

## Robert Liston's Letter to Dr. Francis Boott: Its Reappearance after 135 Years

Richard H. Ellis, M.B., F.F.A.R.C.S.\*

ANESTHESIA first was used in England on Saturday, December 19, 1846, when, at the instigation of Dr. Francis Boott, a London dentist named James Robinson gave ether to a young lady at Boott's home and then extracted one of her molar teeth.<sup>1</sup> Dr. Boott was an expatriate American, then living in London,<sup>2</sup> and had heard of Morton's successful introduction of ether anesthesia in Boston from his long-standing friend, colleague, and fellow botanist Professor Jacob Bigelow.<sup>1</sup> As soon as he had received this news, Boott informed Robert Liston, who at the time was one of London's leading surgeons, and as a result England's first major operation under anesthesia was performed by Liston on Monday, December 21, 1846. The operation, amputation of a leg, was performed at the North London Hospital, by which name the present University College Hospital, London, then was known.

On returning home from the North London Hospital after this first major operation under anesthesia, Robert Liston wrote a letter to Dr. Boott thanking him for the information about ether and telling him of the day's historic happenings. On receiving this letter, Boott sent a copy of it to the *Lancet*, and this version was published in that journal's first edition of 1847. A detailed account of the introduction of ether anesthesia in Boston also was included, as was the news of Boott's and Robinson's first use of ether anesthesia in England.<sup>1</sup>

The *Lancet*'s version of Liston's letter read:

Clifford Street, Dec. 21, 1846

"My dear Sir,—I tried the ether inhalation today in a case of amputation of the thigh, and in another requiring evulsion of the great toe-nail, one of the most painful operations in surgery, and with the most perfect and satisfactory results.

"It is a very great matter to be able thus to destroy sensibility to such an extent, and without, apparently, any bad result. It is a fine thing for operating surgeons, and I thank you most sincerely for the early information you were so kind as to give me of it.

"Yours faithfully,

"Robert Liston.

"To Dr. Boott."

---

\* Consultant Anaesthetist.

Received from the Department of Anaesthesia, The Royal Hospital of Saint Bartholomew, West Smithfield, London EC1A 7BE, England. Accepted for publication September 6, 1984.

Address reprint requests to Dr. Ellis.

(Key words: Anesthetics, volatile: ether. History: Boott, Francis; Liston, Robert.)

This version of Liston's letter to Boott has served, since that time, as the standard reference to the beginnings of British anesthesia.

### The Reappearance of the Letter

The original of Liston's letter was sent to a correspondent in Boston, Massachusetts, and when, on February 10, 1847, the *Boston Medical and Surgical Journal* published The *Lancet*'s version, the Editor was able to add that "We ourselves have seen the original of this letter".<sup>3</sup> In a later article in the same journal, it transpired that Dr. Boott had sent the original of Liston's letter to Henry J. Bigelow.<sup>4</sup> (Henry Bigelow was Professor Jacob Bigelow's son, a surgeon at the Massachusetts General Hospital, and an enthusiastic supporter of Morton's introduction of ether vapor.)

The possibility that the original of Liston's historic letter might have survived the interval of some 137 years between then and now does not appear to have been considered by historians of the subject. Nonetheless, the complete and original letter, written in Liston's own hand, reappeared in 1982, when it was offered for sale by auction at Sotheby's in New York. The letter later was acquired by Dr. K. Garth Huston on behalf of The Wood Library—Museum of the American Society of Anesthesiologists.<sup>†</sup>

The original letter consists of a single piece of white notepaper (measuring 22.5 cm by 18.5 cm) folded half-way along its longest sides; the two half-sized leaves thus produced make four pages on which Liston wrote in sequence. The letter, written in ink, is creased and slightly begrimed, but otherwise is in good condition. The greater part of the original text is the same as that published in the *Lancet* with the exception of its punctuation and a few, small differences. There is, however, an important middle section that was omitted by the *Lancet* and, so far as is known, has not been scrutinized before by historians of anesthesia. The complete and original letter is reproduced in figures 1-4.

Robert Liston's writing is, in places, difficult to read; the full and original text (with the hitherto unpublished section in capital letters) is:

5 Clifford St  
Dec 21. 1846

---

<sup>†</sup> Huston KG: Personal communication, 1983.

