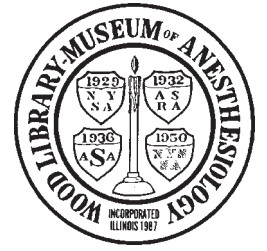




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First Use of Halothane in the United States, C. Ronald Stephen, M.D. (1916-2006)

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The purpose of this essay is to discuss the early use of halothane in the United States and resolve any lingering doubt about who is responsible for its introduction.

Anesthesia is one of the most valued discoveries in all of history. Few inventions have made such a profound difference in the human condition as the discovery of anesthesia. The grim thought of a surgical procedure in the days when a patient had to be awake, while a surgeon amputated a breast or sawed through bones, is frightful to contemplate. The ability to put an end to this kind of pain is certainly one of the greatest gifts that any man ever gave to his fellows. William Thomas Morton's public demonstration of the anesthetic effects of ether has caused him to be ranked as one of the hundred most influential persons in history.¹ However, almost immediately after the demonstration a search for a better drug began and continues to this day. Chloroform, ethylene, cyclopropane, and trichloroethylene all were popular for a while and abandoned because of toxicity or flammability. Flammable drugs were a severe hazard to patients and operating personnel alike. Ether, despite its flammability, persisted as the primary inhalation agent for over a hundred years. The search continued for safer, non-flammable substitute. The breakthrough came at Imperial Chemical Industries in Manchester, England where C.W. Suckling had synthesized and J. Raventos had investigated a volatile chemical called halothane in 1955.²

Halothane was a critically important development in the history of inhalation anesthesia. It was a quantum leap forward in the safety of anesthetic drugs. It was heralded as a true breakthrough because

of its potency, lack of flammability, smoothness and ease of administration. Its approval in 1958 in the United States was quite rightly followed by an explosive increase in its clinical usage. By the early 1960s it was the most commonly used anesthetic in the western nations. However, the dark side to halothane soon began to emerge. Anecdotal case reports of unexplained fatal jaundice following halothane anesthesia began to appear. The condition was named "Halothane Hepatitis." Anesthesiologists who dealt with the real advantages of the drug on a daily basis denied a cause-effect relationship. Internists and hepatologists failed to be reassured by the denials and sounded an ever increasing crescendo alarm.

The controversy led to one of the largest epidemiological studies of all time, the National Halothane Study sponsored by the National Academy of Sciences.³ The study failed to show a causal relationship, but did demonstrate that the overall mortality associated with halothane anesthesia was lower than that associated with ether or cyclopropane. Rather than being a dangerous anesthetic, halothane was shown to be remarkably safe. However the problem of hepatic necrosis did not go away and by the time that the pathogenesis of hepatotoxicity of halothane had been worked out in 1988 by Dr. Burnell R Brown, the drug was virtually obsolete, having been replaced by enflurane and isoflurane.⁴ Halothane had played a pivotal role in the development of modern anesthesia.

Because I worked with Dr. Ron Stephen and learned from him, I had always considered him to be the first to use and publish about halothane anesthesia in the USA but I began to have doubts when I read that Dr. Gino Dente, of the University of Ver-

mont (UVM) had received two bottles of halothane from Dr. Raventos of England and began to use it with the encouragement of Dr. John Abajian, who was the "driving force behind everything that went on in UVM's Anesthesia Division in the 1950s."⁵ Dr. Kreutz writes "So began UVM's halothane research in November 1956." They quickly learned of the potency of halothane when they had three cardiac arrests in the first 100 cases and realized that a precision vaporizer was required. This experience was reported at the ASA "Works in Progress" section in October 1957. Abajian turned to Dr. Ed Brazell, who worked out the necessary flows through a copper kettle vaporizer to deliver a precisely known concentration of halothane to the patient. These were called the "Abajian Scales" and were used in Abajian's earliest published report.⁶ Dr. Kreutz quotes Abajian as saying only half jokingly, "Someday people may be flocking to UVM's College of Medicine to view a Fluothane Dome, just as thousands of visitors each year have inspected the Ether Dome at the Massachusetts General Hospital." Abajian must have considered his work at UVM to be as revolutionary as Morton's in Boston.

My doubts intensified when, at Dr. Kreutz's suggestion, I read Dr. E.S. "Rick" Siker's autobiography.⁷ Dr. Siker states that he returned from England in October 1956 with twelve bottles of halothane and these "gifts made it possible for me to administer the first 100 halothane anesthetics in the United States." Dr. Siker, who was on the staff at Mercy Hospital in Pittsburgh, had been an exchange scientist for a year in Cardiff, England under Professor William Mushin. During that year, in

Continued on Page 4

Make the WLM part of your ASA 2008 Annual Meeting Activities! Orlando, FL (October 18-22) Activities at the Orange County Convention Center.

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Celebrating the Centenary of the Introduction of the Airway

(October 19-21)

Monday, October 20, 2008

12:30 p.m. – 2:00 p.m.

Friends of the WLM Appreciation Tea and Book-Signing of Careers Volume XI: *Professionalism: The Joy of Volunteering*
Room W414D

2 p.m. – 4 p.m.

WLM Forum on the History of Anesthesia
A Curriculum for History in Anesthesia Training Programs
Room W414D

Tuesday, October 21, 2008

12:40 p.m. - 12:50 p.m.

2008 Laureate of the History of Anesthesia Investiture: David J. Wilkinson, MB, BS, FRCA
Preceding the Lewis H. Wright Memorial Lecture
Chapin Theater, Room W320

12:50 p.m. – 1:50 p.m.

Lewis H. Wright Memorial Lecture
Presented by Drs. Jerry A. and Susan E. Dorsch
Beyond Blue Lips: Advances in the Prevention of Hypoxia
Chapin Theater, Room W320

2 p.m. – 4 p.m.

Panel on Anesthesia History
Not by Bread Alone
Chapin Theater, Room W320

See the WLM Web site for Further Details:

www.WoodLibraryMuseum.org

WLM 2008 Laureate of Anesthesia History Named

The 2008 Wood Library-Museum Laureate Historian of Anesthesia was elected on Tuesday, October 16, 2007. David J. Wilkinson, MB BS, FRCA., was named the 2008 Laureate just prior to the Lewis H. Wright Memorial Lecture at the American Society of Anesthesiologists Annual Meeting in San Francisco, California. Investiture will occur at the ASA 2008 Annual Meeting in Orlando, Florida.

The Laureate of Anesthesia program, established in 1994, has as its purpose increased recognition of the richness and importance of the history of the specialty by recognizing the work of scholars who have made singular contributions to the field. The honor is awarded every four years by the WLM Laureate Committee to an individual who has a demonstrable record of contributing over the years out-

standing, original materials related to the history of our specialty as reflected by articles published in peer-reviewed journals, and/or in monographs. The first Laureate, Dr. Gwenifer Wilson of Sydney, Australia, was honored in 1996. The second Co-Laureates were Norman A. Bergman, M.D., F.R.C.A., and Thomas B. Boulton, M.D., Ch.B., F.R.C.A. in 2000. The third Laureate was Donald Caton, M.D. in 2004.

Dr. David Wilkinson has published two books, 17 book chapters, 43 peer-reviewed articles, 19 non-peer-reviewed articles, as well as nine posters, three booklets on the history of Anesthesia. His book chapter "The History of Trauma Anesthesia" published in Textbook of Trauma Anesthesia and Critical Care in 1993 is the definitive treatise to date on the topic. Dr. Wilkinson has arranged a variety of audiovisual projects focusing on the history of Anesthesia includ-

ing 38 such presentations. In 1991, he won a British Medical Association film award for his "Some Things Never Change" video.

Dr. David Wilkinson is well known in anesthesia history throughout the world, not only through his numerous publications but also as a speaker. As the 2002 Lewis H. Wright Memorial Lecturer, he spoke on "Bart's Books, the Blues, and Beyond: The Story of Christopher Langton Hewer." Dr. Wilkinson has given over 200 presentations including at least six eponymous lectures on the history of Anaesthesia. He has been the organizer of the History sections at the WFSA World Congresses for the last 16 years.

