

## ■ SPECIAL ARTICLES

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### Henry K. Beecher

#### *The Introduction of Anesthesia into the University*

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W. T. G. MORTON gave the first public, successful anesthetic on October 16, 1846, in Boston at the Massachusetts General Hospital (MGH). This momentous event opened the way to the operative treatment of uncounted afflictions. For almost a century, the MGH and Harvard Medical School largely ignored anesthesia, and only in 1941 was a professorship in anesthesia filled. The first Harvard Professor in Anaesthesia was Henry K. Beecher (1904-1976). Although he is infrequently mentioned today, Beecher was one of the most prominent anesthesiologists of his day. He enjoyed international recognition not only in anesthesia but well beyond the confines of the specialty for his work on pain, the ethics of human experimentation, and the definition of death.

At the sesquicentennial of Ether Day, I was given the opportunity to honor my teacher, Henry K. Beecher. My remarks are of a personal nature rather than a rigorous historical assessment of Beecher. I was a resident and later a fellow in anesthesia at MGH in Beecher's department.

#### A Synopsis of Beecher's Career

Friends, disciples, and admirers have well recorded Beecher's life, described his family, and commented on

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\* Jenkins MTP: The whistleblower. American Society of Anesthesiologists' Newsletter 1992; 56(9):8-9

† Beecher HK: Reports to the Trustees of the Dorr Professorship, 1938 and 1939. Countway Library Collection, Harvard University, Massachusetts. For many years and in many institutions, medical students and interns gave anesthesia.

his work in considerable detail. Bunker painted fond pictures of Beecher the Perfectionist, the Showman, the Colleague, and the Mentor of many academic anesthesiologists and physicians and tabulated the controversies in which he was involved.<sup>1,2</sup> M. T. Pepper Jenkins recalled Beecher the Whistleblower, a title earned by Beecher's "devastating indictment of research ethics," and Elliott V. Miller called him a "man of controversy."<sup>1,3</sup> Unsigned editorials also have reviewed Beecher's life and his contributions.<sup>4,5</sup> In *New England Journal of Medicine*, Claude Welch, a long-time surgical colleague at MGH, wrote an obituary of praise and admiration.<sup>6</sup> The Harvard medical alumni publication\* (September/October 1976) carried Bunker's summation of Beecher's life, and ANESTHESIOLOGY presented that prepared by Nicholas Greene.<sup>7</sup> However, a brief summary of his life is useful to place my comments in perspective.

Henry Knowles Beecher was born on February 4, 1904, in Wichita, Kansas. In 1926 he obtained an A.B. and in 1927 an A.M. degree in physical chemistry from the University of Kansas. Then, for a year, he was in charge of the Department of Chemistry of Highland College, Kansas. In 1928, he entered Harvard Medical School, apparently after having considered a career in chemistry. He was awarded student research fellowships in 1929, 1930, and 1931. After graduation from Harvard Medical School in 1932, he started his clinical training as a surgical house officer at MGH. Even during those busy years, he showed interest in research, spent a year in the physiology laboratory of the Nobel Laureate August Krogh in Denmark, and published several scientific papers.

In the early 1930s, anesthetic mortality at MGH must have been appalling if we may judge by what Beecher wrote in official reports in 1938 and 1939†: "[T]he ineptness of internes [sic] in anesthesia has lead to many avoidable fatalities," and "the death rate in lobectomy for bronchiectasis has been cut in a few years from 50% to 5%." In 1932, Dr. Howard H. Bradshaw, a promising



surgeon, was given the responsibility for anesthesia at MGH. He stayed only 4 yr and then accepted a position in surgery in Philadelphia. In 1936, Beecher succeeded Bradshaw as Chief of Anesthesia at MGH. Neither Bradshaw nor Beecher had received formal training in anesthesia.<sup>‡</sup>