5. Clifford's  
Dec 21. 1864

My Darling

I find the other  
whenever I do, in  
case of amputation of  
the thigh & in another  
repeating dissection of both  
sides of the great toe  
and one of the most  
beneficial function in  
surgery & as the most

giving the other matter  
over to the people & saw  
the condition in which  
leaves - It is a very  
great matter to transfer the  
the existing principles to  
American to be & without  
appeals and  
result - It is a further  
fundamental lessons &  
they to thank you and

Useful & Satisfactory  
results. Johned have  
afforded me great satisfaction  
but found it was need  
to make the experiment  
in a few minutes before  
the operation. In pursuit  
has suffered from. Cough  
or some kind of irritation  
from the use of the paper.

Remind of the early before  
and you are a kind of  
person of it. John

Yours faithfully  
 W. C. C. C.

*J. Noth*

FIG. 1 (*upper, left*). The first page of Robert Liston's letter to Francis Boott.

FIG. 2 (*lower, left*). The second page of the letter. The previously unpublished section begins after the full stop in the second line.

FIG. 3 (*upper, right*). The third page of the letter. The previously unpublished section ends at the hyphen in the fourth line.

FIG. 4 (*lower, right*). The final page of the letter.

My Dear Sir

I tried the ether inhalation today in a case of amputation of the thigh & in another requiring evulsion of both sides of the great toe-nail one of the most painful operations in Surgery & with the most perfect and satisfactory results. I SHOULD HAVE APPRIZED (a) YOU OF MY INTENTION BUT I MADE UP MY MIND TO MAKE THE EXPERIMENT ONLY A FEW MINUTES BEFORE THE OPERATION. THE PATIENT HAD SUFFERED FROM COUGH AND SOME TINGED (b) EXPECTORATION AND I WAS DOUBTFUL OF THE PURPOSE OF USING THE ETHER UNTIL I WENT TO THE HOSPITAL & SAW THE CONDITION IN WHICH HE WAS—It is a very great matter to be able thus to destroy sensibility to such an extent & without apparently any bad results—It is a fine thing for operating Surgeons and I beg to (c) thank you for the early information you were so kind as (d) give me of it. Believe me (e) Faithfully Rob Liston  
Dr Boott

It is known that Robert Liston was not always clear as a writer,<sup>5</sup> and he seems to have written this particular letter in haste, presumably before the dinner party he gave at his home that evening, following which he demonstrated ether insensibility to his guests by anesthetizing one of his surgical assistants.<sup>6</sup> Liston, it has been said, also wrote another letter on this occasion. This second letter describing the day's momentous events was sent to Liston's friend and surgical colleague in Edinburgh Professor James Miller.<sup>7</sup> By all accounts Liston opened and closed this letter by quoting the triumphant words of St. Paul "Rejoice, and again I say Rejoice!"<sup>8</sup> Unfortunately, it has not yet been possible to find the original of this second letter; it may no longer exist.‡

There are several points about Liston's letter to Boott that need to be clarified. These are marked with the small letters from "a" to "e" in the complete text given above.

At (a) Liston's use of "apprized" is incorrect, meaning as it does "have given the value of." He confused this word with "apprised," which has the meaning that he wished to convey, namely, "have imparted information to."<sup>9</sup> Reference to other examples of Liston's hand-

writing<sup>10-12</sup> leaves no doubt that the word at (b) begins with a "t," ends with a flourishing "d," and consists of six letters, the fourth of which is "g." "Tinged" seems correct; the alternative "turgid" is unlikely. When the editor of the *Lancet* reproduced the letter, he omitted the words "beg to" at (c): Liston, in turn, omitted at (d) the word "to," which was inserted by the editor before publication. Interestingly enough, Liston made precisely the same omission in one of the several other letters that have been studied<sup>10-12</sup> in order to prove beyond doubt that the handwriting of the present letter is genuine. Perusal of some of Liston's other correspondence shows that it was not his custom to use "Yours faithfully" at the end of his letters, but simply wrote—as in his note to Boott— "Faithfully." The consensus of graphologic opinion is that the indistinct writing at (e), between the end of the final sentence and "Faithfully," is a hurriedly written, abbreviated form of "Believe me."

