddle martyrs, writer of radical tracts and maker of radical speeches but, somewhat paradoxically, also a landlord who vigorously applied the draconian gaming laws on his country estate at Harefield Park, later to become the residency for Harefield Hospital.

Quackery, chicanery, nepotism and charlatanism were Wakley's ultimate enemies, an unreformed and unregulated profession which allowed them were his immediate ones, and this put him on a more or less permanent collision course with the *status quo* and the medical corporations and their atavistic leaders, and he was forever railing against 'The dull, feeble exclusiveness of the Royal College of Physicians, the tyranny and ineptitude of the Royal College of Surgeons, and the pettifogging malice and rapacity and imbecility of the Society of Apothecaries', whose Warden and Court he forever referred to as 'the old hags of Rhubarb Hall' [17, 18]! The medical corporations were to him an abscess on the body of the profession which had to be incised, the title of *The Lancet* was not idly chosen. George Eliot (*Middlemarch,* Book 2, chapt. 16) sums up the general attitude of the profession when she gives the country practitioner, Dr Sprague, the following words:

> 'I disapprove of Wakley, no man more; he is an ill-intentioned fellow … There are men who don't mind being kicked blue if they can only get talked about. But Wakley is sometimes right', Dr Sprague added judicially, 'I could mention one or two points on which Wakley is in the right'.

We may not know today where the profession is going, but those who want to know where it is coming from could do worse than read Wakley's *Lancet* leaders over nearly 40 years. He planned to both *in*form and *re*form; or to adapt what was said of C.P. Scott, the editor of *The Manchester Guardian* in its greatest days, his editorials not only educated but they comforted the sick and sickened the comfortable.

Like all great lampoonists and polemicists, Wakley spiced his pungency with wit. As an example, introducing a case report of ectopic viscera, Wakley wrote:

> 'The following case of misplaced viscera is particularly curious. We believe, however, that several examples of a similar kind are to be found among the Court of Examiners in Lincoln's Inn Fields – we anticipate, for example, that when a postmortem examination of [a Royal College of Surgeons President] Sir William Blizard shall be instituted, that the liver of this bitter knight will be found in his cranium for during the whole of Sir William's life his mouth has been performing the office of a *ductus communis choledochus'* [11, pp. 204–5].

Eventually after 40 vigorous years and many libel-suits Wakley's great strength ran out, he handed over *The Lancet* to his youngest son, James, and retired to Madeira where he died after an haemoptysis in May 1862 aged 67. Characteristically at his death he was exposing the illicit export to England of pseudo-Madeira wine!

Like many who made things happen, things happened to Wakley. Within 6 months of marriage to an heiress and when established in an affluent practice yielding £700 p.a. at 5 Argyll Street in the West End which his father-in-law had obligingly bought for him, his biographer writes:

> 'Within six months after his marriage his home was broken up, his house burnt to the ground, his health temporarily impaired, his practice well-nigh destroyed, his reputation gravely impugned and the slanders that were rife about him were as widespread as they were malignant' [11, pp. 36–7].

A gang had burnt down the house and attacked Wakley and left him for dead because rumour said that Wakley had been involved in the recent executions of five of the leaders of the Cato Street conspirators who

were hanged and decapitated outside Newgate on May Day 1820. After the bodies had hung for the prescribed 30 min a masked man in a top hat and sailor suit climbed onto the gallows and expertly decapitated the corpses, for which he was paid £20. Since a corpse is difficult to behead the rumour grew that the masked decapitator was an anatomist or surgeon – which was reasonable; that he was associated with the nearby Webb Street Anatomy School – which was feasible; and that he lived in or about Argyll Street – which was wild speculation. Wakley had attended the Webb Street School, knew the proprietors (the Grainger brothers) and was the only surgeon in Argyll Street. Ergo, he was the decapitator and the gang's supporters took their violent revenge. (The decapitator was, in fact, Tom Parker, then the dissecting-room porter and resurrectionist at the Webb Street School – in this respect rumour was correct – but he was a stranger to Argyll Street. He later became chief anatomy porter at St Thomas's Hospital.)