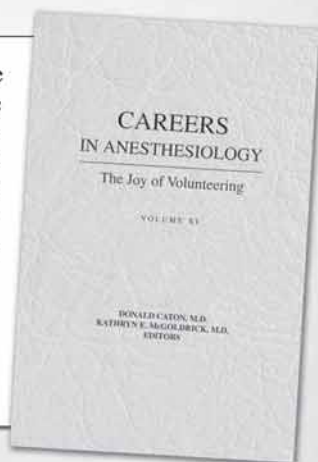
The Laureate was elected by an international panel of judges who are known historians and active contributors to the history of medicine.



The Joy Of Volunteering

Careers in Anesthesiology, XI

CAREERS XI, the final volume in the series, tells the altruistic stories of eight anesthesiologists who gave their time and energy to benefit others and the communities within and outside their professional and personal confines.



Their stories take the reader from Africa to the frozen tundra of northern Canada to Central Asia. One was called to collect and channel medical equipment to needy foreign communities. Another turned to elected office to serve in municipal government. Two raised financial resources to restore a prominent public monument symbolic of anesthesia. Another helped to save a teaching program threatened by a disastrous natural calamity. Lastly, a long-standing family tradition of volunteering shaped a noble, giving spirit to serve in non-profit institutions within, and beyond, the realm of anesthesiology.

In full display here is anesthesiology voluntarism as a noble repayment to society. It is a joy to read these stories of giving, which are an inspiration for young physicians who may choose to do likewise.

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*CAREERS IN ANESTHESIOLOGY, XI:
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Kathryn E. McGoldrick, M.D., Eds. Park Ridge, IL,
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1. Monographs: Old citations to historical monographs (including books, audiovisuals, serials, book chapters, and meeting papers) are now in LOCATORplus (locatorplus.gov), NLM's web-based online public access catalog, where they may be searched separately from now on, along with newly created citations.
2. Journal Articles: Old citations to journals have been moved to PubMed (www.ncbi.nlm.nih.gov/PubMed), NLM's web-based retrieval system, where they may be searched separately along with newly created citations.
3. Integrated History Searches: NLM has online citations to both types of historical literature -- journal articles as well as monographs -- again accessible through a single search location, The Gateway (gateway.nlm.nih.gov).

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First Use... *Continued from Page 1*

November 1955, Dr. Mushin began clinical trials with the new agent, halothane. Dr. Siker was a witness to these trials and learned of the high potency of the drug and the necessity to use a precision vaporizer. Siker wrote, "Before leaving Cardiff for our return to Pittsburgh in October of 1956, I was presented with a Boyle's anesthetic machine with a trichloroethylene vaporizer calibrated by Bill Mapleson to deliver precise concentrations of halothane. The other part of my going home gift was twelve bottles of halothane.... The gifts made it possible for me to administer the first 100 halothane anesthetics in the United States. The Boyle's machine now resides in the Wood Library Museum of Anesthesiology."

My doubts were dispelled when I reviewed the articles and writings of Dr. C. Ronald Stephen, who came to Duke University from Montreal in 1950 and established a dynamic division of anesthesiology involved in a variety of important research projects, many of which were evaluations of new drugs or new uses for old drugs. In his autobiography,⁸ Dr. Stephen wrote,

One spring day in 1956 I received a telephone call from Dr. John Jewell, Medical director of Ayerst Laboratories in New York (John and I had graduated from McGill University within a year of each other and he had been of considerable help to us in the investigation of trichlorethylene a few years earlier). The phone call was to tell us about a new non-explosive, nonflammable drug called Fluothane which had been synthesized by Dr. Suckling of Imperial Chemical Industries (ICI) in England (Ayerst was the American distributor for ICI). Would we be interested in evaluating this compound?

John arrived at Duke about a week later with a one-pound bottle of Fluothane in his briefcase. That was all he had available at that time. We had received the primary pharmacological work that had been accomplished by Dr. J. Raventos of ICI and some word of mouth information that Dr. M. Johnstone of Manchester was using the drug successfully in his hospital.

We went to work immediately in the laboratory and soon confirmed the

findings of Raventos. After additional supplies of the drug arrived, we began to use it clinically. Due to its potency, administration by the open drop technique was soon abandoned... So the FNS (Fabian, Newton, Stephen) vaporizer was constructed. It eliminated a number of problems, but unfortunately it did not compensate for changes in temperature associated with vaporization. In a year or two this difficulty was solved when Cyprane, now owned by Fraser Sweatman, introduced the Fluotec vaporizer.



Dr. C. Ronald Stephen demonstrates the FNS Vaporizer to the trustees of the Wood Library Museum in August, 1991. Picture is from Dr. Adolph Giesecke's files.

Dr. Stephen's team completed their experience of 145 patients and presented their preliminary report in the "Work in Progress" section of the ASA meeting in October 1956, the same month that Dr Siker returned from England with his twelve bottles of Fluothane and a month earlier than the work began at the University of Vermont. The abstract of this presentation was published in *Anesthesiology* in January 1957.⁹ Drs. Abajian and Siker did much to promote the phenomenal popularity of halothane in the USA but the credit for the first use and publication of halothane anesthesia in the USA must remain with Dr. C. Ronald Stephen.

Summary

Anesthesia is one of the most valued discoveries in all of history. Almost immediately after the first public demonstra-

tion of ether anesthesia, a search for a better drug began. Ether, despite its flammability, persisted as the primary inhalation agent for over a hundred years. The breakthrough came with the introduction of a non-flammable volatile anesthetic called halothane in 1955. The drug was approved by the FDA in 1958 and quickly became the most commonly used agent in the United States. It was a quantum leap forward in the safety of anesthetic drugs. It became obsolete in 1988 because of hepatotoxicity. Three eminent anesthesiologists: Drs. Abajian of Vermont, Siker of Pittsburgh and Stephen of Duke could have been the first to use halothane in the USA. My review of the documents and writings of the three confirm that Dr. C. Ronald Stephen of Duke University was indeed the first to use and publish on halothane anesthesia in the USA.

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Donations in loving memory of C. Ronald Stephen, M.D., can be made to the AHA to endow the C. Ronald Stephen Resident Essay Award Fund. This worthy cause will enable Ron's love of history and education to continue in perpetuity.

Comments on “First Use of Halothane in the United States, C. Ronald Stephen, M.D. (1916-2006)”

Many thanks for sharing Buddy Gieseke's article with me. I was unaware of John Abajian's early work with halothane but knew that Ron Stephen published the first article on the new anesthetic. In 1955, the British National Research Council had approved the release of the Raventos drug for clinical trials in two anaesthetic departments: William W. Mushin's Dept. at the Welsh National School of Medicine in Cardiff, and Michael Johnston's Dept. in Manchester. Wm. Mapleson calibrated the trichlorethylene vaporizer of a Boyles machine to deliver precise concentrations of halothane - the machine I took back to Pittsburgh with the dozen bottles of halothane. This is the machine used in our studies in Cardiff and the one I donated to the Wood Library with an accompanying letter from Prof. Mushin. John Abajian was a good friend, and Ron Stephen, was a dear

friend of many years. If either or both administered halothane at a time earlier than the Pittsburgh trials, that's fine - I couldn't be in better company.

E.S. Siker, M.D.

The C. Ronald Stephen Resident Essay Contest

The Anesthesia History Association (AHA) sponsors an annual contest for the best essay on the history of anesthesia, pain medicine or intensive care. This contest is open to all residents and fellows in anesthesiology. The purpose of the contest is to promote interest in the history of anesthesia and to advance professionalism in the specialty. Additionally this contest offers residents and fellows the opportunity to present their paper at a national meeting and to publish the results of their research. The Resident Essay Contest is named for Dr. C. Ronald Stephen an anesthesiologist who was a revered teacher, researcher, clinician and anesthesia historian. Dr. Stephen died at age 90 in 2006.

