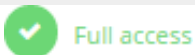




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Historical Studies

# Baylor University Medical Center's leap to prominence: The 1972 conference "Great Ideas in Surgery"

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## Abstract

In 1972, Baylor University Medical Center established the A. Webb Roberts Center for Continuing Education in the Health Sciences. The center

included the Beulah Porter Beasley Memorial Auditorium and a 25,000-volume medical library. The author was fortunate enough to attend the 2-day meeting (November 3–4) as a fellow in cardiovascular surgery. The following account is based on his personal recollections but also on the papers published by the participants and bequeathed to him by the late chief of the Department of Surgery, Robert S. Sparkman, MD.

**Q Keywords:** History of surgery Cole, Warren H. DeBakey, Michael E. Dragstedt, Lester E. Gibbon, John H., Jr. Hufnagel, Charles A. Huggins, Charles B. Hume, David M. Ochsner, Alton Powell, Boone Sparkman, Robert S. Wangensteen, Owen H.

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The future belongs to those who prepare for it.

—Boone Powell Sr.

I landed in Dallas, Texas, on July 1, 1972, in order to start my 1-year stint as a fellow in cardiovascular surgery working with the then-largest private group headed by Ben F. Mitchel, MD, and Maurice Adam, MD. As I emerged from Love Field airport, my first experience was the blinding sun and then the suffocating heat. The streets were practically deserted and the houses had one or two stories, so unlike the European architecture of New England. Those were my first fleeting impressions about the differences, and later I would discover many more: the hugeness of Texas in all respects and the pure-blooded pride of its towering inhabitants. The meaning of *big* extends also to medicine. When Texan surgeons announced at a conference that thanks to their exceptional technique they had operated on an aortic aneurysm using only one unit of blood, whereas three or four are usually required, one of the participants

commented drily: “Of course, it was a Texan unit of blood!”

I had arrived at Baylor University Medical Center, which had started out as the Good Samaritan Hospital in 1901.<sup>1</sup> With donations from rich Baptists, it was followed by the Texas Baptist Memorial Sanitarium with 250 beds, which was inaugurated in October 1909.<sup>1</sup> Until 1948, the hospital consisted of that main structure along with some ancillary buildings, although it did change its name twice, to Baylor Hospital in 1921 and Baylor University Hospital in 1936.<sup>1</sup>

The meteoric rise of Baylor was due to the legendary figure of Boone Powell Sr., who in 1948 assumed the position of administrator and was given the responsibility for supervising day-to-day Baylor operations (*Figure 1*).<sup>2</sup> Powell, along with Hospital Director Laurence Payne, faced the task of raising the staggering amount of \$5.5 million for the construction of the seven-story, 436-bed George W. Truett Memorial Hospital, honoring the renowned Baptist pastor, which was completed in November 1950.<sup>2</sup> Without taking a breath, Boone Powell put his superior business skills to work and between 1954 and 1959 a new Women’s and Children’s Hospital of 403 beds was constructed. It would later be named the Karl and Esther Hoblitzelle Memorial Hospital, acknowledging their substantial contribution.<sup>2</sup> This brought Baylor’s bed capacity to 825. During the opening ceremony, a name change from Baylor University Hospital to Baylor University Medical Center was announced.<sup>1</sup> In 1968, Carr P. Collins, a veteran Baylor trustee, spearheaded a new 300-bed facility for rehabilitation and later for acute psychiatric care, completed in January 1972.<sup>2</sup> It was preceded by the 200-bed Erik and Margaret Jonsson Medical and Surgical Hospital, which opened its doors in September 1970.<sup>1,2</sup>

Figure 1. Boone Powell Sr.

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Despite Baylor's expansion—to over 1300 beds—the hospital maintained a homelike atmosphere, with Mrs. Powell playing the piano at the graduation of fellows and residents and the Reverend B. F. Bennett in his parrot-like green jacket giving his 10 AM sermon through the public announcement system. The hospital, with all of its formidable resources, resembled a beautifully trained athlete ready to compete in the Olympics but as yet to take the plunge. What was missing was a major circumstance in the national arena. This was provided through the collaboration of Boone Powell Sr. with the chief of the Department of Surgery, Robert S. Sparkman (*Figure 2*).

Figure 2. Robert Sparkman, MD.

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A brief description of these two remarkable men is in order. Boone Powell, short and stout, always on the move, with an air of unmistakable authority, possessed leonine facial features. His direct, piercing gaze, radiating sterling honesty and indomitable determination, commanded the absolute trust of the numerous Baylor benefactors. Once, as a patient was leaving, she handed him her checkbook so that he could write the sum of \$1 million that he had suggested (B. F. Mitchel, personal communication). In addition to administrative talents, he was known for

the affection he showed to patients and hospital staff, whom he visited and chatted with as if they were family.