Beecher's 1936 appointment to the position of Chief of Anesthesia at MGH and Instructor in Anaesthesia at Harvard Medical School and his 1939 promotion to Associate in Anaesthesia and his appointment to the Dorr professorship would not have been possible without the supportive efforts of his mentor and surgical chief, Edward D. Churchill. Beecher regarded Churchill with great respect, as was apparent from his occasional comments to me about the chief surgeon at MGH and from a later paper he dedicated to Churchill.<sup>8</sup> He credited Churchill with the recognition of the role anesthesia needed to play in future advances in surgery.<sup>9</sup>

### *Personal Recollections*

I first met Dr. Beecher in the spring of 1952 in Basel, Switzerland, when he visited the Bürgerspital where I had started training in anesthesia. My chief, Werner Hügin, had spent a year in Boston in Beecher's department and was thus among the first formally trained anesthesiologists in continental Europe. To our University of Basel anesthesia service, which consisted of one chief, two residents, and a number of nurses, the visit by "The Great Professor" from Harvard Medical School was analogous to the Pope dropping in on a village priest. I do not recall whether we polished the anesthesia machines and dusted the cabinets, but it would have been in character; the word was that an official Ameri-

can staff limousine with standards fluttering on the fenders was to meet Professor Beecher at the airport.

Dr. Hügin arranged for me to take Professor Beecher to his hotel. I remember that he carried an attaché case too precious to surrender to a porter. As we walked toward the hotel, he mentioned that he had just flown in from Berlin where he had consulted with the United States Armed Forces on matters of national security, which he could not discuss with me. He left me with the impression that the attaché case contained top secret papers of great significance.<sup>§</sup> I viewed the case with awe and was ready to avert my eyes when he put it on the desk in his hotel room to open it. It contained a bottle of gin and a bottle of whiskey. Over drinks, more by him than me, he inquired about my background, my family, and my medical education. He was kind and invited me to come to Boston to complete my training in anesthesia.

Soon after my arrival in Boston, in the late summer of 1952, I attended my first lecture by Beecher. The amphitheater at MGH was almost empty. I was troubled that many of my fellow residents paid less attention to him than to a radio loud enough to be heard at a distance. The residents were not captivated by what the Chief had to say, and to my amazement, he did not appear to mind. As a lecturer, Beecher affected a halting, sometimes almost stammering delivery, which suggested a constant struggle to find the word or phrase most befitting ivy tower learnedness. In relaxed discussion, Beecher did not stammer.

### *Of Appearances and Images*

Once I asked Beecher whether he was related to Harriet Beecher Stowe of *Uncle Tom's Cabin* fame. He denied a blood link with her illustrious Beecher family. Beecher mentioned that the name Unangst was in his family. Only long after his death did I learn that he was not born a Beecher and that Unangst was indeed his original family name. He must have changed his name when he was approximately 20 yr old. The Wood Library Museum of the American Society of Anesthesiologists (ASA) has several books Beecher had used in college. In one, dated September 1924, he had written in ink the name Harry K. U. Beecher.<sup>||</sup> The name Beecher had been entered over an erasure, which could have been Unangst, the "U" of which had become a second initial; a faint loop extending down from the erasure could have been the "g" in Unangst. In other textbooks, the place usually reserved for the owner's name had been cut out.

<sup>‡</sup> For many years, surgeons did not hold anesthesia in high regard. In the early 1950s, a professor of surgery remarked to me that anesthesia was a specialty for nurses; if a patient under the care of a nurse anesthetist encountered difficulties, there was always a surgeon available to straighten things out. Although in 1936 a few training programs in anesthesia had been established in the United States, many future anesthetists started their career with little or no formal training in the field. If Edward D. Churchill, Beecher's surgical chief and mentor, wanted to see progress in anesthesia, he might have looked for a surgeon with an academic bent. Beecher was such a surgeon; he had training in physiology and had published five papers, the first two of which were honored with the Warren Triennial Prize and were often quoted by other investigators.<sup>22,23</sup>

<sup>§</sup> He actually had clearance from the United States Armed Forces to view secret material that was upgraded to top secret in 1953.

<sup>||</sup> Perkin WH, Kipping FS: Organic chemistry. London, W & R Chambers, 1922.