The essays must be written in English and be approximately 3,000 to 5000 words in length. Judging will be in two stages. In the first stage the finalists will be chosen. These finalists will be announced at the AHA dinner meeting during the American Society of Anesthesiologists annual meeting. From these finalists, the winners will be chosen on the basis of both content and delivery during the spring meeting of the AHA. All the finalists will present their papers in a session of the AHA attended by a panel of judges. The panel of judges will make their final decision based on originality, appropriateness of topic, quality of the research, and delivery. Because the final judging will be at the time of the presentation at the spring meeting of the AHA, all who enter must agree to attend the meeting at which the presentations are made. Essays must be submitted by the 10th of September in order to be eligible for presentation at the spring AHA meeting of the following calendar year. If not received by that date they will be considered for the next year's contest.

The first, second, and third place winners receive \$500 \$200 and \$100 respectively. Awards will be made during the AHA spring meeting. The three winners are required to submit their essays to the peer-reviewed Bulletin of Anesthesia History for possible publication.

To enter, essays should be sent to:

William Hammonds, MD, MPH
Professor, Department of Anesthesiology and Perioperative Medicine
Medical College of Georgia
1120 15th Street
Augusta, GA 30912
whammonds@mcg.edu

Entries must be received on or before September 10, 2008

James Y. Simpson: A Physician Ahead of His Time

by Robert A. Strickland, M.D.

Department of Anesthesiology

Wake Forest University School of Medicine

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Students of anesthesia history know that James Y. Simpson (Figure 1) is revered as one of the earliest proponents of obstetrical analgesia, specifically with chloroform. However, he also appears to be 1) one of the first physicians to describe vacuum extraction of the infant during difficult deliveries, and 2) the first to describe the potentially lethal complication of peripartum venous air embolism.

The Air Tractor

In the 1840s the use of forceps during childbirth was known to cause injury to the mother and the fetal head. On December 20, 1848, Dr. Simpson in an oral presentation to the Edinburgh Obstetric Society described his obstetric air-tractor.^{1,2} A few weeks later in February 1849, this announcement appeared in the "Medical Intelligence" section of the *London Medical Gazette*:

We understand that Professor Simpson has invented an apparatus on the principle of the vacuum-making organs of the cuttle-fish, which it is proposed so to attach to the presenting scalp of the child during labour as to render the introduction of the forceps unnecessary.³

A few days later he published a written description of his air-tractor.^{1,4} He stated that many cases of prolonged second stage occurred in obstetrics where the child's head was deep in the pelvis at the level of the perineum. And uterine contractions had "little or no effect upon the advancement of the infant." It was not possible for the physician to pass his hands around the infant's head to deliver the child and thus end labor. Although thin forceps could do the work of a pair of hands, "the instrument, in being introduced between the maternal passages and head, was apt to injure these passages, and to contuse and even lacerate them during their work." Simpson reasoned that if the exposed occiput could be grasped, then the baby could be delivered. He then described the suction discs of limpets or cuttlefish, both marine animals that could firmly attach

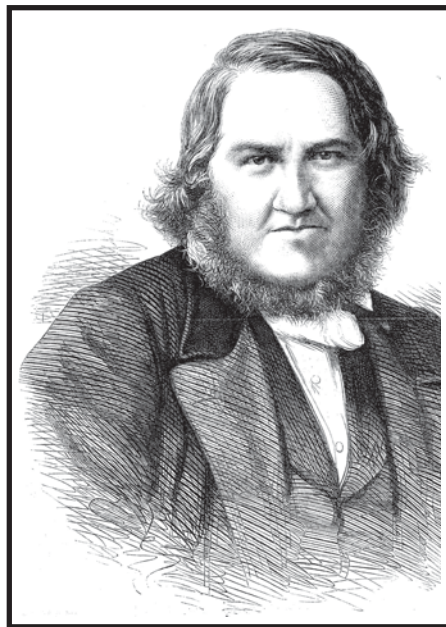


Fig. 1. Portrait of Sir James Simpson from *The Illustrated London News* Vol. XLVIII, No. 1358, February 24, 1866, page 177.

themselves to ocean rocks. A similar description was that of a child's toy, a wet piece of leather that could securely hold large objects by suction.⁵

Simpson's suction or vacuum extractor was a curved disc that was applied firmly to the head of an infant, "a common metallic vaginal speculum, fitted with a piston, and with the edge of the trumpet-shaped concave disc at its outer or broader end covered with leather."^{1,4} The concave disc was two to three inches in diameter, and it was coated with lard and applied to the presenting fetal head. Suction was then applied by a syringe and piston vacuum device, and the infant was gradually pulled down the birth canal. He described the case of a protracted labor where the fetal head was high in the pelvis. By attaching his suction device to the head, which had to be reapplied once or twice, he was able to slowly pull the head down to a successful delivery. He even suggested its use in breech presentation, where it might prove to be safer and more effective than other methods of assisting delivery.

In his initial presentation Simpson gave credit for the idea to Dr. Neil Arnott of London who had written a medical text suggesting that such a device could replace the forceps. Also, previous physicians such as Dr. Ambrose Pare had suggested that a similar device might be useful in removing skull depressions in children.⁴

Within a few weeks Simpson described at the Medico-Chirurgical Society of Edinburgh (on February 7, 1849) an improved design in which "a second cup formed of vulcanized caoutchouc" (i.e., natural latex rubber) is placed over the metal cup or disc.⁶ The rubberized disc was placed on the presenting fetal scalp, suction was applied thus drawing the fetal scalp down to the metal disc, and continuous traction was then applied by the obstetrician. The fact that the metal disc was now covered with rubber made the modified device safer for mother and infant. "In conclusion, Dr. Simpson stated that he had now used the air-tractor which he had constructed in several cases of labour, and with results answering his best expectations. But it doubtlessly admitted of much further improvement in construction, in mode of application, in working and other details."⁶ Simpson felt that obstetrical lacerations and injuries could be reduced by using this device instead of forceps. It could be used to bring the fetal head down from high up in the uterus where long forceps might cause maternal and fetal injury. Other benefits of his air-tractor compared to forceps: "It was attended with far less danger in the application and working; no space was occupied by it; it produced no compression of the head in a wrong direction; it could be used to bring the head from an occipito-posterior to an occipito-anterior position, or if necessary, to bring down the occiput or forehead; lastly, it was of small size, portable, and cheap."⁷

In his first presentation and articles on the topic, Simpson gave credit to Dr. Arnott for describing the possibility of such a device and to other surgeons who had used suction devices to reduce skull fractures.^{1,4,6} Controversy appeared within weeks when Dr. James Mitchell stated in a letter to the *London Medical Journal* on March 3, 1849, that while he was a student of Simpson's

in 1847-48 he had first described the idea during an examination. Mitchell asserted that Simpson had appropriated Mitchell's apparatus as his own.⁵ Simpson was allowed to respond and stated that his device did not come from Mitchell's exam because Simpson had other physician instructors read and grade the exams. Mitchell in two subsequent letters continued to argue that he had priority in claiming this device as his invention.⁵ Simpson apparently did not feel the need to respond to these latter two letters. A few weeks later Mitchell again made similar claims in the *Lancet*.⁸ In other journals it was noted by other physicians that Mitchell had not manufactured such a device and his motives for attacking Simpson were questioned.⁹⁻¹¹ Simpson's defenders included Dr. J. M. Duncan, one of the graders of the examination,^{9,10} and Dr. J. Liston Paul, one of Mitchell's fellow students.¹¹ Another physician, Mr. F. H. James, stated that he had described a similar device in his personal files, yet he had not made public his ideas.¹² He felt that Simpson was due credit and honor for being the first physician to try the air-tractor and to publish the results of his work. Because of Mitchell's continued attacks, Simpson was forced to publicly defend his professional integrity in this matter on several occasions, most notably on April 7, 1849.¹³

For reasons not stated by Simpson, he did not write again about the air-tractor. Apparently, it did not work as well as he initially indicated or hoped for. Although he was enthusiastic about it potential, he knew that the apparatus was rudimentary:

I may be, perhaps, excused for adding that I have now employed it repeatedly, both in cephalic and pelvic presentations, and both when the head was still high above the brim, and already sunk into the pelvic cavity; and I believe that the construction of the air-tractor is still very far from being so perfect as it will yet be rendered.¹³

About forty years later this statement provided a summary of the benefit of the Simpson's air tractor:

Unfortunately for humanity it did not work, and was finally abandoned by its gifted inventor. So complete was its failure that, although Dr. Simpson lived until 1855, he did not publish any more in reference to it, nor is it mentioned even as a curiosity by any of his English or Ameri-

can contemporaries or successors.¹⁴

Obstetrical Air Embolism

Air embolism is a rare but potentially lethal complication during vaginal childbirth.¹⁵ In April 1849, Simpson discussed the possibility of venous air embolism and death during labor.¹⁶ He stated that several years earlier he had been called by another physician to assist in the care of a parturient with postpartum hemorrhage who died shortly after childbirth. They noted "an evanescent red scarlatinoid rash over the body" and signs of shock such as rapid and very weak pulse. Because they suspected air being entrained into the uterine vasculature, an autopsy was performed shortly after death, with the abdomen being opened under water. Air bubbles and frothy blood were found in the vena cava and the uterine and hypogastric veins. Simpson described other similar deaths, but no autopsies were performed.