This incident led to the first of Wakley's numerous libel actions when James Johnson, surgeon to the Duke of Clarence (later William IV), then editor and proprietor of *The Medico-Chirurgical Review* (a competitor of *The Lancet*) and who was native of Antrim, suggested that Wakley had burnt down his own house for the insurance money and wrote of him as 'Lucifer – the fire factor' [19]. This gave Wakley his day in court and cost Johnson £100 in damages. Wakley never forgave him and in his most acerbic style – not irrelevant when I later consider *The Lancet* and John Snow – Wakley commented:

> 'Johnson had all the morality without a scintilla of the intellect of Machiavelli', he wrote …'His bad faith as a controversialist was in a great degree neutralised by his utter feebleness, and his desire to make dupes of his readers was counteracted by his want of power to deceive. In his method of arguing he resembled a clumsy card-sharper who, with all imaginable disposition to slip a card, had not sufficient guile to elude the vigilance of the spectators. He was disingenuous without plausibility; and dishonest without dexterity. He had the wriggling lubricity without the cunning of a serpent. Such was the editor [of the *Medico-Chirurgical Review*]' [20].

John Snow (1813–1858)

Snow was from a different world. Born in York on 15 March 1815 the eldest of nine children of a 'farmer' (more likely an unskilled labourer) [21], he had some elementary education at a dame's school before being apprenticed to a surgeon-apothecary in Newcastle through the help of an affluent uncle [22]. Assistantships followed, ambition grew, London beckoned and he entered the Hunterian School in Windmill Street and walked the wards of the Westminster Hospital becoming MRCS (in May) and LSA (in October) 1838 aged 25. Necessity led him to put up his plate in Soho while hope led him to move from the squalid 11 Bateman's Buildings, Soho Square, round the corner to the more comfortable 54 Frith Street, but to small effect and he had ample time to haunt meetings of local medical societies and to read voraciously. Within 2 months of qualifying he was writing to the popular *London Medical Gazette*; within another month he was an active member of The Westminster Medical Society (and later – 1855 – its President as The Medical Society of London) and he was soon publishing communications on resuscitation and chest conditions in which he showed an interest in instrumentation and mechanics. A colleague (Joshua Parsons) recalls Snow at this time as 'not particularly quick of apprehension or ready in invention, but yet he always kept in the foreground by his indomitable perseverance and determination', adding later that these were 'the same mental qualities which have marked him ever since' [4, pp. i–xliv]. He also sought to boost his practice by taking the MB (second division) of London University in November 1843 and the MD (first division) in December 1844, so that he was now 'Dr' and not 'Mr' Snow. But it was to no avail and he remained, as he said, 'encumbered with four sick clubs', acted as an unpaid, temporary, non-resident, out-patient physician dogsbody at Charing Cross Hospital, and saw depressingly few, if impressively poor, patients at his rooms. From 1847, his new anaesthetic practice brought its rewards allowing him in 1852 to move to the opulent 18 Sackville Street off Piccadilly and to enjoy fees of up to £1000 a year. But his now heavy anaesthetic case load, which he so meticulously recorded in his Case Books over 10 years, did not prevent his attendance at meetings and supplied ample material for professional publications, yet he still found time to develop his ideas on cholera and contagionism and his general theory covering communicable disease causation by what he termed 'continuous molecular change' – whatever that is [23]!

On the evening of 9 June 1858, he joined a select group of colleagues in the home of Dr (later Sir) Richard Quain, member of a well-known Cork family, later President of the General Medical Council and the subject of Sir John Millais's last portrait (which hangs in the Royal College of Physicians). Their shared interest was the new bi-aural stethoscope and they planned to set up an investigative committee into the cause of the first heart sound. Snow agreed to be a member. The next morning he had stroke and died a week later aged just 45.