## HENRY K. BEECHER

Documents in Harvard's Francis A. Countway Library of Medicine confirm that Unangst was his original name. When he changed his name, he was a young man. But 16 yr later, he still strove to maintain an acquired image or even aura. In a letter (July 2, 1940) to the Lane Theological Seminary in Cincinnati, Ohio, he presented himself as a member of the famous Beecher family and requested custody of a portrait of Lyman Beecher.<sup>#</sup> The well-known preacher and abolitionist had been president of the Lane Theological Seminary from 1832–1852. These concerns over his name and heritage suggest vanity or a need for recognition, which also manifested in other ways. Even though his roots were in Kansas, he exuded the airs of a Boston Brahmin clad in Brooks Brother's tweeds rarely worn without the ribbon of a Chevalier de la Legion d'Honneur in the lapel (fig. 1). He cherished his position at Harvard and cultivated ties to prominent nonmedical academicians.

*Beecher As Teacher*

Beecher had a certain aloofness toward the clinical practice of the residents, and in educational matters he was the general involved in strategy rather than the officer developing tactics or the corporal in the trenches with his troops. Mundane matters of education may have bored him. I do not recall that Beecher ever was present or checked on me when I was anesthetizing a patient or, later, while I was giving a presentation to the residents. I recall many instances when I was summoned to take over an anesthetic that he had begun in the Phillips House, the private division of the MGH complex. Invariably, his patient was breathing spontaneously, if barely so, well preserved in ether vapors. He favored two draw-over bubble vaporizers in series, both of them going full steam ahead; he liked his patients "very asleep," with pupils dilated, if not wide enough to qualify as open windows to eternity. Others had similar experiences of being called to relieve him when he had to rush out of town or to other assignments.<sup>4</sup> He once admitted to me that he gave anesthesia because he needed to boost his income. Recently, I discovered that he had started his career with a modest fixed salary and only later was permitted to charge fees for services rendered to private patients. He left me with the impression that the clinical aspects of administering anesthesia did not intrigue him. His residents and colleagues recognized him to be a meticulous but not gifted clinician behind the ether screen.



Fig. 1. A 1962 portrait of Beecher by the French painter Jean-Pierre Aloux. A plaque under the painting gives Beecher's appointments as chief of anesthesia from 1936–1969 and as Henry Isaiah Dorr Professor from 1941–1970. The picture hangs in the office on the fourth floor of the White Building, part of the MGH complex that was occupied by Beecher and now serves his immediate successor, Dr. Richard J. Kitz.

I believe Beecher was not at ease with senior surgeons, and I do not know whether to attribute this to his earlier surgical career, an insecurity about his anesthetic skills, or whether it was a result of his not being the hands-on clinical anesthetist-in-chief. The clinical direction of the department he had delegated to competent colleagues when I was a resident and fellow during the years 1952–1956. Some of the staff in the department were ready to ignore his orders if they appeared impractical in the clinical routine. For example, I remember the annoyance of a senior surgeon when muscle relaxation during an abdominal operation had become insufficient. The intravenous needle (no catheters were used in those days) had become dislodged, and the single infusion (at that time, 5% glucose in water), piggybacked with a succinylcholine drip, had infiltrated. The surgeon complained to Beecher, who

<sup>#</sup> Correspondence in the Countway Library collection.



then ordered all patients to have two intravenous infusions when a succinylcholine drip was to be used. The order was obeyed, more for appearance than effect, the second intravenous tubing occasionally ending unused beneath the drapes.

If I did not learn clinical anesthesia from my chief but from his excellent faculty, there was enough to be learned from Beecher, for example, the value of statistical consultation and the need to rewrite papers at least eight times, something Miss Ruth Studley, his patient secretary, quietly did for his scientific papers and books. In Beecher's day, before word processors, Miss Studley had to cut stencils of the many manuscripts and do revision after revision. She cranked the mimeograph machine almost daily. Often Beecher sent drafts of his papers and chapters for review to colleagues before submitting a manuscript for publication. He preached to authors: Keep the reader's comfort in mind! I also learned never to write "nauseous." It is "nauseated!" Those were some of the practical things I carried away.