Yet, despite his affable personality, he could become hard and unbending when it came to order and discipline. I remember a well-known patient, an eminent member of the Dallas community with an aggressive, short nephew, who was also a doctor. Things were not going well and the nephew, visiting the intensive care unit more frequently, started interfering with the work of the doctors and nurses. One evening, at the end of visiting, he announced that he would stay the night to look after his uncle. This was against the rules and the charge nurse politely suggested that he leave. He refused. Immediately, the administrative supervisor was summoned but again to no avail. The next step was the two enormous security guards asking him to leave. When he again refused, they lifted him by the armpits, his legs wildly kicking in the air, and threw him out! Faced with his vociferous protestations the following day, Mr. Powell fully supported his staff.

The other protagonist, Robert S. Sparkman, had been chief of the Department of Surgery since 1969. A native Texan, trained in Cincinnati, he had developed a keen interest in biliary surgery; hence his acquaintance with the Lahey Clinic surgeons of Boston. A president of several surgical societies and a strong believer in medical education, he established a significant endowment for his department, culminating in the creation of a chair carrying his name. Dr. Ronald C. Jones, subsequently chief of surgery at Baylor, became the first holder of the chair. Dr. Sparkman was a delightful man, the epitome of a southern gentleman. Of slight build with feline agility and grace, he was renowned

for his impeccable manners and sartorial elegance. He exhibited a genuinely paternal affection for his trainees, who reciprocated with unbounded loyalty. Known for his taciturnity, he would quietly join a conference, make his well-measured comments, and depart in the same discreet manner.

So, at the beginning of November 1972, on the occasion of the ceremonial dedication of the A. Webb Roberts Center, in the presence of Judge Abner V. McCall, president of Baylor University in Waco, Texas, with Chaplain Bennett officiating, a stellar faculty of nine speakers was introduced to a packed auditorium (*Figure 3*):

Figure 3. Selected autographed presentations from the program.

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- John H. Gibbon Jr., professor of surgery emeritus and former chairman of the Department of Surgery, Jefferson Medical College, Philadelphia
- Charles B. Huggins, professor of surgery (urology), The University of Chicago; director, Ben May Laboratory for Cancer Research
- Lester E. Dragstedt, research professor of surgery and professor of physiology, University of Florida
- Owen H. Wangensteen, regents' professor and chairman emeritus, Department of Surgery, University of Minnesota

- Warren H. Cole, professor emeritus and former chairman of the Department of Surgery, University of Illinois College of Medicine
- Michael E. DeBakey, president, Baylor College of Medicine; professor and chairman, Department of Surgery, Baylor College of Medicine
- David M. Hume, professor and chairman, Department of Surgery, Medical College of Virginia
- Charles A. Hufnagel, professor and chairman, Department of Surgery, Georgetown University Medical School
- Alton Ochsner, professor of surgery emeritus, Tulane University School of Medicine; director of surgery, Ochsner Clinic and Foundation Hospital

Three of the speakers, Drs. Gibbon, Huggins, and Dragstedt, presented their lectures on Friday, November 3, after the opening ceremony. Three more (Drs. Wangensteen, Cole, and DeBakey) spoke in the morning session of Saturday, November 4, and the rest (Drs. Hume, Hufnagel, and Ochsner) spoke in the afternoon session on the same day. All nine lectures were later published in the *American Journal of Surgery*, with Dr. Sparkman as series editor.

As expected, all eyes and television cameras were focused on Dr. DeBakey, who was then at the peak of his celebrity status. However, a notable absence from this luminous gathering was that of Denton A. Cooley, chief of cardiac surgery at Texas Heart Institute, already a legend for his unique technical prowess and unparalleled productivity. A disastrous falling out with Dr. DeBakey in April 1969 over the invention and subsequent use of