Reception by The Lancet of Snow's work

I now refer to the reception *The Lancet* gave to Snow and his work. Perhaps we shall find that enthusiasm which in retrospect both deserve. Perhaps we shall find only lukewarmness and a grudging acceptance. Perhaps we shall find criticism, or worse – apathy. Perhaps we shall find little contemporary indication that an association of anaesthetists would later establish an eponymous lecture in his memory.

The early signs were unpromising. Ten days after Snow's death *The Lancet* carried his death notice. It was to be the journal's only one. It appeared in the regular Births, Marriages and Deaths section and reads:

> 'Dr John Snow – This well-known physician died at noon on 16th instant at his house in Sackville Street, from an attack of apoplexy. His researches on chloroform and other anaesthetics were appreciated by the profession' [24].

And that is all. Three lines. No obituary, nor panegyric then or later. No mention of his work on cholera. The final sentence in fact makes the *cliché* about damning with faint praise seem almost charitable and could be seen as a slight on the many thousands of patients who had by then 'appreciated' anaesthesia, as had the profession, not to mention the Queen whose medical advisors had consulted Snow as early as 1850 over the birth of Prince Arthur and had engaged his services for the births of Prince Leopold (7 April 1853) and Princess Beatrice (14 April 1857). Admittedly, the *BMJ* gave Snow only two lines [25], but it didn't at the time run to obituaries. *The Lancet*, however, did: the same (6-month) volume of *The Lancet* which carried Snow's curt death notice ran lengthy obituaries of up to 85 lines for such impeccably forgettable worthies as – J Forbes Royle, Sir James Fellowes, Alderman Brown, Dr Thomas Ralph, Professor Gregory, Professor Harrison, Dr William Boyle Chevasse, J Pollock Holmes, Charles Fowler, and Professor Müller! How different is the notice in *The Medical Times and Gazette*. It ran to 31 lines and opened with the ringing phrase:

> 'We announce the great pain and grief of the death of our distinguished and estimable brother Dr Snow',

and then goes on to place him alongside the chloroform pioneer, Dr J Y Simpson (later Sir James Simpson, Bart.) and to comment favourably on his cholera work, and finishes with what was nothing less than the bare truth:

> '… for several years the leading surgeons in London constantly sought his co-operation' [26].

Admittedly there were no 'anaesthetists' in those days, merely doctors who administered ether or chloroform ancillary to their other practice, and were classed as 'auxiliaries' in the extended surgical teams. Naturally Snow didn't sign the medical bulletins announcing the Royal births of Leopold and Beatrice [27] and was never a member of the Queen's Medical Household, but nonetheless *The Lancet's* brief notice appears unduly shoddy. Was it by design or chance, conspiracy or cock-up, the eternal enigma of history?

Consideration of the evidence

The Lancet and anaesthesia

Counsel for *The Lancet's* defence would have an argument. Snow died when he was just 45 and had achieved only local and limited prominence. His most important book on anaesthesia was not published until after his death [4]. Like many pioneers and trailblazers his fame is largely in retrospect. Even his cholera work, now seen as seminal, had a very limited impact and was severely down-played in his life-time crucially by Sir John Simon, the influential Medical Officer to the Privy Council, though who later made amends in his textbook but this was in 1890 in the light of hindsight and 32 years after Snow's death [28]. Moreover, many men of influence believed 'the supposition that the choleraic infection multiplies rather in air than in water' [29] and when Snow died few unreservedly accepted his water-borne hypothesis. At his death, Snow may have been included as among the good and righteous but not among the great or those whose ideas were widely accepted. Furthermore, Wakley's style was to expose evil, not trumpet good; to attack corrupt institutions and individuals not their intellectual ideas. The introduction of ether into anaesthetic practice from January 1847 is a case in point. Between January and June there were no less than 105 entries in *The Lancet* index under 'ether', so Wakley could not be said to have down-played its use. His first substantial leading article about it on 21 January, however, dealt not with its efficacy, still less with MacDonnell's *Te Deums*, but with its exploitation for personal gain through the use in the USA of patents taken out by the Boston dentist, Morton, to protect the Jackson and Morton 'etherisation' machine called the *Letheon*.