An experienced teacher once remarked that what a student learns is less important than from whom he learns it (Rhoton FM, personal communication, 1976). A curriculum can be mastered with the help of many a teacher, but only the exceptional professor (in the traditional sense of the word) can breathe life into ideas and ideals and lift students' eyes to great visions. And Beecher was that exceptional professor. There was nothing wishy-washy about him. The positions he espoused he defended with vigor. The scope of ideas he considered had no bounds, nor did the depths he explored have limits. In scientific matters, he insisted on clear definitions of concepts and well-considered hypotheses to be tested in scrupulously designed and executed experiments. Any research project started with paper and pencil (most of them well chewed). Progress was to be made only when the cause rather than the symptom of a phenomenon was investigated. He considered the gathering of descriptive data useful but not interesting if such studies did not test substantial hypotheses. He ridiculed (and would not forget) the approach exemplified by one chairman who had acquired a scientific apparatus and asked Beecher what study he should do with the new device.

### Perspectives on Anesthesia As a Specialty

Beecher viewed clinical anesthesia and much of what the contemporary anesthesia literature had to

\*\* Dr. L. D. Vandam, who had been a member of the committee, kindly allowed me to read the report by the committee.

offer with impatience. He recognized the need for technical expertise but was weary of "an overwhelming preoccupation with tools and their use." He thought anesthesia required less technical prowess than surgery and that "anesthesia technique can be mastered by ordinary men who are ordinarily deft, with only a modest requirement of intelligence and of knowledge and judgment." That is strong language. He demanded more of anesthesia: "To live a vigorous life a specialty must have not only those who can apply the developments of others but also those who can create new ones. — Unless anesthesia is taught in terms of principles, it can hardly rise above the status of a craft. The university cannot be expected to foster anesthesia based upon the standards of the clinic alone. Anesthesia must develop scholarly aims and standards, characteristics of university caliber before it can expect the patronage of the university." These quotations come from an article on the specialty of anesthesia, and they summarize what he conveyed in occasional comments about this specialty.<sup>10</sup> He wanted to bring anesthesia into the university.

When I assumed responsibility for anesthesia at the new medical school of the University of Florida in 1958, Beecher had encouraged me to secure departmental status for our division of anesthesia in the department of surgery. He told me that he thought Harvard was not ready to do the same at that time, and he waited another 10 yr, until his imminent retirement, before applying for departmental status for anesthesia at Harvard. In a letter (September 1968) to Dr. Robert H. Ebert, Dean of Harvard Medical School, Beecher quoted "general trends," and the recent National Institutes of Health (NIH) award to Harvard Medical School of an Anesthesiology Center for Research and Training.<sup>\*\*</sup> Indeed, in the 1950s and 1960s many anesthesia divisions of modest distinction had become independent from their surgical parent departments but few could boast large NIH grant support. In his letter to the dean, Beecher wrote: "No specialty can survive, unless it heeds the changing aspiration of the graduating physician. No young physician will choose a specialty for his future career, unless it offers challenges and responsibility . . . consistent with his educational level, his concepts of himself as a physician and his social conscience." The Harvard Medical School committee appointed to advise the dean on the matter recommended departmental status for anesthesia.

Having attained departmental status did not mean that Beecher thought of anesthesia as a science. He always



and emphatically opposed calling the specialty anesthesiology, to the displeasure of mainstream American anesthesiology. To Beecher it was anesthesia, and the physicians working in it were anesthetists. More than once he pointed out to me that our British colleagues spoke of anaesthesia and anaesthetists and did not find the term anesthesiology suitable. He reminded me that surgery and internal medicine were clinical disciplines as well and not "-ologies" like the true basic sciences of physiology and pharmacology. Indeed, he stressed that all advances in our field comprised advances in respiratory, cardiovascular, and neurologic physiology, pharmacology, and biochemistry applied to anesthesia. These advances, he thought, would come from physician anesthetists applying the tools of physiology and pharmacology, as was amply demonstrated in the anesthesia laboratories of MGH and in other academic anesthesia departments. Such work justified departmental status for the specialty of anesthesia in medical schools, a status deserved by a discipline representing an "identifiable body of knowledge," as later defined by Nicholas M. Greene.<sup>11</sup>

