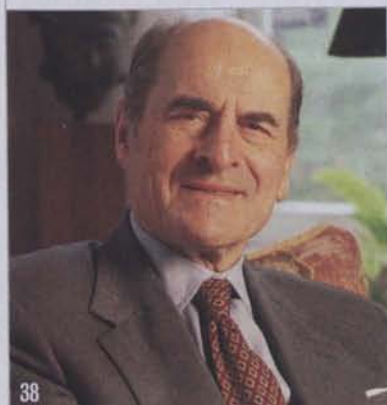


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BRAD HERZOG

In addition to the maneuver that bears his name, Henry Heimlich invented a valve that prevents lung collapse and a host of other medical innovations. Now the eighty-four-year-old physician wants to cure AIDS and use his life-saving reputation to bring world peace. But critics say there's more to Heimlich than meets the eye.

44 A World Apart

DAVID DUDLEY

When the NASA rover Spirit rolled onto the rocky sands of Mars in January, astronomer Steve Squyres experienced "the culmination of a sixteen-year-long ordeal." Now Squyres, associate professor Jim Bell, and a cadre of researchers and graduate students have begun the scientific adventure of a lifetime. "We can't believe how fortunate we are," says Squyres. "This will be arguably the coolest geologic field trip in human history."

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NATALIE GINGERICH

Fashion may be fun, but it also says a lot about society. The 9,000 pieces in Cornell's costume collection include everything from Abercrombie and Fitch to Victorian bridalwear and the everyday garb of Kurdish villagers. Students and professors have long taken advantage of all the collection has to offer. Now with an online, fully searchable catalogue, the holdings can be viewed by visitors around the world. "Studying dress is studying culture," says curator Charlotte Jirousek. "And studying culture is a matter of understanding who we are."

Cover photograph of Mars from NASA



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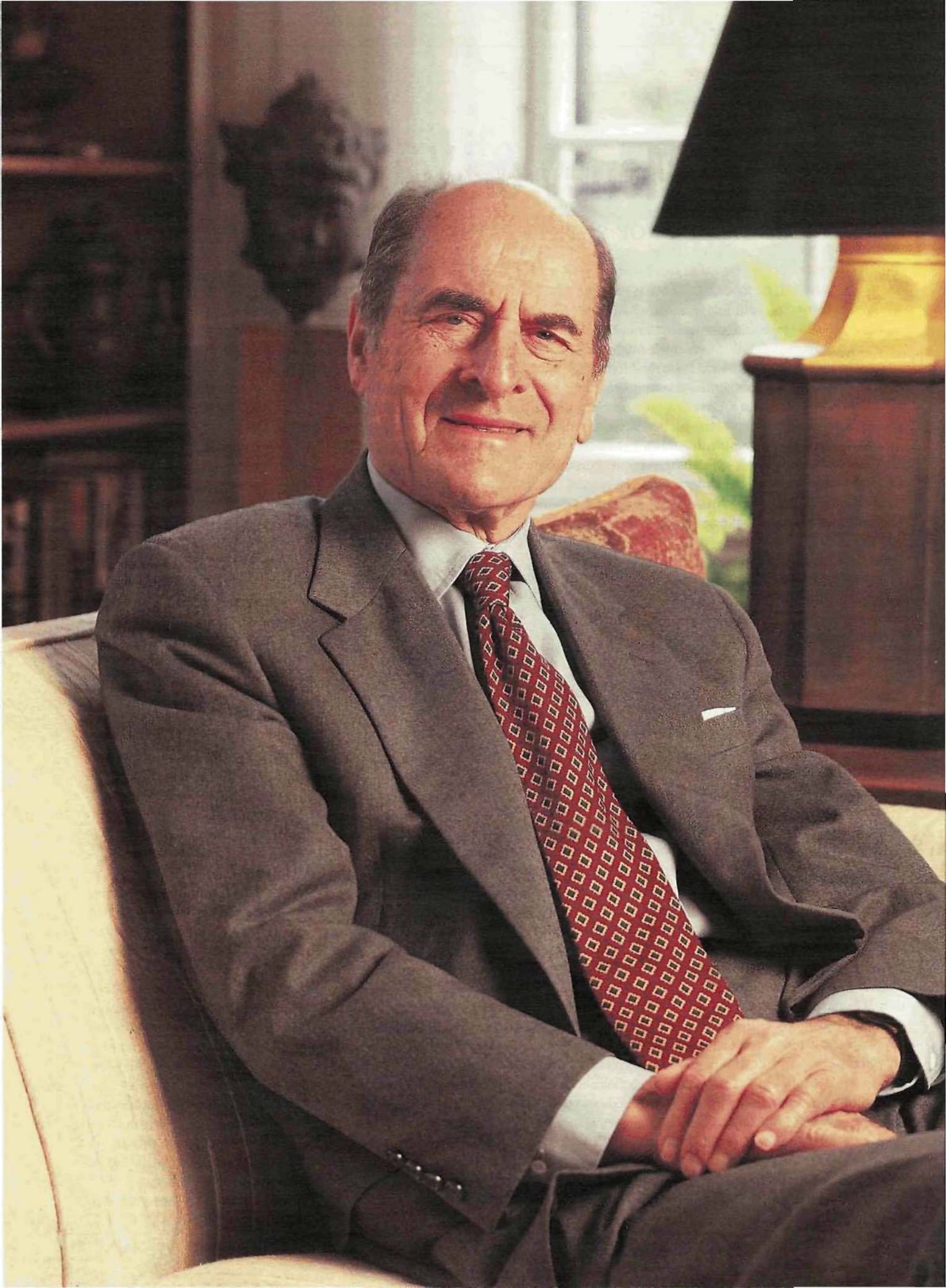
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Garden on ice