Liston's casual, if not careless, script must be judged in the context of conditions that existed in 1846. There were, at the time, no secretaries as we know them today, and typewriters were not in common use.<sup>13</sup> As a busy professional man, Liston probably would have had to have written many letters himself each day, and he may well have thought that the finer points of the English language were unimportant, provided that his meaning was clear.

### The Historic Implications of the Full and Original Text of the Letter

The whereabouts, between 1847 and 1982, of Liston's letter to Francis Boott are—at present—unknown although it is to be hoped that more information on this important point soon will emerge. In the meantime it is possible to consider in some detail the principal question that is raised by a study of the full original text of the letter.

This most important point, which requires a convincing explanation, refers to the reason why it was necessary for Robert Liston to write to Francis Boott with the news of his first operations under ether anesthesia. At first sight the reason is obvious, namely that Liston wrote the letter because neither Francis Boott nor James

‡ Part, at least, of the text of a remarkably similar letter was published some 13 years later (Rice NP: Trials of a public benefactor as illustrated in the discovery of etherization. New York, Pudney and Russell, 1859, pp 106 and 110).

Robinson had been present at his pioneering, major operation. This, however, begs the question, since the absence of Boott and Robinson from the operating theater of the North London Hospital on that famous day is the most inexplicable aspect of the whole episode. After all, it was from Francis Boott that Liston had first heard about the existence of ether anesthesia and Liston himself had visited Boott's house to see Boott's and Robinson's early attempts with the process.<sup>14</sup> Boott's and Robinson's interest in ether anesthesia continued, and Liston knew of this continuing interest. He also knew that both men lived within a few hundred yards of the North London Hospital and easily could have made the short journey to see the operations for themselves. Finally, many others—with no previous involvement in ether anesthesia—did attend Liston's operations on December 21, 1846. There is, thus, every reason to suppose that Boott and Robinson would have wished to be, and should have been, invited to be present.

Hitherto there has only been one source of reliable information to explain the paradoxical absences of Boott and Robinson from the North London Hospital when Liston first used ether anesthesia. This is to be found in an account of the episode written by Dr. William Squire, who gave the anesthetic on that historic occasion.<sup>14</sup> This account appeared in the *Lancet* in 1888, some 42 years after the event, when Squire was aged 63. It is, nonetheless, a clear and detailed account and one that appears to be authentic: much of what Squire wrote could have been contradicted at the time by other surviving witnesses had it been untrue, and no such contradictions were published. (There are three other accounts, each written by a person who was in a position to comment upon the events. W. H. Ransome, Liston's surgical dresser, gave a description to the *Pharmaceutical Journal*,<sup>15</sup> and William Cadge, who had been Liston's surgical assistant at the time, wrote of his reminiscences some 50 years later in the *British Medical Journal*.<sup>7</sup> Neither of these sources refer to Boott's and Robinson's absence. A few weeks after the event, James Robinson published a book describing the introduction of ether anesthesia to Britain<sup>16</sup> but referred only briefly to Liston's use of anesthesia.)

In his own reminiscences of ether's introduction to Britain,<sup>14</sup> William Squire attempted to explain Boott's and Robinson's absence from the North London Hospital. He also wrote of Liston's actions in the interval between his having first seen Robinson give ether for dental extraction and the time—no more than 48 hours later—when he first used ether for major surgery.

Squire recalled that on the day before he first used ether anesthesia:

Liston looked into every detail for himself before arranging for the operation next day under ether. . . . His decision was

soon widely known, letters were written that night, and messengers sent next morning to those likely to be interested, and a large assembly filled the operating theatre at the appointed time. . . . Messages were sent on the Monday to Dr. Boott, of Gower Street, and to Mr. Robinson, but I believe that neither was able to be present. Dr. Thomas Park—now living, since his retirement from the army at Leamington—went himself, at Liston's request, to Mr. Robinson."

It would appear, therefore, from William Squire's account that Liston did plan the use of ether well in advance of his operations and that he did have time to invite many people (including Boott and Robinson) to be present. The inference is that neither Boott nor Robinson cared to be present or that other more pressing invitations prevented them from accepting Liston's invitation. As discussed above, it is difficult to understand how either of these inferences could be true.