### Does Beecher Merit Consideration at the Sesquicentennial of Ether Day?

Beecher's position in the firmament of luminary anesthetists could be quickly described if it were a matter of his having been the first occupant of the first endowed chair for research in anesthesia and the first director of the Department of Anaesthesia at Harvard University. His membership in the small circle of historical personages in anesthesia, however, should not be based on his tenure as professor at Harvard but instead on his successful demonstration of a scope for anesthesia that encompasses not only the clinical realm but also questions of interest to the scientific community of the university. He viewed anesthesia as a tool to plumb the function of the central nervous system. The

"subjective response" was the leitmotif that governed much of the research he initiated and in which I participated. At the time, I did not know of the roots of this consuming interest. But at the Sesquicentennial, it is appropriate to look at what Beecher had to say at the Centennial of Ether Day. He had entitled his presentation "Anesthesia's Second Power: Probing the Mind."<sup>12</sup> Instead of extolling anesthesia's role in relieving surgical pain or facilitating safe surgical operations, or advancing pharmacology and physiology, worthy subjects of any centennial (and areas to which he had made substantial contributions), he quoted Humphry Davy's description of recovering from the inhalation of nitrous oxide. Davy had written in 1799: "As I recovered my former state of mind, I felt an inclination to communicate the discoveries I had made during the experiment. I endeavored to recall the ideas, they were feeble and indistinct; one collection of terms, however, presented itself: and with the most intense belief and prophetic manner, I exclaimed to Dr. Kinglake, 'Nothing exists but thoughts!—the universe is composed of impressions, ideas, pleasures and pains!'" On this Beecher commented: "Those who are familiar with the history of philosophy will recognize that this is the epitome of that extraordinary school set forth long before this time by Bishop Berkeley."<sup>††</sup> He then mentioned dreams and trances of poets (with Tennyson, we are reminded of lotus eaters) and reveries (William James, a Harvard M.D. who had linked drugs and mystical states) and the experiences of a young man (Benjamin Blood) who probed "the subconscious with anesthetic levers" in the 1860s.

Beecher's papers preserved at the Countway Library contain a large selection of writings by Benjamin Paul Blood (1832–1919), a philosopher, mystic, and poet. Blood enjoyed (or perhaps suffered) a stronger reputation as a mystic than as a philosopher, if we may judge by the remarks of a reviewer in *Atlantic Monthly* on Blood's "The Anesthetic Revelation and the Gist of Philosophy," which Blood had published in Amsterdam, New York, in 1874. Wrote the *Atlantic Monthly*: "Crack-brained will be the verdict of most readers." After an extensive quotation from Blood, the *Atlantic Monthly* went on to say: "This flight of rhetoric . . . will seem grand or funny, according to the disposition of the reader." And still further: "What blunts the mind and weakens the will is no full channel for truth, even if it assist as to a view of a certain aspect of it."<sup>‡‡</sup>

Beecher, however, was intrigued by the "anesthetic levers," and he used the phrase to introduce the con-

<sup>††</sup> G.E. Erikson (personal communication, October 17, 1996) advised me as to the correct pronunciation of the Bishop's name with the following limerick:

A philosopher, one Bishop Berkeley,  
Observed wryly and rather darkly,  
What'ever you can't see  
Can't possibly be  
And the rest is rather unlikely.

<sup>‡‡</sup> Unsigned: Discussion. *Atlantic Monthly*, November 1874; XXXIV(205):629–628



cept of the subjective response and how drugs might alter the experience. He often quoted his observation that the battle-wounded soldier requires less analgesic agents than the severity of his wounds would suggest. Being trained as a natural scientist, he responded to the admonition of Lord Kelvin (which Beecher liked to cite): "... when you can measure what you are speaking about, and express it in numbers, you know something about it; when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind ... ." Thus, Beecher started to measure the subjective response and he placed numbers on it.