> 'This American patent stands in the name of Dr C F Jackson of Boston … and Dr Morton the discoverer. This question of patent is a stain upon the whole matter … the thing is far too noble to be clogged with a mere commercial transaction. Not that Dr Morton should pass unrewarded: he deserves [not patents] but the gratitude and reward of every civilised people and government upon the face of the earth: he will have we should hope too strong a claim upon their

spontaneous gratitude to need to resort to compulsory reward …' [30].

'Spontaneous gratitude' was hardly the reward which Jackson and Morton sought and the question of patent was to rumble on. Wakley did not return to ether for 3 months, and again no *Te Deums* but a chiding of the London surgeons for not auditing their results with ether anaesthesia and he pushed his son, Thomas Jnr., a surgeon at the Royal Free Hospital, into organizing an extensive survey [31]. By November, *The Lancet* index entries for 'ether' were down to nearly zero as etherisation lost its novelty [32], and with no associated scandal or blatant misuse to attack, ether anaesthesia passed from Wakley's attention.

Similarly with chloroform which soon replaced ether. There were 14 indexed entries for 'chloroform' in the 1847 *The Lancet* all after Simpson's historic description [33], 125 in 1848 as against a mere 13 for 'ether', 45 in 1849 with only two for 'ether', and subsequently a quickening stream as chloroform gained in use but a dried-up one for ether which didn't.

Through all this, Wakley remained strangely disinterested no doubt because nothing smacking of malpractice, corruption or negligence caught his eye. Then in January 1851, after nearly 4 years of editorial slumber, he awoke roused as always by a perceived professional abuse, i.e. that pain-relieved operations were encouraging 'operating-mania … whereby promising young men carve their way into practice'. To him this was doubly reprehensible because to the hazards of surplus surgery were now added the attendant risks of chloroform anaesthesia. As he saw it ambitious young bucks were building their careers (and bank balances) unprofessionally [34] and when later it was reported in the *Association Medical Journal* (from 1855 *The British Medical Journal*) that Queen Victoria had been given chloroform during Prince Leopold's birth in April 1853 [35], Wakley was quick to question its veracity writing scathingly 'probably some officious meddlers about the Court so far overruled Her Majesty's responsible professional advisers as to lead to the *pretence* of administering chloroform': he held strongly that general anaesthesia had no role in normal labour and, hardly a trifling consideration, the Queen might have died [36]! Had he accepted the reports as true and known that Snow had administered chloroform 'on a folded handkerchief' with each Royal contraction for 53 min even without removing consciousness, he would not have been best pleased with Dr Snow and was even less pleased when he later came to acknowledge the truth!

The Lancet and cholera

Wakley was also critical of Snow's work on cholera though for different reasons. He disagreed with Snow's theories but this in itself was not provocative since he could be tolerant of scientific and intellectual controversy. More important to him was Snow's evidence to parliamentary committees and commissions that unless acutely and overtly toxic, atmospheric as distinct from water pollution and including 'odours and gases' was not in the generality harmful to health. This seemed to support the contemporary *laissez-faire* approach to industrial aerial pollution including that of 'offensive trades', and would help to frustrate many of the public health reformers' objectives and so to give a green light to some of the worst of opportunistic industrialists whom Wakley passionately opposed in *The Lancet*, in his coroner's reports and previously in parliament itself [37]. His editorials on this point didn't miss Snow! [38, 39]