Long ago in fourth-century Armenia, there lived a man named Blasius who was both the Bishop of Sebaste and a physician. Legend has it that, to avoid persecution as a Christian, he hid in a cave, where sick animals would come to him for help. But one day his persecutors arrived instead.

Blasius was arrested, and while imprisoned, he healed a child whose airway had been blocked by a fish bone. Such is the tale of St. Blasius, the patron saint of choking.

**The man,
the Maneuver,
and the many
battles of
Henry Heimlich**

Dr. Eponymous

by Brad Herzog

Sixteen centuries later, in 1920, a child was born in Wilmington, Delaware, on February 3, the day of the Feast of St. Blasius. Henry Heimlich '41, MD '43, would be celebrated as a healer—perhaps the most widely known physician of his generation. Indeed, if there were an Eponym Hall of Fame, his bronze bust might go next to those of Samuel Maverick and the Earl of Sandwich.

The Heimlich Maneuver, introduced in 1974, is now so ingrained in society's consciousness that it seems always to have been there. *Make a fist. Place the thumb side against the abdomen, above the navel but below the rib cage. Grasp the fist with your other hand and press into the abdomen with quick upward thrusts.* Voila! A modern-day Blasius in the guise of a now eighty-four-year-old Jewish physician in Cincinnati.

Perhaps the most fascinating thing about the man behind the maneuver is not necessarily that he developed a lifesaving tech-

nique used around the world, or that he produced several other contributions to medical science, or even that he has lately set his sights on nothing less than finding the cure for AIDS and the key to world peace. It is that the man often credited with saving more lives than any other American has also been described by some medical experts as reckless and even dangerous.

Heimlich prefers to think of his critics as persecutors—either unprogressive purveyors of an imperfect status quo or pedestal-topplers aiming to drag a famous name through the mud. The truth of the matter, as is often the case, may lie somewhere in the middle.

On the peach-colored walls of the offices of the Heimlich Institute at Cincinnati's Deaconess Hospital hang a dozen framed comics referencing the doctor's claim to fame. He rises out of his chair, shuffles past the four-foot caterpillar on the floor (a stuffed version of "Heimlich," an oft-hungry character from the animated film *A Bug's Life*), and points out his favorite, which shows a doctor putting his arm around a nurse in a darkened movie theater. The caption reads "Heimlich's First Maneuver."

Actually, the first maneuver was performed on a beagle. The way Heimlich remembers it, while reading a magazine article one day in the early 1970s he was surprised to learn that choking on food was among the leading causes of accidental death. Since 1933, the American Red Cross had been promoting back slaps as

the appropriate aid to choking victims, even though Heimlich claims scientific evidence showed that it can actually force a choking object tighter into the airway. "I wondered, OK, what will drive the object away from the airway?" says Heimlich, who was at the time director of surgery at Jewish Hospital in Cincinnati. He inserted a tube with a balloon on one end into the larynx of the anesthetized dog and tried different ways of pressing on the chest without success. Finally, he pressed under the animal's diaphragm and found that the tube was expelled consistently.