He hypothesized a mechanism for air entrainment in the uterine vasculature during the peripartum period.

The interior surface of the (uterus), especially opposite the late seat of the placenta, has a number of ruptured venous orifices opening upon it. Supposing air once introduced into the uterine cavity, which in some cases may occur in consequence of the alternate relaxations and contraction of the wall of the organ following delivery . . . ; and supposing further, that under the returning contractions of the organ, the expulsion of this air from the cavity was prevented by the presence of a clot at the os uteri, or other such obstructing cause, it will then, under the compression to which it is subjected, be liable to be driven into the open venous orifices existing in the lining membrane of the uterus.¹⁶

Thus, according to Simpson the contraction of the air-filled uterus would force air into the uterine veins, and from there it would enter the returning circulation to the heart. Cardiopulmonary collapse would be the result, if sufficient volume of air was present.

Here in Dr. Simpson we see someone who was actively engaged with and concerned about morbidity and mortality in obstetric practice. While his air-tractor was not successful, a future generation of obstetricians with better technology has used the same concept with success. Air embolus (in addition to amniotic fluid embolus)

continues to be a potential source of maternal morbidity and mortality. Dr. Simpson is to be remembered for his peerless work in improving the practice of obstetrics and obstetrical analgesia.

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Jone J. Wu, M.D., 1912-2008

Senior Chinese Pioneer Anesthesiologist

A Memorial Tribute

by Patrick Sim, M.L.S.

Paul M. Wood Librarian

Wood Library-Museum of Anesthesiology

Wu Jue, M.D., popularly and fondly known as Jone J. Wu, M.D., to anesthesiologists of the Aqualumni professional lineage, died on March 8, 2008, in Shanghai, China, at age 96. Dr. Wu was born in February 1912, although some sources indicate that he was born in 1909, which likely was traditionally dated according to the Chinese lunar calendar. He traveled to America in 1947 on a competitive national merit scholarship to study clinical anesthesia in Madison, Wisconsin, with Dr. Ralph M. Waters.

1947 was a tumultuous time in modern Chinese history, a decade after Japanese invasion of China upon the Marco Polo Bridge Incident. Postwar China did not have the luxury of peace, as Civil War raged on between the Nationalists and Communists until 1949. Dr. Wu was a graduate of National Shanghai Medical College, Class of 1938 in this turbulent era. Strong scientific undergraduate training at the National Central University in Wuhan, from which he had received his baccalaureate in 1933, prepared him for his appointment as Lecturer of Physiology and Pharmacology upon graduation from medical school, which faculty position he held until 1946.

Specialized clinical medicine in China at mid-point of the last century was unknown. The Ministry of Education began to address clinical specialization in anesthesia in step with advanced clinical surgery. It held a national merit scholarship exam to identify and select the best qualified physicians for specialist medical training in clinical anesthesia in the United States. Candidates were tested not only for their medical subjects, but also on other branches of knowledge in both applied and basic sciences, as well as humanity and literature. Three scholarships were awarded from this national search. The winning scholar physicians in this process had common educational roots from the National Central University. Wu Jue (Jone J. Wu) received his baccalaureate degree from National Central University; Shih-Hsun Ngai, and Ding Kuang-Seng



*Photo of Dr. Wu taken in February 1986 at his residence in Shanghai. Dr. Wu holds three books he has written on anesthesiology. The middle one is mentioned in the memorial tribute published in 1954, *Clinical Anesthesiology*. Picture courtesy of Joseph Ruprecht, M.D., Ph.D.*

both received their medical degrees from National Central in 1944. All three medical merit scholars traveled to America, destined to the Midwest, for clinical anesthesia training. Dr. Ngai settled at Michael Reese Hospital, and moved on to New York to further his training with Virginia Apgar at Columbia. Dr. Ding joined Dr. Huberta Livingston at the University of Chicago on a dual academic track. Upon completion of his anesthesia residency, he furthered his academic pursuit to gain a doctorate in Pharmacology. Dr. Wu went to Madison, Wisconsin, to join the prestigious academic anesthesia program Dr. Ralph Waters had initiated two decades earlier. His fellow residents at that time were Lucien Morris and Simpson Burke.¹

Of the three medical scholars, two returned to China and one settled in the U.S. All three have impacted anesthesiology with their own unique contributions. Dr. Wu's previous training and experience, in pharmacology and physiology, prepared his clinical research collaboration with fellow residents, Dr. Morris and Dr. Burke. They researched on the precision delivery of volatile anesthetics. His residency at Madison took two years from 1947 to 1949. It was followed by a year of clinical practice in Salt Lake City at a county hospital affiliated with the University of Utah College of Medicine. He returned to China in 1950 to initiate anesthesia education at his alma mater, Shanghai Medical College. As the first appointee to an anesthesia professorship, Dr. Wu was associate professor of anesthesiology and pharmacology, assuming chairmanship of the Sun Yat-Sen Hospital Medical Center and six other affiliated hospitals. By 1954, he established an independent department of anesthesia, the first for academic anesthesiology in China. Dr. Wu organized the first national seminar in anesthesiology in 1964. He helped found the Chinese Society of Anesthesiologists. Clinically, he established the first blood bank in China, pioneered techniques in epidural analgesia and spinal anesthesia, and promoted endotracheal technique he had acquired from Madison, Wisconsin. He advocated balanced anesthesia, led pharmacological research on drugs for cardiac anesthesia, and studied the physiological effect of deliberate hypotension with sodium nitropruside in epidural analgesia. He also conducted research on traditional Chinese therapeutics for alternative treatment in clinical anesthesia.² Dr. Wu published the first anesthesia monograph in China, *Clinical Anesthesiology*, in 1954, and assumed editorial leadership for anesthesia in medical and surgical journals. To keep himself in the world community of anesthesia, he remained an active member of the ASA upon his return to China until 1964.³ He was also in close contact with his fellow aqualumni, including Dr. Carlos Parsloe and Dr. Lucien



movement bringing Chinese anesthesiology to the level of excellence in the world. The visionary decision of the Chinese Ministry of Education indeed has exceeded its anticipated goal of dispatching three young physicians to America to train in clinical anesthesia. Led by Jone J. Wu, they have transformed clinical anesthesia in modern China.

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Photo taken during a visit by an international delegation at Dr. Wu's hospital in Shanghai. Seated from left: Mrs. Edith Parsloe, Dr. Wu, unknown anesthesiologist, Dr. Carlos Parsloe, and Dr. Joseph Ruprecht. Picture courtesy of Joseph Ruprecht, M.D., Ph.D.

Morris. His visionary idealism kept him active in involving Chinese anesthesiology in the world community of the World Federation of Societies of Anesthesiologists (WFSA). Frequent visitors to Dr. Wu in China included the late WFSA president Dr. John Zorab, Dutch anesthesiologist Joseph Ruprecht, and American anesthesiologist Merlin Larson.