The personalities of Snow and Wakley

To add to all this, Snow, unlike Wakley, was the epitome of the genus 'unclubbable'. A quiet, reserved, shy, non-smoking, virtual teetotaller and for a time a vegetarian, content with his own company and his books, unmarried, of regular habits, given to simple pursuits and light exercise and of such monastic seclusion outside his work that as his highly sympathetic friend and biographer Dr (later Sir) Benjamin Ward Richardson puts it, 'in his last years of his life he so far threw off all restraint as to visit the opera occasionally'. He took no interest in politics or current affairs though he was a loyal member of the BMA, enjoyed visual art but read no novels because to do so was time 'thrown away', and 'the experiences of life instead of entwining around him the vices of the world, had instead wearied him from them'. He was a bad speaker, had a low, husky voice difficult to make out, and though he wrote well and enjoyed a few close friends, he was not generally popular with his colleagues although they were pleased to make use of his skill [4, 40]. He may have been eminently worthy and an exemplary professional but he was dull company to most and certainly no bundle of laughs! I don't know if he every met Wakley. Like Wakley he was a member of the Royal College of Surgeons and of local medical societies; he had articles and letters published and books reviewed by *The Lancet* and attracted editorial comment; and his cholera work was topical when Wakley was a coroner and a recent sanitary-minded MP. So perhaps they might have met. However, he would not have empathised much with the flamboyant, almost foppish and dandified, sartorially ornate to the point of being *outré* gregarious political animal and showman that was Wakley and as is so apparent from his familiar portrait. I can't see the grim-looking, drably clad Snow as portrayed in his best known photograph (Fig. 2), having the clothes which Wakley inventoried at his marriage aged only 24 and which included 20 pairs of

Figure 2 Dr John Snow (1813–1858). A photograph in the series *Literary and Scientific Portrait Club*. (Bowerbank J S. *Literary and Scientific Portrait* Club. London: Heinz Archive and Library of the National Portrait Gallery.)

Figure 3 Thomas Wakley (1795–1862). Engraving by W H Egleton from a painting by K Meadows. (Reproduced in Sprigge SS. The Life and Times and Thomas Wakley. London: Longman, 1897.)

trousers, six pairs of black silk gloves, numerous shirts, and eight purple and seven green silk handkerchiefs, the whole wardrobe valued at £150 (at least £12 000 in to-day's money!) [11, pp 65–6] (Fig. 3). Even if they never met, vibes across the aptly termed ether would have ensured disharmony.

Interim conclusion

Given all the above there is a *prima facie* case that the dismissive response of *The Lancet* to Snow's death was not altogether unintentional and it might indeed have been considered as appropriate.

Further evidence

Further evidence is largely circumstantial. At his death Snow had all but completed his text *On Chloroform and Other Anaesthetics*; in fact he was literally at work on it when he had his fatal stroke. It was edited and completed by Benjamin Richardson 4 months after Snow's death [4]. It was reviewed in *The Lancet* for 27 November 1858, 1 month after publication [41]. The anonymous reviewer is almost adulatory about Snow:

> 'We have nothing but good to say of Dr Snow, living or dead. He was a potent and earnest worker for the good of his fellow-men, one of those practical philanthropists whose efforts were nonetheless meritorious because they were exerted for his own advancement as well as for the benefit of others. A professional man who takes no heed of his own well-being can have little opportunity of taking hold

> of the welfare of those submitted to his care … With the introduction and application of chloroform the name of Dr Snow will be permanently connected … The present work is by far the best treatise on the subject which we possess … [he was] a careful [anaesthetic] manipulator who could be relied upon, almost alone amongst many, to administer this agent with all the precautions necessary to ensure safety … The man who has left us such a legacy cannot be said to have lived in vain.'

