

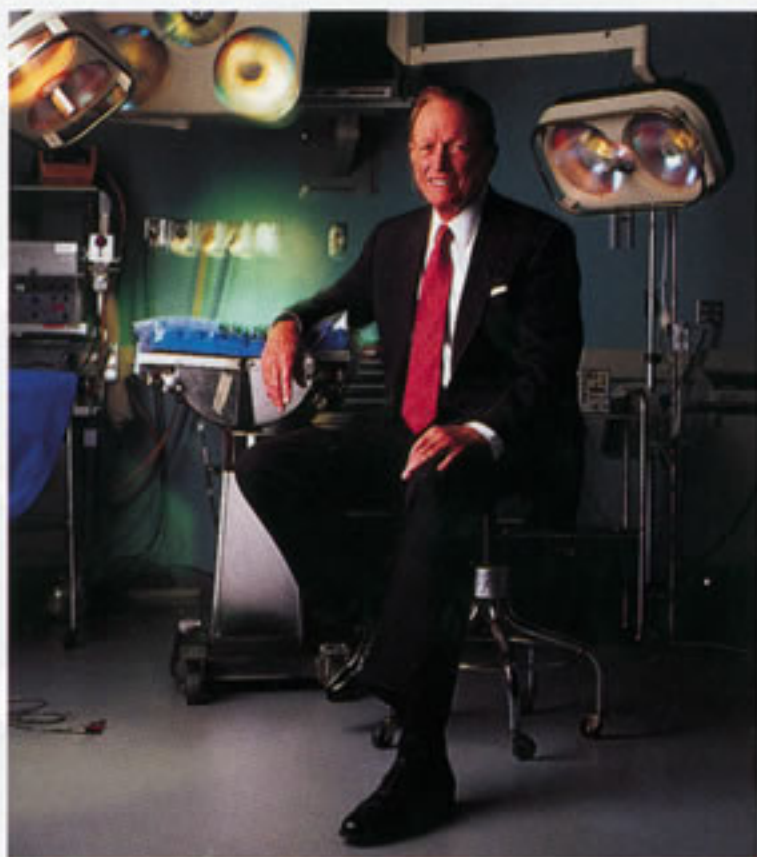
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# Forces of Change

*These 10 members pioneered techniques and technology and possessed the tenacity to make them succeed. Our world is a brighter one for their efforts.*

## HEART OF THE MATTER

**I**n the 1950s Denton A. Cooley, M.D. (below), began a revolution, one that would dramatically alter the lives of millions of people around the world. It was then that he began his career in open-heart surgery. Cooley realized his destiny at Johns Hopkins Hospital in 1944, when, as a surgical intern, he participated in the famous "blue baby" operation under Alfred Blalock, M.D. "That was, in my mind, the dawn of modern heart surgery," says Cooley, surgeon-in-chief of the Texas Heart Institute and a member of the **Houston City Club**, "and I was there to witness the dawn."



Denton Cooley, M.D., has made heart surgery what it is today.

Soon Cooley's light shone just as bright, as he established his reputation by performing many procedures for the first time. His hands were so skilled and his movements so precise that famed surgeon Christiaan Barnard praised Cooley in his book *One Life*: "It was the most beautiful surgery I had ever seen...Every movement had a purpose and achieved its aim...No one in the world, I knew, could equal it." Cooley is as renowned for his speed as his precision. In his first five years of practice he accomplished more than 1,000 open-heart surgeries, and by 1996 Cooley and his team had performed more than 90,000 open-heart operations. "I used to perform eight or 10 operations a day," says Cooley. "But we are seeing more complex cases today, so I may do only three or four a day."

In the 1960s he invented a dextrose-saline solution for priming heart-lung machines. The solution decreased demand on blood banks, curtailed incidences of blood-borne diseases such as hepatitis, reduced blood incompatibility problems, and eliminated religious restriction on open-heart surgery for those of the Jehovah's Witness faith. Another of his significant contributions to cardiology was founding the Texas Heart Institute in the Texas Medical Center in Houston in 1962. In 1968 Cooley performed the first "successful" human heart transplant in the United States, five months after Barnard's historic operation in Cape Town, South Africa. "We were worried about failure of the donor heart to respond," he says. "If the donor heart had frozen up, it would have been a serious defeat. But we were thrilled to see the transplanted heart begin to function normally. It was almost spiritual. We have been involved with a lot of technical improvements, but nothing quite compares to the excitement of the total replacement of the heart." Approximately one year later, Cooley implanted the first total artificial heart in a human.

The surgeon says the glory days of heart surgery are gone, largely because of concerns over medical liability that have a chilling effect on rapid advancements and experimental techniques. "Progress will occur, but it's going to be at a much slower pace," he says. "We're much more cognizant of the fact that there may be repercussions, such as medical liability, that we would not have anticipated in the past. It makes us more hesitant to do something that is innovative."

Cooley soon tires of talking about himself. For all his contributions to cardiology and cardiac surgery, his modesty comes as something of a surprise. "I was able to participate in a lot of techniques that someone else might have done subsequently," he says. "In many instances I just happened to have been there first."