the Liotta artificial pump led to a public confrontation between them. Dr. DeBakey argued that the pump had been created in his own laboratory under his supervision, as the product of National Heart Institute research, and that therefore Dr. Cooley should have asked his permission prior to using it. Moreover, Dr. DeBakey criticized the use of the pump for a presumed emergency followed the next day by a heart transplant on the same patient.<sup>3</sup> Dr. Cooley's counterargument was that the pump was of a different construction and had been created by using his own private funds. The controversy broke when DeBakey took the matter to the American College of Surgeons, the National Heart Institute, and Baylor College of Medicine. Each carried out its own investigation, leading to mild reprimands from the first two and censure from Baylor for not requesting permission from the Committee on Research Involving Human Beings. A lawsuit with the deceased patient's wife as plaintiff, demanding \$4.5 million in damages, despite a consent form signed by the patient and witnessed by her and the rabbi for the Jewish Community of Houston, led to a "directed verdict"; that is, the accusations did not merit a jury trial, because Dr. DeBakey refused to testify as an expert witness. Despite this, DeBakey and Cooley conspicuously avoided each other for the next 38 years, not even being on speaking terms. They reconciled as late as 2007 at a ceremony of the Denton Cooley Society, recognizing Dr. DeBakey. The honoree was then 99 years old and his former rival was 87.<sup>4</sup>

Dr. Gibbon's name is inextricably linked to the development of the heart-lung apparatus that made cardiac surgery possible in the latter part of the 20th century. The idea occurred to him in 1931 when, as a fellow under the famed Harvard professor Edward D. Churchill, he spent the night at Massachusetts General Hospital watching a patient dying of a massive



pulmonary embolism. He thought then that temporary circulatory assistance using a machine could take the venous blood, oxygenate it, and return it to the arterial system instead of attempting a desperate and hurried Trendelenburg procedure.<sup>5</sup> Over the next 20 years, with the help of his loyal assistant and subsequently wife, Mary (Maly) Hopkinson, he developed a number of experimental devices. The real breakthrough came when he received financial as well as technical assistance from Mr. Thomas Watson, president of IBM. The reward arrived on May 6, 1953, when he successfully closed an atrial septal defect in an 18-year-old woman. Two subsequent cases were unsuccessful, and Dr. Gibbon did not pursue open heart surgery further. Yet the baton had already been passed on, most notably to Dr. John Kirklin of Mayo Clinic.<sup>6</sup> Dr. Gibbon was an incredible speaker and a great teacher. Although nominated for the Nobel Prize, he never received it.<sup>7</sup> Sadly, he died of a heart attack on a tennis court shortly after his Baylor lecture. I dare say that of all of the speakers at that conference, he is the one who left me with the indelible image of a real patrician and a gentleman.

Dr. Huggins was a pioneer in the development of the treatment of malignant disease by the alteration of the hormonal environment of the subject. In 1966 he was the winner of the Nobel Prize in Physiology or Medicine, sharing it with Dr. Peyton Rous. Dr. Huggins received the award for his discovery of the hormonal treatment of prostate cancer in dogs. Orchiectomy or the administration of estrogens caused a rapid shrinkage of canine cancer.<sup>8</sup>

Dr. Dragstedt was an acknowledged world authority on the subject of gastroduodenal physiology and pathology, with particular reference to

peptic ulcer disease. In his lecture, he referred to his studies since 1924, proving that duodenal ulcer is caused by hypersecretion of gastric juice of nervous origin. Contrary to this, a gastric ulcer is caused by hypersecretion of hormonal or gastric origin brought on by stasis of food in the stomach due to pyloric stenosis or gastric atony.<sup>9</sup> His lecture was a brilliant dissertation on the experimental background leading to his theses on the etiology of peptic ulcer disease.

Dr. Wangensteen trained more department chairmen of surgery than any other individual in the USA. He had been an innovator in many fields and was considered an international authority on intestinal obstruction and its relief through nasogastric tubes and suction systems.<sup>10</sup> Although he was not a thoracic surgeon, he is best remembered for ushering in cardiac surgery at the University of Minnesota when, in 1952, Dr. F. John Lewis closed an atrial septal defect using W. Gordon Bigelow's total body hypothermia technique.<sup>11,12</sup> Another of his associates, the subsequently legendary C. Walton Lillehei, who was present, remarked, "Boy, there's got to be a better way to do open heart surgery." In 1954, therefore, he introduced his own "controlled cross-circulation" technique, using a parent as oxygenator by connecting his or her femoral vessels to the patient.<sup>13</sup> In this way, he operated on 45 young patients with congenital heart defects. Two-thirds of them were discharged from the hospital, and 22 were alive 30 years later.<sup>14</sup> Humorously, another surgeon, Dr. C. Lam, remarked, "You know, Walt, this is the only operation that carries a potential risk of 200% mortality."<sup>15</sup> Other notable contributions were the Lillehei-DeWall bubble oxygenator, the first pacing wire for atrioventricular block, and various valves, including the Lillehei-Kaster one.<sup>13</sup> Dr. Lillehei attributed the success of cardiac surgery at the University of Minnesota to Dr.