And so on. But who was the anonymous author of this hagiology? If it was Wakley or if the copy was approved by Wakley we could say that *The Lancet* fully atoned for its curt Snow obituary. Certainly at that time, Wakley was an occasional reviewer and even as late as 1858 'he was the absolute dictator of the policy of the paper and the most powerful and impressive leader-writer on the staff' [11, p. 490]. This could suggest that he wrote or at least approved it. Consideration of the review's form is unhelpful because *The Lancet* house style produced uniformity. Consideration of content is more useful because reviewers had considerable freedom of expression. The review contains many technical comments and the author has an enthusiasm for chloroform anaesthesia, and neither of these would suggest Wakley. As against this the review opens with a defence of *The Lancet* against Richardson's failure to compliment it on its alleged support for Snow: if the support were patent or exceptional this criticism could have been validly made by any reviewer; if it were not but required special pleading, it could suggest Wakley or a *confrère* who would be keen to defend the journal and its role and frustrate further criticism. It is worth briefly considering the question.

Richardson's alleged gracelessness

The reviewer writes:

> 'it would have been only graceful and becoming if its writer [Richardson] had at least alluded to the active part taken by *The Lancet* in bringing Dr Snow's merits before the professional world at a time when such an encouragement was all-important to him – when he was comparatively unnoticed and unknown and struggling at the painful commencement of what must always be an arduous career'.

I may have missed something but I fail to see what 'active part' *The Lancet* played other than in doing its journalistic duty. First, it published many of Snow's communications, but this was unexceptional at the time; indeed it is what the journal was for. Anyhow we don't know how many it might have rejected. Second, it reported many of his contributions to medical societies notably the Westminster (later to be The Medical Society of London) and to other bodies, but this was along with those of other members; there does not seem to have been discretion in his favour. Third, it reviewed his publications but often luke-warmly. Fourth, it commented editorially on his work, sometimes unfavourably! Fifth, it had no claim to monopoly of his output; other journals accepted and commented on his work. Perhaps Richardson chose to ignore the 'active part' of *The Lancet* for the simplest of reasons – there wasn't one! To argue that there was smacks of special pleading. This could strengthen the case for Wakley or a sympathetic *confrère* as the author of the review. I think the latter more likely since Wakley, the pungent satirist and master of the destructive phrase, who could incite, besmirch, slander and libel colleagues with facility and humour, would have found a more robustly censorious phrase in his journal's defence than 'it would have been only graceful and becoming …' when describing its alleged critic!

Comment

The identity of the author of the review is largely academic. The crucial point is that the columns of *The Lancet* carried within months of Snow's death and without the clarity of hindsight, a laudatory review of both the man and his work. With inhalation anaesthesia becoming general and safe (Snow had no deaths in over 4000 chloroform cases, often bad risk ones), with the *imprimatur* given to Snow's pre-eminence by the fact that he anaesthetised for over 30 leading London surgeons and included the Queen and members of the social and commercial *élite* among his cases and with MacDonnell's *Te Deums* now ringing loudly on all sides, a sympathetic appreciation was not only in order but would atone for the inadequate death notice. If Wakley had a hand in the review so much the better.

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References

1 Snow J. *On the Mode of Communication of Cholera.* London: Churchill 1849.
2 Snow J. *On the Mode of Communication of Cholera*, 2nd edn. London: Churchill 1855.