Jone Wu's total dedication to Chinese anesthesiology, and Chinese medicine, is recognized in his invaluable contribution to clinical anesthesia. During his productive career, Jone Wu had trained and influenced the post-war generations of Chinese anesthesiologists in the motto of his teacher, "teaching doctors to teach other doctors," a principle seriously taken by aqualumni trained with Dr. Ralph Waters in Madison, Wisconsin.

In historical context, Jone Jue Wu, M.D., 1912-2008, assumed a vital role in medical anesthesiology of the 20th century. Three young physicians sharing the same academic roots won competitive merit scholarships to study clinical anesthesia in the U.S. Mid-America in mid-century was the center of academic anesthesia. The oldest of the three, by a decade, Dr. Wu joined the Waters program at the University of Wisconsin. His fellow merit scholar, Dr. Ding Kuang-Seng, trained in clinical anesthesia and completed a postgraduate program in pharmacology, both in Chicago. The third of the trio, Dr. Shih-Hsun Ngai, served his residency in Chicago, and in New York with a prominent aqualumna at Columbia. The training of these three physicians in American anesthesiology was

the most important academic link of mid-century medical anesthesia between the United States and China.

At the founding of the new Chinese Republic in mid-century, Dr. Wu returned to his motherland with his newly acquired expertise to lay the foundation of modern anesthesiology according to the Waters principles. He had trained and influenced generations of Chinese anesthesiologists under Spartan conditions, adapting his acquired expertise to indigenous practice for maximum results. Dr. Ding acquired his dual expertise in clinical anesthesia and scientific pharmacology in America. He returned to China to attend to an ailing parent, ultimately founded a national pharmacological journal to collect and disseminate scientific research contributions beyond medical anesthesiology. Dr. Ngai remained in America, distinguished himself as chief editor of the leading anesthesia journal, and chaired an important academic department. Upon retirement, Dr. Ngai served Chinese anesthesia in both the mainland and the island state of Taiwan. He shuttled tirelessly across the Taiwan Strait serving the highest medical academic bodies of both governments to promote clinical and basic scientific research in anesthesia. Three young physicians sailed to America to train in anesthesiology in mid-20th century. All made significant and lasting contributions as anesthesiology marched to the first decade of the new century. Chinese anesthesiology without a doubt has a strong professional connection from America, and Jone J. Wu spearheaded this professional medical

A Long Life: Well-Lived Norma Bowles Utley, M.D., (1905-2008)

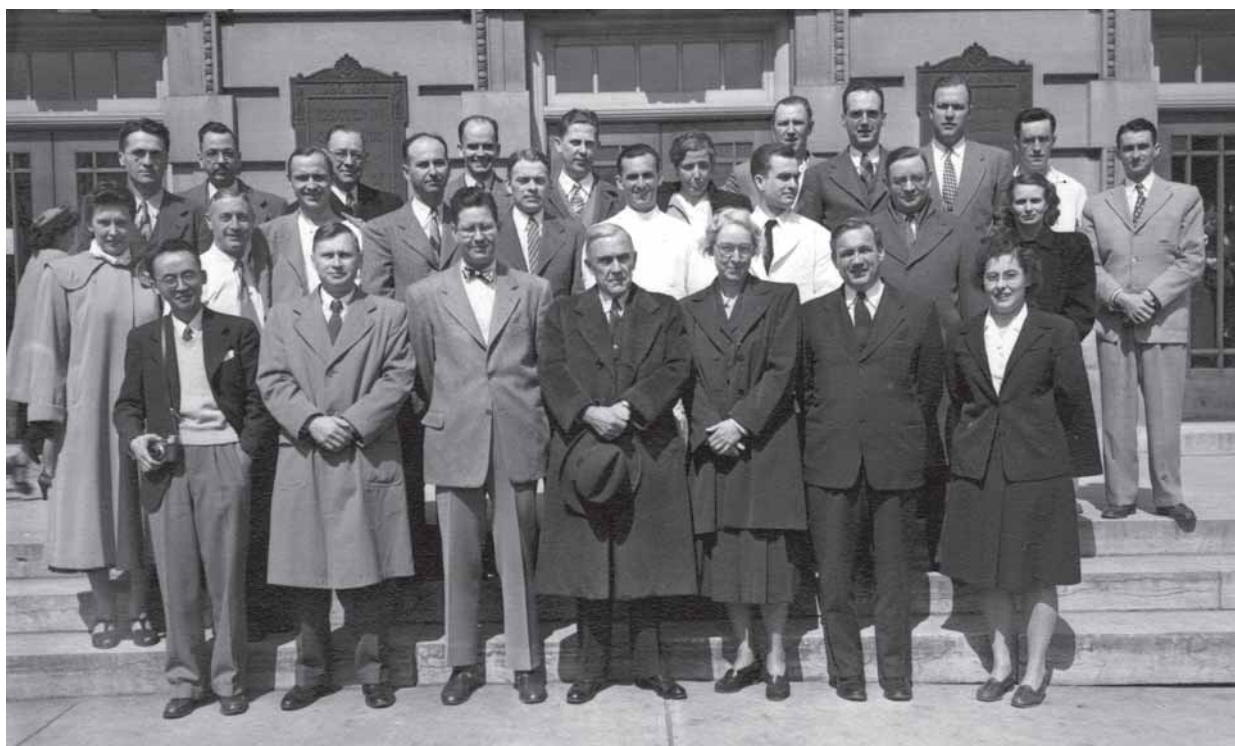
by *Doris K. Cope, M.D.*

*Professor and Vice Chair for Pain Medicine
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With a lifetime spanning the century, one of the last surviving “Aqua-alumni,” Norma Bowles Utley died at the age of 103 on June 21, 2008, in Colorado Springs, Colorado. Born in 1905 in Pullman, Washington, she received her B.A., M.S. and M.D. degrees from the University of Rochester in New York in 1926, 1929, and 1931, respectively. She trained as a resident in Anesthesiology at the University of Wisconsin prior to World War II, followed by taking the position of Director of Anesthesia at St. Mary’s hospital in Rochester, New York. In 1941, as a suddenly widowed single mother of two daughters, she continued her medical practice of anesthesiology as the Associate Director for Anesthesia at Reading Hospital in Reading, PA, before moving to Colorado. There, she opened her anesthesiology practice in Colorado Springs, Colorado, in 1950 where she practiced for twenty years becoming the first female Chief of Staff at Memorial Hospital. In her retirement from clinical practice she gave over 30 years to active community ser-

vice in her work with the Rocky Mountain Rehabilitation Center and the Visiting Nurses Association helping patient convalesce from tuberculosis. She was described as energetic, generous and modest while “zipping around in a little foreign car” between philanthropic and church activities. Her passion in her later years was to her church where she served on the vestry and as a Stephen minister. She was an active and joyous participant in the ASA centenary celebration in 2005 and her life and career were an inspiration to many.

Aqualumni Spring Reunion, Madison, WI, 1948. Dr. Norma Utley is fifth from the left in the third row. Photo courtesy of Wood Library-Museum.



The Anesthesia History Association's 2008 Spring Meeting May 8-10, 2008, Pittsburgh, Pennsylvania

by Selma Harrison Calmes, M.D.