For the strict purposes of his narrative, William Squire did not need to have added the rider that Dr. Park has been sent to Robinson at Liston's request. Nonetheless, for some reason he felt obliged to include this point and, in so doing, emphasized that, in addition to many others, Robinson (and therefore presumably Boott) indeed had been invited.

The hitherto unpublished section of Liston's letter to Boott gives a completely different explanation for Boott's (and therefore presumably Robinson's) absence. Liston wrote to Francis Boott "I should have apprised you of my intention but I made up my mind to make the experiment only a few minutes before the operation. . . . I was doubtful of the purpose of using the ether until I went to the hospital and saw the condition in which he was."

It is impossible to reconcile Liston's excuse to Boott for not having invited him to be present with that offered by William Squire. Liston declared that he did not have time to issue invitations; Squire states that there was enough time for this to be done, and insists that Boott and Robinson were invited. Even if it is assumed that, with the passage of time, Squire's recollections of the events that took place 42 years previously were inaccurate Liston's words to Boott still conflict with the known fact that there had indeed been enough time to invite many people to travel to the North London Hospital for the occasion.<sup>6,17</sup>

There is, at present, no satisfactory documentary evidence on which to base a solution to this enigma. Such evidence as does exist is purely circumstantial but may indicate that there might have been some disharmony between Boott and Robinson on the one hand and Squire and Liston on the other.

### Conclusion

The knowledge that there is, at present, no obvious answer to this conundrum must not be allowed to

detract from the fact that the unexpected reappearance of Liston's letter to Boott—together with its acquisition by The Wood Library—Museum of Anesthesiology—are matters of the greatest possible historic importance. The letter is unique; no other similar, original document dating from the very earliest days of British anesthesia is now likely to exist. Of all such documents, none could be more significant.

It is a pleasure to acknowledge the advice and encouragement received from Dr. K. Garth Huston. Without his erudite and timely intervention, the unique letter would not have been preserved in its proper place, namely in the Wood Library—Museum of the American Society of Anesthesiologists. The expert assistance of Peter Jones, of The Department of Manuscripts at The British Library, has been invaluable.

### References

1. Boott F: Surgical operations performed during insensibility produced by the inhalation of sulphuric ether. *Lancet* 1:5-8, 1847
2. Ellis RH: The introduction of ether anaesthesia to Great Britain. 2 A biographical sketch of Dr. Francis Boott. *Anaesthesia* 32:197-208, 1977
3. Annotation: Mr. Liston on the Respiration of sulphuric ether. *Boston Medical and Surgical Journal* 36:47, 1847
4. Bigelow HJ: Etherization—a compendium of its history, surgical use, dangers and discovery. *Boston Medical and Surgical Journal* 38:229-237, 1848
5. Stephen L, Lee S: Dictionary of National Biography, vol 11. London, Oxford University Press, 1917, pp 1236-1237
6. Cock FW: The first operation under ether in Europe—The story of three days. *University College Hospital Magazine* 1:127-144, 1911
7. Anonymous: The Jubilee of Anaesthesia. History of the Discovery. *Br Med J* 2:1135-1142, 1896
8. The Epistle of Paul the Apostle to the Philippians. Chapter 4 v.iv. The Authorized King James Version of The Holy Bible.
9. Onions CT: The Shorter Oxford English Dictionary, vol 1, third edition. Oxford, The Clarendon Press, 1964, p 88
10. Liston R: Autograph letters in The Stone Collection of The Royal College of Surgeons of England. 88X, 1839
11. Liston R: Miscellaneous loose letters at The Royal College of Surgeons of England. Undated
12. Liston R: College Correspondence at University College, London, 1847
13. Girling DA: Everyman's Encyclopaedia, vol 12, sixth edition. London, Dent, 1978, pp 118-120
14. Squire W: On the introduction of ether inhalation as an anaesthetic in London. *Lancet* 2:1220-1221, 1888
15. Annotation: The sedative effect of ether tested in the operating theatre of The North London Hospital. *Pharmaceutical Journal and Transactions* 6:337-338, 1847
16. Robinson J: A treatise on the inhalation of the vapour of ether for the prevention of pain in surgical operations. London, Webster, 1847, p 6 (Republished by Balliere-Tindall, Eastbourne, 1983)
17. Forbes J: On a new means of rendering surgical operations painless. *British and Foreign Medical Review* 23:309-312, 1847