3 Hill AB. Snow – an appreciation. *Proceedings of the Royal Society of Medicine* 1955; **48**: 1008–12.
4 Snow J. *On Chloroform and Ether Anaesthetics: Their Action and Administration*, by John Snow MD, Edited with a Memoir of the Author by Benjamin W Richardson, MD. London: Churchill 1858.
5 Bigelow HJ. Insensibility during surgical operations produced by inhalation. *Boston Medical and Surgical Journal* 1846; **35**: 309–17.
6 Forbes J. On a new means of rendering surgical operations painless. *British and Foreign Medical Review* 1847; **23**: 309–12.
7 Froggatt P. MacDonnell, father and son. James (1763–1845), physician of Belfast; John (1796–1892), surgeon of Dublin. *Journal of the Irish Colleges of Physicians and Surgeons* 1984; **13**: 198–206.
8 Clarke R. *The Royal Victoria Hospital Belfast. A History, 1797–1997*. Belfast: Blackstaff Press 1997.
9 MacDonnell J. Amputation of the arm performed at the Richmond Hospital without pain. *Dublin Medical Press* 1847; **17**: 8–9.
10 MacDonnell J. Report to the Surgical Society of Ireland. *Dublin Medical Press* 1847; **17**: 71–5.
11 Sprigge SS. *The Life and Times of Thomas Wakley*. London: Longmans, Green 1897.
12 Brook C. *Battling Surgeon*. Glasgow: Strickland Press 1945.
13 Froggatt P. Thomas Wakley, *The Lancet* and the surgeons. *Journal of the Irish Colleges of Physicians and Surgeons* 1977; **7**: 1–9.
14 Froggatt P. *The Lancet*: Wakley's instrument for medical reform. *Journal of the Society of Occupational Medicine* 1979; **29**: 45–53.
15 Memoir of Thomas Wakley Esq. *Lancet* 1862; **i**: 609–12.
16 McMenemey WH. Thomas Wakley. *Lancet*., 1962; **i**: 1061–4.
17 Wakley T. Collectanea. *Lancet* 1825–6; **10**: 625.
18 Lancet 1828–9; **i**: 148–9.
19 Johnson J. Mr Bell's lectures at the College. *Medico-Chirurgical Review* 1826; **4**: 599.
20 Wakley T. Editorial. *Lancet* 1827–1828; **i**: 851.
21 Ellis RH. Introduction. In: Ellis, RH., eds. *The. Case Books of Dr John Snow*, (Medical History (Suppl.) 14), London: Wellcome Institute for the History of Medicine 1994: p. xii.
22 Leaman A. John Snow MD – his early days. *Anaesthesia* 1984; **39**: 803–5.
23 Snow J. *On Continuous Molecular Changes More Particularly in Their Relation to Epidemic Diseases*. London: Churchill 1853.
24 Lancet. 1858; **i**: 635.
25 British Medical Journal. 1858; **i**: 506.
26 Medical Times and Gazette, 1858: **16**: 633–4.
27 Mackintosh JM. Snow – the man and his times. *Proceedings of the Royal Society of Medicine* 1955; **48**: 1004–7.
28 Simon J. *English Sanitary Institutions.* London: Cassell 1890; pp 246, 259, 286.
29 Halliday S. Death and miasma in Victorian London: an obstinate belief. *British Medical Journal* 2001; **323**: 1469–71.
30 Editorial. *Lancet* 1847; **i**: 74–5.
31 Editorial. *Lancet* 1847; **i**: 392–3.
32 Review of Snow J. *On the inhalation of the vapour of ether in surgical operations: containing a description of the various stages of etherization and a statement of the results of nearly eighty operations in which ether has been employed*. London: Churchill, 1847. *Lancet* 1847; **ii**: 410–1.
33 Simpson JY. A new anaesthetic agent more efficient than sulphuric ether. *Lancet* 1847; **ii**: 549–50.
34 Leading Article. *Lancet* 1851; **i**: 54.
35 Bartrip PWJ. *Mirror of Medicine. A History of the British Medical Journal*. Oxford: British Medical Journal and Clarendon Press 1990: pp 127–9.
36 Leading Article. *Lancet* 1853; **i**: 453.
37 Pelling M. *Cholera, Fever and English Medicine* 1825–1865. Oxford: Oxford University Press 1978, Chapt. 6.
38 Leading Article. *Lancet* 1855; **i**: 634.
39 Leading Article. *Lancet* 1857; **ii**: 477–8.
40 Snow J. *Snow on Cholera, Being a Reprint of Two Papers by John Snow MD, Together with a Biographical Memoir by B. W. Richardson MD, and an Introduction by Wade Hampton Frost MD.* (Facsimile of 1936 Edition). London: Hafner, 1965: pp xxv–xlviii.
41 Lancet 1858; **ii**: 555–6.