Wangensteen's unique training program with both clinical and research aspects, and another famous trainee of his, Dr. Norman Shumway, praised their chief's "total lack of envy" as his greatest quality.<sup>12</sup> It should be mentioned that Dr. Lillehei, despite his achievements, was most proud of training 154 cardiothoracic surgeons between 1951 and 1979, 23 of whom became directors of cardiothoracic programs around the world.<sup>13</sup>

Dr. Cole, in conjunction with Dr. Evarts Graham, developed the first method of x-ray examination of the gallbladder. In his lecture, he described the first visualization of the gallbladder in 1923 by the intravenous injection of a halogenated compound that was excreted by the liver into the biliary system. There was a funny twist to this story when the first obtained cholecystogram in a dog and the work log were pilfered by a visitor, and it took some time before they were returned for display at the Mallinckrodt Institute of Radiology. Throughout his career, Dr. Cole continued making notable contributions to many branches of surgery, especially those of the gallbladder and bile ducts.<sup>16</sup>

Dr. DeBakey, both revered and feared, was popularly known as "Black Mike" because of his brusque manner, relentless drive, uncompromising demand for perfection, and ruthless treatment of trainees and associates.<sup>3</sup> A Louisiana native, he trained under Dr. Alton Ochsner, for whom he maintained a lifelong loyalty. He obtained further experience in Strasbourg with Dr. René Leriche, famous for his vascular work. Returning from service in World War II, he became chairman of the Department of Surgery at Baylor College of Medicine in Houston in 1948. He resected the first abdominal aortic aneurysm in 1952 and did the first carotid endarterectomy in 1953, developing the Dacron graft in the early 1960s,

which ushered in the era of vascular surgery. He is also credited with the development of the roller pump (part of the heart-lung apparatus) and the addition of pyrolytic carbon to the artificial heart valves.<sup>17,18</sup> He was the first to use a left ventricular assist device in 1966, favoring this over a total artificial heart, which later led to the Liotta pump controversy (see above). As a matter of fact, he predicted that assist devices would become as common as pacemakers or defibrillators. He apparently did the first coronary bypass operation but only reported it 7 years later, in 1973.<sup>18</sup> As Dr. R. B. Wallace, another well-known surgeon, said, "Dr. DeBakey demanded perfection of himself and of others and did not hesitate to tell people that they fell short of his expectations."<sup>19</sup>

Coming from Harvard in 1956, Dr. Hume set up a modern academic surgical department in Richmond, making extensive contributions in the field of organ transplantation, rejection, and immunosuppression.<sup>20</sup> As early as 1945, at Peter Bent Brigham Hospital, he and two other house officers (C. Hufnagel and E. Landsteiner), by the light of a gooseneck lamp, anastomosed a fresh cadaver kidney to the antecubital vessels of a woman dying of renal failure and watched the meager flow of urine.<sup>21,22</sup> In 1957, 3 years after the first clinical kidney transplantation by Murray, he did his own identical twin transplant, and 3 years later (in 1960) proved that 6-mercaptopurine prolonged the life of kidney transplants in dogs. He documented hyperacute (humoral) rejection for the first time, subsequently developing a histocompatibility matching test with Dr. B. Amos of Duke University. His interests were wide and varied, encompassing not only organ transplantation but also neuroendocrinology and surgical stress.<sup>23</sup> Those working with Dr. Hume enthusiastically praised his enormous energy, optimism, and productivity.

His intellectual curiosity was unlimited, and his youthful enthusiasm infectious, readily transmitted to his disciples. Despite his formidable reputation, he retained a boyish mischievousness.<sup>24</sup> As Dr. T. Starzl said, he always reminded him of a human buzz saw, constantly advancing with precision and beauty.<sup>25</sup> Regrettably, Dr. Hume died 6 months after his Baylor lecture.<sup>26</sup> He was piloting his own plane, and as one of his colleagues remarked at the memorial service in Richmond, "Dr. Hume obviously believed the mountain would just move out of his way!"<sup>27</sup> The eulogy by his mentor, the surgeon-in-chief at Harvard/Peter Bent Brigham, Francis D. Moore, summarized it all: "A restless person, dissatisfied with things as they are, ... drawn to adventure, ... controversy, ... danger."<sup>24</sup>