Co-Founder, Anesthesia History Association

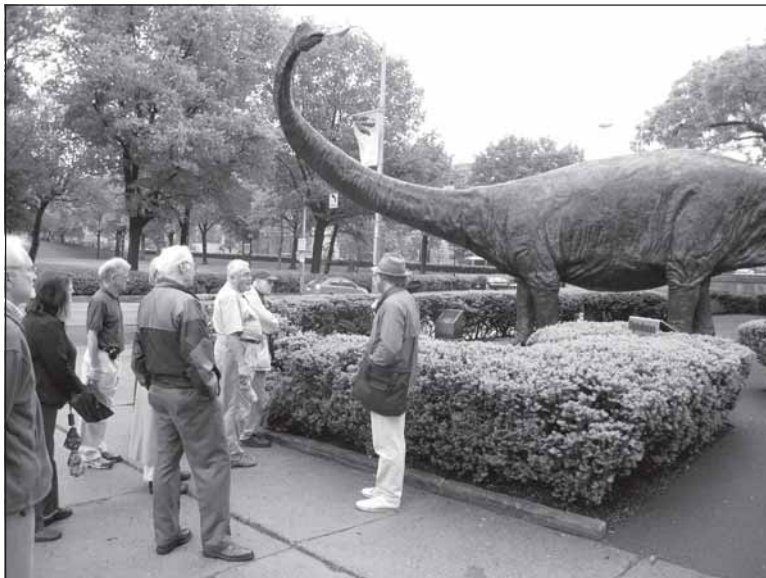
Fifty-one people attended the 26th spring meeting of the Anesthesia History Association May 8-10, 2008, in Pittsburgh. The meeting's theme was "The Gilded Age and the Great Industrialists," to emphasize the tremendous role industrialization, for example in steel and glass production, played in shaping Pittsburgh and the United States. We met at the Twentieth Century Club, a prestigious women's club founded in the late 19th century by wives of the city's wealthy industrialists. The club has an elegant building a few minutes walk from our lodging, a hotel on the edge of the University of Pittsburgh campus. Although many of us think of Pittsburgh as a grey, gritty "steel city," it proved to be a lovely city of rivers, trees, blooming dogwood and azaleas.

The meeting began with a day of tours. A morning walking tour of the nearby

houses class rooms and space for academic officials, such as the university president. A huge first floor open space, the Commons Room, is the students' social center. The striking building, which dominates the campus skyline, certainly is a cathedral to learning and is well worth a visit.

Other Pitt campus stops were the Heinz Chapel, the university's non-demoninational chapel, and the Stephen Foster Memorial. This honors noted American composer Stephen Collins Foster, a Pittsburgh native. The tour ended by seeing other parts of campus and the Carnegie Museum and Library.

Two afternoon tour groups went to the nearby Frick Art and Historical Center. This consists of the art collection of Helen Clay Frick, daughter of Pittsburgh industrialist Henry Clay Frick, and the Frick house, Clayton. (Henry Clay Frick's



University of Pittsburgh campus began at one of Pittsburgh's most striking landmarks, the Cathedral of Learning, a 42-story Gothic building begun in 1926 to emphasize the importance of learning to the city's many immigrants. The various communities were encouraged to develop "Nationality Rooms," depicting schools in their home countries. The building also

wealth came from his new coke processing technique that led Andrew Carnegie—who needed coke to run his steel mills—to join with him, leading to the mammoth company, U.S. Steel.) The day ended with dinner at Dr. Cope's house, a dinner cooked by her! Everyone enjoyed this, once they were able to find the lovely house. Navigating in Pittsburgh is a real challenge!



The official meeting began on Friday, May 9th, with greetings from, first, the Dean of the University of Pittsburgh School of Medicine, then John Williams, Chair of the Department of Anesthesiology, and finally, Dr. Doug Bacon, current AHA president. Six papers followed in the

Dr. John Williams, Chair of the Department of Anesthesiology at the University of Pittsburgh School of Medicine, welcomes the Anesthesia History Association to Pittsburgh.



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Spring Meeting . . . Continued from Page 11



Luncheon speaker: Dr. Thomas Starzl

morning sessions. Topics ranged from the Pittsburgh dentist-minister S.J. Hayes, his anesthesia vaporizers and his efforts to get O₂ added to N₂O anesthesia (George Bause); dentist Leonard Monheim, the first and only anesthesiologist at Pittsburgh's Presbyterian Hospital for nearly twenty years, (D. Ryan Cook); the last meeting of the Anesthesia Travel Club (John Forestner), a comparison of Dr. William Morton and his son in terms of their greed and villainy (Gerald Zeitlin), the current situation for chloroform (Ray Defalque) and the clinical and laboratory



Dr. Ray Defalque

research needed to develop liver transplantation to the relatively common operation it is today (Tony Aldrete). The luncheon speaker, pioneer transplant surgeon Thomas Starzl, continued the liver transplant history theme with his talk, "Tall Tales About Transplantation." This traced his experiences as kidney and liver transplant surgery and anesthesia evolved.

The afternoon session began with presentations by the finalists in the C. Ron Stephen Resident Essay Contest. Neel H. Amin, an anesthesiology resident at the Medical College of Georgia, presented "How Ether Became the First Successful

Anesthesia." Edward Kosik, an anesthesiology resident at Case Western Reserve, presented "Four Decades of Suspending Disbelief: Milestones in Anesthesia." Dr. Kosik was awarded first prize, Dr. Amin second place. Hopefully, they will continue their work in the future.

The final session began with two papers on equipment. "Noel Gillespie's Shadwell Laryngoscope" (Mark Schroeder) looked at why and how this pediatric blade was developed and why it was named "Shadwell." Next was a presentation on "Hayden's Pneumatophora: A Chloroform and Ether Inhaler" (Tony Aldrete). Hayden, another dentist and colleague of W.T.G. Morton, developed a smaller, more portable inhaler in 1848; the sponge with anesthetic could be easily replenished. The final presentation was "The History of Anesthesia in Alabama and other States in the US" (Mark Mandabach). This identified early physicians working in anesthesia in Alabama and sources of information.

Next was the banquet, held in The Twentieth Century Club. After dinner, we enjoyed a visit from another Pittsburgh great, George Westinghouse, (actually an impersonator) who told us of his life and accomplishments. Dinner ended with an absolutely grand cake featuring AHA items such as the organization's logo, the Morton inhaler, and the AHA's book of newsletters. This grand creation was by Ramona Bause! It survived travel from Cleveland and was a most impressive ending to this meeting. Thank you, Ramona and George Bause, for making this possible. And, many thanks to Dr. Doris Cope and her ever-efficient and energetic assistant, Debbie Bloomberg, for coordinating this excellent meeting.

Next year's spring meeting will be April 16-18, in Augusta, Georgia, at the Medical College of Georgia and will be hosted by Dr. William Hammonds.



Ramona Bause and her fabulous AHA cake.

Book Review

A Manual of Etherization: Containing Directions for the Employment of Ether, Chloroform, and other Anaesthetic Agents, by Inhalation, in Surgical Operations, Intended for Military and Naval Surgeons, and All Who May Be Exposed to Surgical Operations; with Instructions for the Preparation of Ether and Chloroform, and for Testing Them for Impurities. Comprising, also, a Brief History of the Discovery of Anaesthesia by Chas. T. Jackson, M.D., F.G.S.F., Chevalier de la Légion d' Honneur; Cavaliere dell Ordine dei S.S. Maurizio é Lazzaro; Ritter des Rothen Adler; Knight of the Turkish Order of the Medjidich; Member of numerous Scientific and Medical Societies in Europe and America (Boston: J.B. Mansfield, 1861, 138 pages).

*by Theodore A. Alston, M.D., Ph.D.
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Harvard Medical School*

Charles T. Jackson provided William T.G. Morton with the ether for ether day. Jackson has been often mocked for appearing to demand too much credit for monumental event. In 2007, Richard J. Wolfe and Richard Patterson sprung to the defense with *Charles Thomas Jackson: the Head behind the Hands* (Novato, CA: Norman Publishing, 417 pages). We learn that Jackson was entirely admirable, made only just claims, and had no flaws other than a bit of commercial naivety. Most interesting, Jackson never worked himself jealously into a nervous breakdown as many claimed. Instead, in his last years he battled a speech-robbing cerebral vascular accident that was misrepresented by careless historians.

Who, then, was the real Jackson? One way to decide is to examine his own words. He revealed much about himself in his *Manual of Etherization*, and that once rare book is now readily available as a Google electronic book (<http://books.google.com/books>). Straight away, the title page says much about the author. He was the erudite inventor of inhaled anesthesia, and he had the credentials to prove it. Alas, the year was 1861. Lincoln had just started his presidency, and there were other things to worry about. But, then again, the manual was written for "military and naval surgeons." The preface mentions, in addition to the surgeon, the "soldier in his camp" who "will read with satisfaction the history of a discovery, which will in time of need prevent his suffering."