He unveiled his findings in an article called "Pop Goes the Café Coronary," published in the June 1974 issue of *Emergency Medicine*. A newspaper columnist in Chicago picked up the story and wrote a syndicated article, which was noticed by a restaurateur in Seattle. A week later, the man successfully performed the maneuver on a choking woman and became the first of thousands of Heimlich heroes.

According to Heimlich, he originally dubbed his discovery "sub-diaphragmatic pressure," but when letters began pouring in with accounts of people miraculously brought back from the brink of expiration, the editors of the *Journal of the American Medical Association* decided to name the procedure after its inventor. The Heimlich Maneuver entered the mainstream with remarkable speed, and it has been pop-culture fodder ever since—from Archie Bunker (the king of bigots saves Sammy Davis Jr.) to Homer Simpson (he chokes on a donut while his co-workers ignore a Heimlich Maneuver poster in favor of a softball team sign-up sheet). Liz Taylor, Cher, and Goldie Hawn are listed among the thousands saved by the Heimlich; so are Jack Lemmon, Walter Matthau, and Ronald Reagan. And as the fame of his maneuver spread, Henry Heimlich became a celebrity himself.

The maneuver was not the doctor's first eponymous invention of widespread application, or his last. The Heimlich Chest Drain Valve, unveiled in the 1960s, attaches to a chest tube and prevents lung collapse in gunshot victims. The Heimlich MicroTrach, a 1980s innovation, permits direct delivery of oxygen to the lungs via a tube inserted through the throat.

The first time Heimlich attached his name to a medical innovation of note was nearly a half-century ago, although that episode remains somewhat controversial to this day. In 1955, Heimlich co-authored a paper about an operation he had conceived, which consisted of replacing a defective esophagus by fashioning a tube from a portion of the stomach. It would gain fame as the nation's first total organ replacement. However, after publishing the paper, Heimlich learned that a Romanian surgeon named Dan Gavrilu had been performing the operation behind the Iron Curtain since 1951. Heimlich later cited Gavrilu in various medical journals, suggesting in one of them that the Romanian surgeon "be given priority for having described and successfully performed" the operation. But even a half-century later, Gavrilu remains bitter, contending Heimlich has sought undue recognition for the procedure. "Scratch a liar," he told the *Cincinnati Enquirer* in 2003, "and I will show you a thief."

The esophagus operation jumpstarted Heimlich's career and led to the formation of the nonprofit Dysphagia Foundation (dysphagia is a swallowing disorder) in 1961. Renamed the Heimlich Institute in 1982, its website still refers to the gastric-tube



Heimlich hero: In 1986, five-year-old Brent Meldrum, of Lynn, Massachusetts, saved Tanya Brandon, six, from choking on a piece of candy. Meldrum learned the Heimlich Maneuver from an episode of the TV show 'Benson.'

EVAN RICHMAN / BETTMANN CORP.

In 1994, a committee commissioned by the Institute of Medicine concluded that the research did not support routine use of the Heimlich Maneuver for drowning; Heimlich called their findings 'scientifically fraudulent.'

procedure as the Heimlich Operation.

There are some indications, too, that the name given to the doctor's famous maneuver ignores the contributions of one of Heimlich's colleagues. "I always looked at Dr. Heimlich and me as the Wright Brothers," says emergency physician Dr. Edward Patrick, who was a Purdue University electrical engineering professor and medical student when he collaborated with Heimlich in the 1970s. "We worked on this process together, and we jointly developed what would be called the Heimlich Maneuver."

Patrick conceived the Patrick Energy Model to explain the air pressure of the Heimlich Maneuver, performed outcome analysis that he says verified the danger of back slaps, and promoted the maneuver on talk shows in the 1970s. The two men remain in close contact, but differ on when they met: Patrick says it was before the maneuver was introduced to the world; Heimlich says it was after. "Dr. Heimlich once told me, quite a few years ago, that I did not receive the proper credit for development of the Heimlich Maneuver," says Patrick. "As to why that is, I'm not sure."

One thing is certain: Heimlich has made quite a name for himself during his sixty-year medical career, often courting the spotlight (in his pre-med days on the Hill, he was drum major of the Cornell Band). But whether he has used his fame and influence in a responsible manner is a matter of some contention.

Heimlich is fond of quoting Belgian poet and playwright Maurice Maeterlinck: "At every crossway on the road that leads to the future, each progressive spirit is opposed by a thousand men appointed to guard the past."