Beecher believed narcotics acted by a twofold mechanism: on the one hand, they produced analgesia; on the other hand, they changed the patient's subjective response to pain and ameliorated suffering. Therefore, narcotics were more effective in pathologic pain—in which the patient had to bear the pain *and* the awareness of being afflicted with an ominous disease—than in experimental pain. Placebos provided a powerful argument in favor of this perspective: Because sugar pills can palliate pain, they must do so via psychological rather than pharmacologic mechanisms. This perspective drew Beecher to examine the power of narcotics in postoperative patients (and by extension, antitussive drugs in tuberculous patients) and their effects on healthy volunteers. We tested new and old narcotics, among them heroin. The investigation of psychedelic drugs was a natural extension of this interest.

Much research in Beecher's department dealt with studies in humans, both patients and volunteers. In the 1950s, we did not consult an institutional review board to obtain permission for such studies, and we obtained consent from the patients with significantly less formality than is customary today. Occasionally, problems did arise. For example, once a disoriented student volunteer, after an experiment with a central nervous system-active drug (I do not recall which), had to be retrieved from a rooftop. I do not know whether questions about human experimentation that arose in Beecher's own department fueled his involvement in the ongoing debate surrounding the ethics of human experimentation. His concern with these issues culminated years later in his exposure of unethical experimentation in a notable article in *New England Journal of Medicine*, which drew much criticism.<sup>13</sup> In a later book entitled *Research and the Individual, Human Studies*, he responded to that criticism.<sup>14</sup> Beecher's views set forth in the quoted paper and the book were influential in

defining the standards of human experimentation now taken for granted in this and many other countries.

Beecher bridged what natural scientists pursue and what philosophers and psychologists chose to examine. If Beecher did not make anesthesia into anesthesiology, he did at least for the field what in Beecher's eyes his mentor, Edward D. Churchill, had done for surgery. Beecher had dedicated a book to Churchill "who, more than any other, brought the standards of the university into the hospital."

### Beecher's Bibliography

Richard J. Kitz, Beecher's successor, allowed me to view Beecher's papers still kept in the office that Beecher and then Kitz had occupied for many years. Of particular interest to me was Beecher's bibliography, a typed catalog with entries dating from 1933 to 1973, which covered his most active years. It lists not only papers published in journals but also reviews of some of his books and even occasional correspondence, for example, a letter (March 29, 1972) from Walter F. Mondale, then United States senator, and one (June 21, 1973) from Elisabeth Kübler-Ross, the well-known Swiss-American physician and author of the book *On Death and Dying*. Beecher omitted from this list some books, for example, his often praised and quoted *The Physiology of Anesthesia* published in 1938 by Oxford University Press, for which he received the Warren Triennial Prize. In addition to clinical and experimental papers, the bibliography includes occasional historical articles, papers on methods, and comments on the clinical specialty of anesthesia, reflecting his wide-ranging interests.

After World War II, Beecher did not work with patients at high risk of dying in the intensive care unit or in the operating room; however, he made an important contribution working on the definition of death, not so much by examining the adequacy of circulation or ventilation, but by focusing on the irreversibility of coma, which is the antithesis of anesthesia. Thus, the function of the brain, central to all of anesthesia and the subject of his early studies dating back to the late 1930s and still occupying his attention at the end of his career, can be viewed as the focus of Beecher's interests. He worked on electrophysiologic aspects of the brain, on pain and its relationship to suffering, on drugs affecting mental function, and finally on the failure of the central nervous system in death. This wide range



of interests is matched by a broad spectrum of specialists from other fields who collaborated with him. Among them were neurophysiologists and psychologists and physicians from many other disciplines who worked with him in Boston and elsewhere.