Chapter 1 explains that surgical pain can be deadly, and drugs before ether, such as alcohol or opium, were woefully inad-

equated. The suggestion of Humphrey Davy that nitrous oxide might be used in surgery was "rather too hasty." Jackson argues that nitrous has no anesthetic power, none, other than a simple asphyxiating effect.

In Chapter 2, the "first discoverer and verifier of anaesthesia" describes the events leading up to ether day. The "flash" occurred to him in the winter of 1841-2 when he was treating himself with inhaled ether for a chlorine gas injury incurred while preparing a chemistry lecture. He notified many "gentlemen" as much, and W.T.G. Morton, dentist, is eleventh on the chronological list. Interestingly, Chapter 2 skips over ether day and lands in 1847, and the professor goes on to describe himself as an Indiana Jones-like character. On a geological survey on Lake Superior that year, Jackson wrestled with a "stout Indian" in order to induce anesthesia for a tooth extraction. Jackson relates, "This Indian resisted me furiously; but I placed my arm around his neck and held onto him so closely that he could not escape." After the sponge full of ether and chloroform ended the "struggle," the pulse was 30 beats per minute. Hmm. In order to astonish the patient's "aboriginal friends," he kept the guy apparently dead for four hours and then effected a resurrection with a splash of water in the face. The show was pronounced "great medicine." Later in the book, Jackson uses a pound of ether (mostly wasted, as was often the case in a Jackson anesthetic) to anesthetize a "very ferocious" and "uncommonly agile" caged cougar. The private owner wanted the animal declawed "so that animal should not

be able to injure his children." To his credit, Jackson refused to remove the fangs. Not so creditable, the supposedly careful scientist was surprised when the claws grew back.

Chapters 3 and 4 are erudite accounts of the chemistry of ether and chloroform and of several experimental agents tried from 1846-1861. Jackson rightly dismissed inhaled ethyl nitrite as a "deadly poison" though minute doses of the gas are presently of interest as a vasodilator.

Jackson gets to ether day in Chapter 5. We learn that he delayed because he wanted to introduce ether anesthesia for surgery first in France, but he did not have time for the voyage. Meanwhile, he decided to find a dentist to try the stuff out. He picked Morton ("a nominal medical pupil of mine") to use it to help pull teeth. It reportedly worked, so Jackson "engaged this dentist to go see Dr. John C. Warren and to ask him to test the ether in a more severe operation, at the Hospital." Morton "did as directed." Jackson did not go in person to talk to Warren because he was "engaged in chemical work for others, which could not be left." Morton ("my messenger") never told Jackson that the trial would be the next day and never mentioned Jackson to Warren. The ether demonstration was "partially successful." Warren asked to have Jackson, not the "quackish fellow" Morton, give the next anesthetic, but Jackson was going out of town. He promised to "fully instruct Morton" and send him ("my pupil") back. There is nothing good to say about Morton.

The manual contains very little practi-

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This Month in Anesthesia History*

by A.J. Wright, M.L.S.

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Director, Section on the History of Anesthesia

University of Alabama at Birmingham

1743 August 26: Antoine Laurent Lavoisier born in Paris.

1774 August 12: Robert Southey, future English poet laureate and biographer of Lord Nelson, is born. Southey was also one of numerous famous or soon-to-be famous individuals who participated in the nitrous oxide experiments conducted in 1799 and 1800 by Dr. Thomas Beddoes and Humphry Davy at the Pneumatic Medical Institute in Clifton, just outside Bristol, England.

1809 August 29: American physician and author Oliver Wendell Holmes is born. In 1846 Holmes suggested the word "anesthesia" for the state of unconsciousness. William T.G. Morton induced with ether in patients at the Massachusetts General Hospital.

1819 August 9: William Thomas Green Morton, is born in Charlton City, Massachusetts. In October, 1846, Morton—a dentist—made the first successful public demonstration of surgical anesthesia at the Massachusetts General Hospital in Boston. Morton's story is told most recently in a massive biography by Richard Wolfe, *Tarnished Idol: William Thomas Green Morton and the Introduction of Surgical Anesthesia; A Chronicle of the Ether Controversy*. (Norman Publishing, 2001) Morton died on July 15, 1868, in New York City.

1819 August 25: James Watt dies near Birmingham, England. Watt, of workable steam engine fame, developed a partnership in the mid-1780s with Thomas Beddoes as Beddoes attempted to market his therapeutic applications of Priestley's "factitious airs" or gases. Watt developed equipment for Beddoes' use; some of this equipment was later used in Bristol during the nitrous oxide experiments of 1799 and 1800. Watt, his wife, and one of his sons, James Jr., participated along with numerous others in those experiments.

1842 August 26: Heinrich Irenaeus Quincke, German internist is born in Frankfurt an der Oder [Quincke died on May 19, 1922]. Among other notable medical achievements, in the early 1890s Quincke introduced lumbar puncture as a diagnostic and therapeutic tool.

1849 August 23: English poet, critic and editor William Ernest Henley is born. As a young man, Henley underwent an operation for a club foot. This experience resulted in a series of poems published as *In Hospital* (1873-75). In one of those poems, "Before", Henley wrote: "Behold me waiting—waiting for the knife./A little while, and at a leap I storm/ The thick, sweet mystery of chloroform,/The drunken dark, the little death-in-life." The complete text of the collection can be found at www.victorianweb.org/authors/henley/inhospital/contents.html. In addition to his own work, Henley wrote several plays with his friend Robert Louis Stevenson. Henley died in 1903.

1867 August 25: English chemist and physicist Michael Faraday dies. In 1818 Faraday, a student of Humphry Davy, published a brief anonymous article in the *Quarterly Journal of Science and the Arts* in which he noted the lethargic state that could be produced by the inhalation of ether vapor. Faraday is best known for his pioneering experiments in electricity and magnetism. He was born September 22, 1791, at Newington, Surrey, near London. A recent biography is *Michael Faraday* by Geoffrey Cantor, et al. (1996).

1868 August: James Thomas Clover, a chloroformist, presents his paper "On the Administration of Nitrous Oxide" at the British Medical Association meeting at Oxford.

1868 August: Coxeter and Son in England begin marketing an apparatus employing a cylinder of gas, a reservoir bag and a Clover face mask.

1869 September 23: American poet Edgar Lee Masters is born. In his classic collection *Spoon River Anthology*, Masters includes the story of "Searcy Foote" who murders his invalid Aunt Persis because she won't let him go away to college: "And a bottle of chloroform on the book,/ She used sometimes for an aching tooth!/ I poured the chloroform on a handkerchief/ And held it to her nose till she died." Foote got away with the crime and inherited his aunt's fortune. Masters died in 1950.

1871 August 27: American author Theodore Dreiser is born in Sullivan, Indiana. Dreiser's best known works are probably his novels *Sister Carrie* and *An Ameri-*

can Tragedy. In February 1915 Dreiser published in *Smart Set* magazine his one-act play "Laughing Gas" in which a physician having surgery has a mystical experience while under nitrous oxide anesthesia. [see Wright AJ. Theodore Dreiser's "Laughing Gas." *Anesth Analg* 69:391-392, 1989] Dreiser died on December 28, 1945, in Hollywood, California.

1875 August 4: Danish author Hans Christian Andersen dies in Copenhagen. Andersen was a frequent traveler and kept a diary during his trips. In August, 1847, he visited Edinburgh, Scotland, for several days. Several dinners were arranged by the locals for this famous author, and on the night of August 17 Andersen and numerous others dined at the house of prominent physician James Young Simpson. In his autobiography, Andersen wrote that "...in the large circle which was gathered there several experiments were made with breathing in ether. I thought it distasteful, especially to see ladies in this dreamy intoxication...there was something unpleasant about it, and I said so, recognizing at the same time that it was a wonderful and blessed invention to use in painful operations..." Simpson did not discover the anesthetic properties of chloroform until November of that year. [See Secher O. Hans Andersen and James Young Simpson. *Br J Anaesth* 44:1212-1216, 1972] Andersen was born in Odense on April 2, 1805.