It wasn't until 1985, eleven years after the maneuver was introduced, that Surgeon General C. Everett Koop, MD '41, endorsed the technique, calling other methods "hazardous, even lethal." Heimlich believes the delay in the maneuver's acceptance by the American Heart Association (AHA) and the American Red Cross (ARC) is evidence of institutional obstinacy—politics betraying public health. But in insisting that his choking maneuver can also be used to

save drowning victims, Heimlich has run into far stiffer resistance.

Victor Esch, now retired but formerly chief surgeon of the Washington, D.C., fire department, compares Heimlich to "a white knight charging a medieval castle." In 1974, Esch was credited by Heimlich with being the first person to save a near-

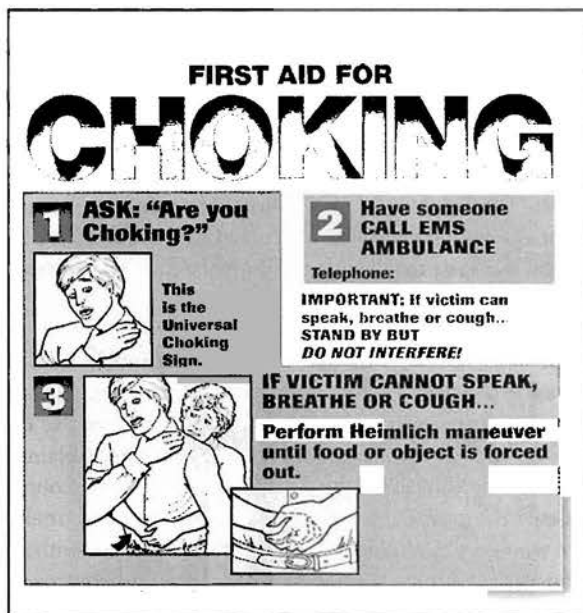
drowning victim with the Heimlich Maneuver; he reportedly revived an unconscious man in Rehoboth Beach, Delaware, just weeks after the maneuver was introduced. Ever since, Heimlich has promoted the maneuver as a means of expelling water from the lungs. Although both the AHA and ARC incorporate it as part of their rescue protocols, they say that CPR should be attempted first and the maneuver should be used only if something solid appears to be blocking attempts at rescue breathing.

Heimlich insists it should be the first response in a rescue sequence. "You can't get air in until you get the water out," he says. To Heimlich, the drowning debate is another case of the

maverick doctor with good intentions dueling a stubborn medical establishment.

In 1994, a committee of scientists commissioned by the Institute of Medicine concluded that the research did not support the routine use of the Heimlich Maneuver for drowning; Heimlich called their findings "scientifically fraudulent." Five years later, he and researcher Eric Spletzer published an analysis in which they announced that a review of 400 scientific papers over more than six decades proved that "the Heimlich is the best method for saving drowning victims." Their article referenced two studies in particular, which Heimlich says confirmed his maneuver is a safer and more successful lifesaving response than CPR. Both studies were performed by the Patrick Institute, presided over by his longtime associate Edward Patrick.

Heimlich's analysis also notes that, in 1995, the aquatic safety firm Ellis & Associates, which trains lifeguards at most of the nation's water parks, had switched its emergency response protocol to employ the Heimlich Maneuver as a standard first step in treating drowning victims. "You now know the scientific facts," the article concludes. "When faced with a drowning victim, you can make an informed decision. Can you in good conscience not



use the procedure you know is the best lifesaving technique?"

But in 2000, a California-based freelance writer named Pamela Mills-Senn decided to look into the issue while writing what was supposed to be a 1,500-word article for *Funworld*, a publication of the International Association of Amusement Parks and Attractions. It turned into a painstakingly researched 10,000-word special report on the efficacy of the Heimlich Maneuver for drowning victims. Three of the experts whose research Heimlich had referenced to support his contentions told Mills-Senn that Heimlich had either misinterpreted or misrepresented their findings. "Not one of the sources that Dr. Heimlich gave me panned out," she says.

The report was sent to Ellis & Associates for review and comment. Within weeks, the company revised its protocols and aligned them with those of the AHA and ARC. Nevertheless, Heimlich has continued to crusade for his cause, which in recent years also includes promoting the maneuver to treat asthma attacks. A 2000 Heimlich Institute press release lamented that "many Americans still mistakenly believe that CPR is the first step to rescue a drowning victim."