It is difficult to appraise Beecher's importance to the specialty by surveying his publications. For example, his work on the subjective response, which is on the central action of narcotics in altering the response to noxious stimuli, was widely discussed during his life. Today's clinical pharmacologists and natural scientists largely ignore his, to use a modern word, "holistic" perspective. Beecher emphasized that personality and setting influenced the action of narcotics; modern investigators focus on specific opiate receptors not only in the brain but also in the spinal cord and elsewhere, sites of action not considered by Beecher.<sup>15</sup> It remains to be seen whether Beecher's emphasis on the subjective response will be revitalized by later investigators. Beecher's papers related to the physiology and practice of anesthesia no longer receive attention. His comments on the ethics of experimentation and the definition of death are still remembered and quoted, and they have lost little relevance to us today.

None of Beecher's many papers triggered more criticism than the extensive report on mortality in anesthesia by Beecher and Todd.<sup>16</sup> According to Dripps this paper was "greeted with violent objections in this and other countries" because of the interpretation of the data.<sup>17</sup> Beecher and Todd had reported on their multi-institutional investigation, a pioneering effort in anesthesia. They had observed an astonishingly high mortality when D-tubocurarine was used during diethyl ether anesthesia. Critics pounced on Beecher's interpretation that the high mortality was related to "inherent toxicity of curare." The controversy caused some academic centers to withdraw from the study; as Dr. Papper explained: "I withdrew toward the end of the study from collaboration on behalf of the Columbia-Presbyterian Medical Center because I was not satisfied that we were doing the right thing to make what I felt to be sweeping condemnation of a potent new vehicle to assist in clinical anesthesia" (Papper EM, personal communication, November 29, 1994). According to E. S. Siker, who had served in the Korean War, Beecher's influence led the Armed Forces of the United States to curtail the availability of muscle relaxants, a fact Siker considers to have been to the detriment of the wounded in that conflict (Siker ES, personal communication, 1996). Because the interpretation of the data diverted much attention from

the design and execution of the study, Beecher received more criticism than praise deserved for a landmark epidemiologic investigation in anesthesia.

Beecher was one of the most prominent and visible representatives of American anesthesia, both by dint of his position at MGH and Harvard Medical School (a statement likely to elicit objections by colleagues from the West coast) and by the influence exerted through his publications. An examination of the journals in which he published, however, shows that of well over 200 original papers in his bibliography only a handful appeared in the American or British anesthesia literature. No single journal had carried more of his publications than the *Journal of the American Medical Association (JAMA)* and the *Journal of Pharmacology and Experimental Therapeutics*. The sum of all papers appearing in various surgical journals, however, surpasses those in *JAMA*. The fact that he published the large Beecher and Todd outcome study<sup>16</sup> in a surgical journal instead of in one of the respected anesthesia publications has galled some anesthesiologists. Perhaps we should not read into the bias to publish in surgical papers old loyalties to surgery, or the need to impress his former colleagues, or uncertainty about the scientific stature of anesthesia. Perhaps it was just a matter of finding the greatest number of readers. But we must ponder why he did not invest his considerable intellectual capital into anesthesia journals to entice those lagging in scientific achievement to come aboard with academic anesthesia or to lend his prestige to the young specialty.

### Relationship with Anesthesiology Organizations

Beecher's relationship with organized anesthesia in the United States started with some difficulties. When first appointed anesthetist at MGH, he could not qualify for membership in the ASA because he had had no training in the field and had not served as anesthetist long enough to be admitted under a grandfather provision. When he finally became a member in 1938, he wrote an interesting letter to the ASA: "I want to tell you that I think the American Society of Anesthetists has made a very progressive start toward raising the standards of anesthesia. I am proud to have been elected a member of this organization." The left-handed phrase "a very progressive start toward raising the standard" barely obscures Beecher's implied criticism that only a



start had been made toward a necessary raising of the standards. About a decade later, Beecher's first open criticism emerged in an editorial probably written in response to the resolution made by the ASA on June 11, 1947, which had been widely distributed to hospitals.<sup>18</sup> In this document, the ASA had expressed disapproval "of the training of persons other than doctors of medicine in the science and art of anesthesia." Beecher pointed to the dearth of physician anesthetists (as he called them) and suggested that nurse anesthetists fulfilled an important function if limited to giving ether but not cyclopropane or thiopental or spinal anesthesia. He could have held his tongue; instead he charged into the open with his opinion. For many years, he maintained a school for nurse anesthetists in conjunction with a well-known residency training program.