1897 August 10: On this date a thirty-year-old German chemist, Felix Hoffman, synthesized a batch of acetylsalicylic acid, a combination of salicylic acid and acetyl chloride. Salicylic acid occurs in the bark of certain willow trees and has been known as an analgesic since at least the first century A.D. In 1838 salicylic acid was isolated, but alone produces stomach pain and in large doses gastrointestinal bleeding. A French scientist combined it with acetyl chloride in 1853 to produce a less irritating analgesic, but his discovery was forgotten until Hoffman's work. Hoffman's employer, the Bayer Company, quickly began to market the drug as Aspirin.

1898 August 10: Gardner Quincy Colton dies in Geneva, Switzerland.

1898 August 16: Surgeon August Bier of Greifswald, Germany, administers the first spinal anesthetic, a solution of co-

*For the full calendar, go to www.anes.uab.edu

caine, in a human, his assistant Hildebrandt. Bier had previously tried the technique successfully in animals. Soon Bier used the technique in patients. [See Goerig M, Agarwal K, Schulte am Esch J. The versatile August Bier (1861-1949), father of spinal anesthesia. *J Clin Anesth* 2000 Nov;12(7):561-9 AND Van Zundert A, Goerig M. August Bier 1861-1949. A tribute to a great surgeon who contributed much to the development of modern anesthesia on the 50th anniversary of his death. *Reg Anesth Pain Med* 2000 Jan-Feb;25(1):26-33].

1898 August 29: Author and film director Preston Sturges is born in Chicago, Illinois. Sturges became well-known for such films as *The Great McGinty* [1940] and *Sullivan's Travels* [1942]. Sturges also wrote and directed *The Great Moment* [1944], based on the life of William T.G. Morton, and the only Hollywood feature film ever made about the history of anesthesia. Morton was played by Joel McCrea, who had also starred in *Sullivan's Travels*. Sturges died in New York City on August 6, 1959. [See Heynick F. William T.G. Morton and "The Great Moment." *J Hist Dent* 2003 Mar;51(1):27-35.]

1899 August 9: Author Pamela Lyndon Travers is born [as Helen Lyndon Goff] in Maryborough, Queensland, Australia. She wrote as P.L. Travers and her best-known work is *Mary Poppins* [1934], the first of 11 books featuring the character. The Disney film version was released on August 29, 1964. One chapter from the book, "Laughing Gas," set at Uncle Albert Wigg's birthday party, was filmed for the movie and almost removed by Walt Disney. However, after numerous viewings of the scene featuring raucous laughter by actors Julie Andrews, Dick Van Dyke and Ed Wynn, Disney allowed it to remain in the finished film. The chapter was published individually as *Mr. Wigg's Birthday Party* in the Little Golden Books series in 1952. P.L. Travers died on April 23, 1996.

1910 August 26: American psychologist William James dies. Among his many other accomplishments, James self-experimented with nitrous oxide inhalation and left a brief but vivid description of his experience. James was also a long-time supporter of the philosophy Benjamin Paul Blood described in his work *The Aesthetic Revelation* [1874].

1935 August 15: American humorist and author Will Rogers dies. Rogers was born on November 4, 1879, in Indian Territory [what is now Oklahoma]. Rogers had a long career on stage, radio and in films; he also wrote some 4,000 syndicated news-

paper columns and six books. He was especially known for his political humor. Among his books is *Ether & Me...or Just Relax* [1937, reprinted in 1973], a humorous account of a visit to the dentist. Along with famed pilot Wiley Post, Rogers died in a plane crash near Point Barrow, Alaska. Learn more about Rogers at www.cmgww.com/historic/rogers/index.php.

1935 August 17: Feminist author Charlotte Perkins Gilman commits suicide in Pasadena, California. In the note she left behind, Perkins [who was a prolific author of both fiction and non-fiction] said she "chose chloroform over [breast] cancer" pain. The use of chloroform by suicides was apparently wide-spread for several decades in the late nineteenth and early twentieth centuries. Tom Roberts, the father of Mary Roberts Rinehart—one of the most successful American writers of the first half of the twentieth century—committed suicide in 1895 with chloroform, assisted by a gunshot through the heart. A search of the New York Times archive for the period produces dozens of articles with titles like "Suicide by Chloroform," "Suicide Uses Chloroform" and also "Nurse Commits Suicide" [by placing her head in a pan of chloroform!]. No doubt other newspapers around the country were also filled with such sad cases. A very odd account appeared in the New York Times on March 1, 1905: "Suicide Agreed with Osler; Old Man in St. Louis Chloroformed Himself After Reading Lecture." The gentleman had apparently taken seriously William Osler's notorious, tongue-in-cheek lecture remark the previous month that men [but not women!] over the age of sixty were useless and should seek "peaceful departure by chloroform." His remarks had been widely reported—and condemned—in the national press. [See Johnson JA. Osler recommends chloroform at sixty. *Pharos* 59:24-26, 1996]

1937 August 11: Novelist Edith Wharton dies in France. Among her numerous novels is *Twilight Sleep* [1927], a satirical portrait of the wealthy during the Jazz Age of the 1920s. The novel includes scenes of the administration of scopolamine for pain relief during childbirth, a popular method of the day called "twilight sleep." Wharton was born January 24, 1862, in New York City.

1970 August: Drs. H.J.C. Swan and William Ganz of Los Angeles introduce the pulmonary artery catheter into clinical practice.

1974: August 7: Virginia Apgar, obstetric anesthesiologist who developed the

famous scoring system for evaluating newborns, dies in New York City.

1989 August 28: Sir Robert Reynolds Macintosh dies after head injuries sustained during a fall. Although born in New Zealand in 1897, Sir Robert moved to England at the start of World War I and that remained his home. In February 1943 he published an article in *Lancet* about the laryngoscope blade that bears his name. He published four books on regional anesthesia between the late 1940s and early 1950s. After World War II he devoted much effort to improving anesthetic practice in developing countries. [see Boulton TB. Professor Sir Robert Macintosh, 1897-1989: personal reflections on a remarkable man and his career. *Reg Anesth* 18:145-154, 1993].

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cal information as to how to conduct an anesthetic. Jackson describes a few inhalers, but "the sponge is preferable to all inhalers." One reason is that an excited patient may throw a glass inhaler at the operator. He does mention, almost in passing, mouth-to-mouth ventilation (with pressure on the neck to occlude the esophagus) and oxygen gas as aids to resuscitation from overdose.

Jackson emphasized that ether for anesthesia should be pure, and the book ends on a strong note. He claims that "not a

single instance has thus far been found, in which pure washed ether, administered as directed by me, and as stated in this book, ever caused death."

The end pages are interesting. In one, Jackson advertises his services as an analytical and consulting chemist, mineralogist and geologist at his home and office on 32 Somerset Street, Boston. In another, he certifies the safety and efficacy of South Down Company's concentrated extract of tobacco as an insecticide. Though he deemed the stuff perfectly safe, nicotine-based insecticides are now illegal because of many 20th century lethal accidents. It

is a shame that Jackson's eclectic mind did not foresee the role that nicotine would play as a scientific tool in neurobiology.

Correction

In Dr. Ray Defalque and AJ Wright's article "The Introduction of Ether in Paris Revisited," published in the April 2008 issue of the *Bulletin of Anesthesia History*, several errors were inadvertently printed.

Typographical errors in the first paragraph were noted including an incorrect date, a missing footnote, and the word competitors. The correct version is as follows:

Modern accounts of the introduction of ether anesthesia in France are mainly based on a letter written in February, 1847, to the editor of the *Boston Medical and Surgical Journal* by Francis Willis Fisher, a young

Boston surgeon at that time a student in Paris.¹ Fisher's letter hints that his efforts were the main impetus to the acceptance of ether by the French academic surgeons. The authors have reviewed the contemporary medical literature, especially the numerous French journals, relative to that event. Their review suggests that Fisher was largely ignored by the French surgeons and by his young colleagues then studying in Paris. He seems to have exaggerated his role in the acceptance of ether anesthesia in France. The reviewed literature also provides some additional details and some

corrections to Fisher's account.

A copy of the complete, corrected version of the article including the renumbered references is available upon request.

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