Dr. Hufnagel started experimenting in 1950 to develop an artificial valve to be placed in the descending aorta of patients with severe aortic insufficiency, because an intervention on the defective native valve was not feasible prior to the introduction of open heart surgery. He therefore developed an 8-cm-long cylinder, which he interposed by excising an equal length of the descending aorta. A ball valve moving freely inside the cylinder prevented regurgitation in the lower part of the body. This was a significant relief for the patient in congestive heart failure, although he would still have a leaking native aortic valve.<sup>6</sup> He did his first clinical case in 1952, and one of his cases survived for 23 years, a tribute to the valve's durability. He placed about 90 of these devices with a mortality rate of 10%, which was then considered acceptable.<sup>28</sup> Unfortunately, the valve was too noisy, akin to "the aural equivalent of Chinese water torture," and some suicides were reported. It was also somewhat thrombogenic, although the emboli obviously spared the brain, traveling down the lower part of the body.<sup>22</sup>

The final speaker, Dr. Alton Ochsner, an obviously pious man, introduced the last of the historic papers by quoting Genesis 2:21,22, which described how God made woman from man by taking a man's rib. He commented that the first recorded operation was a thoracic procedure, which resulted in a useful and delightful product.<sup>29</sup>

A Wisconsin native, Dr. Ochsner trained at Washington University in St. Louis and later studied in Germany and Switzerland, where he introduced blood transfusion to the European medical community. At Tulane he succeeded the well-known Dr. R. Matas as chairman and became Dr. DeBakey's mentor.<sup>30</sup> In the early 1930s, he ran afoul of the populist Louisiana Governor Huey Long, who insisted on filling the posts of section chiefs with his political cronies. He therefore left and created the highly acclaimed Ochsner Clinic, a premier medical facility up to the present day.<sup>31</sup> He is known for his contributions to thoracic surgery for carcinoma of the lung and bronchiectasis, and he excised the first sacciform aneurysm of the thoracic aorta. He proved that the results after lobectomy for carcinoma were better than those after pneumonectomy, thus improving survival and decreasing morbidity.<sup>29</sup> He emphasized the importance of distinguishing between thrombophlebitis and the fatal phlebothrombosis and was the earliest and most vociferous critic of smoking. He speculated on the causal relation between smoking and lung cancer, for which he was severely criticized by one of the fathers of thoracic surgery, Dr. Evarts Graham, until the latter himself developed the malignancy and promptly apologized to Dr. Ochsner for his earlier criticism.<sup>30,31</sup> He was instrumental as a president of the American Association for Thoracic Surgery in the creation of the American Board of Thoracic Surgery (1948). He is described as the ideal mentor, disciplined

yet compassionate, demanding yet charismatic, awe-inspiring yet accessible, exemplary as teacher, scientist, and friend.<sup>31</sup>

The impact of the conference exceeded all expectations. Dr. O. Wangenstein wrote of “the magnificent Program which probably represents the ‘last stand’ of some of Custer’s old men.” Dr. Charles Huggins, the Nobel Laureate, rated “the Sparkman Symposium a resounding success,” adding that he was “‘overwhelmed’ by the excellence of B.U.M.C. and the Sparkman Department.” Dr. L. Dragstedt gave his congratulations “on the best conducted medical meeting I have ever attended.” Dr. Alton Ochsner praised the program as “one of the finest I have ever listened to, beautifully conducted as only a perfectionist like you could do.” Dr. C. Hufnagel was also impressed by the high caliber of the presentations, “delighted and proud to be an honorary citizen of Texas” (no explanation provided). The icing on the cake was provided by Merlin K. Duval, MD, assistant secretary for health and scientific affairs, who wrote on behalf of President R. Nixon, extending his congratulations and best wishes on the inauguration of the A. Webb Roberts Center for Continuing Education and for the selection of nine outstanding speakers who had made American surgery preeminent in the world. He also stressed that the occasion provided evidence of the medical center’s leadership in enhancing the learning experiences of students in many health occupations.

Baylor’s future proved to be bright in the following decade, going from strength to strength. New centers of excellence, like the H. L. and Ruth Ray Hunt Heart Center and the Charles A. Sammons Cancer Center, would open in 1977, completing Boone Powell’s construction spree before he

handed the torch to his son, Boone Powell Jr., in 1980.<sup>2</sup> Under the latter's leadership as chief executive officer, the magnificent 17-story, 478-bed A. Webb Roberts surgical hospital would start operations in 1985. He subsequently transformed Baylor through new acquisitions into a network of hospitals, the Baylor Health Care System. At about the same time, John Fordtran, MD, the revered chief of internal medicine and close friend and confidant of Boone Jr., involved the great Thomas Starzl, father of liver transplantation, in organizing multiorgan transplantation at Baylor, which catapulted the institution to the front row of American medicine.

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