Another area of contention between the ASA and Beecher was the question of private practice compared with hospital employment of physician anesthetists. Beecher favored employment status for the anesthetist, even though he gave anesthesia in a fee-for-service arrangement at his own institution, which supplemented his salary as anesthetist-in-chief at MGH and the modest income from the Henry Isaiah Dorr Professorship of Anaesthesia at Harvard Medical School. He did not criticize fee-for-service arrangements, but he was vocal in condemning those who tried to stifle the employment of anesthetists in salaried positions. The strength of his conviction found colorful expression in a letter to Dr. Austen Lamont (November 1950) in which he accused organized anesthesia of setting up "a tight little fascist dictatorship" attempting to "club all individuality into a mold."<sup>§§</sup> He was also critical of the scientific standards of the ASA congresses in the early years after World War II. To establish a "loyal opposition to the blind rushes of the present steam roller" and to give academic anesthetists a forum then not available within the folds of the ASA (as he once told me), he envisioned an academic organization for the presentation and discussion of scientific advances in the field.<sup>19</sup> Thus, in 1953 he became a co-founder (with Robert D. Dripps, Austin Lamont, and E. M. Papper) of the Association of University Anesthetists, an elitist group initially limited to 100 members.

In 1970, Beecher gladly accepted the Distinguished Service Award by the ASA, an organization that had become the principal forum for scientific advances in

the field. His life's work had focused on the clinical questions challenging anesthetists and beyond that had opened perspectives on the effects of drugs on the mind. He said, "It is a curious thing that it is technically easier to take away consciousness, with its vast consequences, than it is to take out a lung."<sup>20</sup> His interest in the central nervous system had started with neurophysiologic studies and ended with the definition of irreversible coma. "And to poets sleep is the brother of death."<sup>21</sup>

## The End

In early 1976, I visited Henry Beecher in his apartment in Boston, close to the Charles River, not too far from his beloved MGH and Harvard Medical School. He had lost his wife, he had lost his job, he was alone and emaciated from a carcinoid tumor that resisted treatment; all his flowers had wilted. He died in the summer of that year.

Only 150 yr have passed since William Thomas Green Morton gave the first successful anesthetic to a surgical patient in front of a critical medical audience in Boston. That happened on October 16, 1846, in what is now called the Ether Dome in the Bulfinch Building, part of the complex of MGH. Thus, MGH and, through it, Harvard University are home to the birthplace of anesthesia, a distinction these venerable institutions did little to build on for nearly 100 yr. Henry K. Beecher wrote of the years since Morton that "anesthesiology in practice took form as an eclectic rather than a scientific branch of medicine, and it continued to be taught to students as such into the 1930s."<sup>10</sup> Beecher changed that and he provided new perspectives. To him there were mysteries and challenges in anesthesia. Beecher deserves to be honored on the sesquicentennial celebration of Ether Day. Today's young anesthesiologists do not recognize his name, which means little, because the same young anesthesiologists do not know of Morton either. Morton introduced anesthesia at MGH in Boston — without having been the first to give an anesthetic; Beecher made it a university specialty — without having been the first academic anesthetist.

A number of colleagues generously made time available to talk to and to write to the author about Henry K. Beecher. The author has drawn on that information from Drs. George E. Battit, Nicholas M. Greene, Richard J. Kitz, Susan Lamdin-Learmonth, E. M. Papper, Henning Pontoppidan, E. S. Siker, and Leroy D. Vandam. Mr. Patrick Sim from the Wood Library Museum provided many valuable references

§§Letter in the Wood Library Museum collection of the American Society of Anesthesiologists, Park Ridge, Illinois.



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