Chris Brewster, former lifeguard chief for the City of San Diego and current president of the U.S. Lifesaving Association, believes that the danger of the drowning debate is in the conflicting messages given to lifeguards. "What Heimlich has done is extraordinarily reckless, in the sense that he has elected to encourage lifeguards and other emergency medical services providers to ignore the protocols they were taught and follow his recommendations," says Brewster. "Because of his reputation, it's my opinion that many have indeed done so, which creates a certain air of anarchy in emergency medical care, at least in the field."

Heimlich's response is simple. "What method saves lives better? Period."

"That's very nice," Brewster says, "but if every doctor in the world, whenever they came up with a new idea, was able to tell people, 'Hey, do this instead of that,' we wouldn't have medical protocols anymore. We'd have thousands of doctors recommending different things. I guess the question is: what gives Henry Heimlich the right to play God with peoples' lives?"

The Heimlich Institute's self-described mission is to seek "simple solutions for saving lives around the world." Such has been Heimlich's pursuit from the beginning. After a nine-month internship at Boston City Hospital, he enlisted in the U.S. Navy during World War II and was assigned to be one of a dozen Americans attached to General Fu Tso Yi's Chinese Nationalist Army. "I joined the navy because I like the sea," he laughs. "So I end up in the Gobi Desert in Inner Mongolia." While training a medical corps for the general, he encountered soldiers and civilians ill with exotic diseases, including trachoma, a bacterial infection of the eyelids that was causing blindness throughout Asia. Although there was no known treatment at the time, Heimlich concocted a remedy consisting of sulfadiazine pills ground into a powder and mixed with shaving cream, which he says likely saved the eyesight of hundreds of people.

Two decades later, in 1964, he came up with another simple solution, which he calls "the biggest lifesaver I've gotten out." Ever

since he had watched a Chinese soldier die from a gunshot wound to the chest, Heimlich, a certified thoracic surgeon, had thought about a better means of removing blood from the chest cavity. He had noticed that the existing suction devices used in hospitals for chest wounds worked like one-way flutter valves, permitting fluid or air to run in only one direction. He stopped at a five-and-dime store and bought a children's noisemaker—a piece of flattened rubber tubing that functioned much like a flutter valve—and connected it to the chest tubes of a man with a collapsed lung. The Heimlich Chest Drain Valve was born.

Heimlich introduced it at an American Medical Association meeting later that year, after which he says he was approached by navy officers who requested a half-dozen devices immediately. One week later, a telegram arrived from Vietnam: "The Heimlich valve is a lifesaving item. Must have 100 immediately." The valve quickly became standard battlefield equipment in Southeast Asia and beyond. Trauma surgeon Kenneth Swan, MD '60, spent thirty years in the U.S. Army Medical Corps, including three tours in Vietnam, and he agrees that the Heimlich valve has been a major contribution to emergency medicine. He not only instructs students in its use during his Advanced Trauma Life Support course at New Jersey Medical School, he carries one in his little black bag. "He made a rudimentary principle into an applicable device that could be sterilized and stored, and therefore put into use," says Swan. "I know he's a controversial guy, but he's also very innovative."

Heimlich is a man of mottos. "Creativity requires courage," he says, "and if all your peers understand what you've done, you haven't been creative." This might explain his attempt in recent years to address a modern scourge with a throwback solution. His advocacy of malariotherapy—injecting HIV-positive patients with a curable form of malaria—may be the most controversial endeavor of his career.

He compares his efforts to those of two medical pioneers: Edward Jenner, who invented vaccination in 1796 when he injected an eight-year-old with cowpox to immunize the boy against deadly smallpox; and Austrian psychiatrist and neurologist Julius Wagner-Jauregg, who received the 1927 Nobel Prize for bringing the previously incurable disease of neurosyphilis under control through artificial induction of curable malaria, a treatment that continued to be used for decades. Each was controversial in his day. Jenner was vilified for experimenting on children, including his eleven-month-old son. And a member of the Nobel Prize committee attempted to block Wagner-Jauregg's honor, calling him "a criminal."

Much of the controversy surrounding Heimlich's malariotherapy experiments concerns where they took place. Between 1993 and 1996, the Heimlich Institute sponsored clinical studies in China. Heimlich has reported that eight HIV-positive males were injected with malaria, which was then cured by inexpensive drugs after three weeks of fever cycles. Each of the patients was monitored for two years, at the end of which Heimlich reported that all were alive with normal CD4 counts (the HIV virus destroys CD4 cells). He announced in 2001 that only one of the patients had died (of non-AIDS-related causes), and in 2002 he spoke at the PanAfrica AIDS Conference, where he reported it is

His advocacy of malariotherapy—injecting HIV-positive patients with a curable form of malaria—may be the most controversial endeavor of his career.

“feasible that malariotherapy can produce immune substances in HIV-infected patients in sufficient quantities to overcome the virus throughout the body.” He now claims to be unaware of the patients’ current health.

Heimlich says there is no known report of induced malaria not being cured, but his detractors contend that the experiments are both exploitative and unsafe. Los Angeles physician Paul Bronston, a longtime Heimlich critic who organized a petition a decade ago against the malaria experiments, notes that “it doesn’t take a rocket scientist to realize you don’t give an infectious disease to somebody who is immuno-compromised.”

Heimlich insists the U.S. Centers for Disease Control and Prevention expressed support for his proposal to treat cancer patients with malariotherapy as far back as 1986, but in 1993 the CDC issued a public health warning against the Heimlich Institute’s proposal for malariotherapy for HIV treatment. Since then, the organization’s position seems unchanged. According to a CDC statement released in 2003, “There is no scientific evidence to suggest that high-fever therapies are effective treatment for HIV. In fact, we do have evidence that HIV-affected individuals in sub-Saharan Africa may have worse outcomes.” Heimlich cites the opposite—studies conducted during the 1990s that showed improved survival for African children who were HIV-positive and had malaria.

In this latest debate, Heimlich’s critics appear to be particularly troubled by the doctor’s methods. “He’s not an infectious disease expert,” says Bronston, who serves as the national chair of the Ethics and Professional Policy Committee for the American College of Medical Quality. “So he doesn’t even have the qualifications to embark upon this type of research. It’s an experimental treatment without an institutional review board, without patient protection committees, and it’s not based on any science. If he tried to do any of this in the United States, it would be grossly negligent.”

Former AIDS researcher Peter Lurie ’82 agrees. Now deputy director of the Health Research Group in Ralph Nader’s nonprofit watchdog organization, Public Citizen, Lurie works to provide oversight concerning medical practices and practitioners. “Our basic perspective here is that this is someone who went and experimented on citizens of foreign countries on the basis of the flimsiest of evidence and in a way that never would have been permitted in this country,” he says. “And that’s really outrageous.”

Heimlich, however, is adamant that the experiments were safe and properly monitored. “They were followed very carefully, and it was done with the equivalent of our public health service in China,” he explains. As to charges that he exploited lax standards overseas, he says simply, “I was there because the Chinese love me, and I love them.”

So Heimlich soldiers on, undeterred. Indeed, he has discussed his malariotherapy method with at least five visiting physicians from African countries. “Often, people who oppose something most vehemently are those who have been working in the field, and their ideas haven’t worked,” he says. “Here comes somebody from outside the field with ideas that are logical, but threatening.”

He repeats another favorite motto: “Until they challenge you, you don’t know you’re right.”

“He’s a bit of a heretic,” says Jane Heimlich, his wife of fifty-three years and the daughter of dance studio legend Arthur Murray. “I think one of his great traits is perseverance. He doesn’t give up just because the learned authorities say it’s never been done this way.” Adds Ed Patrick, “I have the greatest respect for Dr. Heimlich. I think he has thought outside the box and has been capable of doing paradigm shifts. He’s a man with a lot of integrity who works hard and has made some major contributions.”

Peter Lurie offers another point of view. “He’s a guy who obviously did something worthwhile at a certain point—I don’t think there’s any question about that,” he admits. “But then he seems to have gotten it into his head that he was therefore competent to do all kinds of other things. He’s definitely dipped into a number of areas in

which he’s ill-trained. There seems to be some grandiose thinking going on.”

On this point, at least, Heimlich seems to agree. One current project, “A Caring World,” attempts to use his famous name to solve international crises. “I have every intention of making a contribution in a field that some might deem outside my bailiwick,” Heimlich says. “I firmly believe there can be creative solutions to even the most gargantuan and formidable problems. Take world peace, for example...” ●

BRAD HERZOG ’90 writes frequently for Cornell Alumni Magazine. Fifteen years ago, his father was saved from choking by the Heimlich Maneuver.



Military medicine: 'I know he's a controversial guy,' says retired army surgeon Kenneth Swan, 'but he's also very innovative.'