

PROFITS WITH HONOR

What's Good For The Health Business Is Good For Health

ADAM WOLFSON

On November 25, 1984, at 2:45 P.M., William J. Schroeder became the second person to receive an artificial heart. While most of humanity stood in awe, applauding the daring of the heart's maker and the courage of its recipient, the medical establishment bitterly denounced the operation as a public relations gimmick that would serve the financial interest of its profit-making sponsor, Humana Hospital Corporation. "If this company was genuinely interested in advancing medical knowledge, it would build a research institute," said Dr. Arnold Relman, editor of the *New England Journal of Medicine*. Dr. David Olch, of the American Medical Association's judicial council, asked: "Will the artificial heart benefit Schroeder as much as it benefits Dr. Jarvik, Humana, and the surgical team?" MIT's *Technology Review* published an article critical of profit-making health providers more generally: "Their own conception of 'doing good' . . . may be influenced, often subtly, by their own quest for fortune and fame."

This bias against the profit motive is difficult to understand, for many of medicine's most dramatic breakthroughs could not have occurred without the contributions of the profit-making company. There is absolutely no incompatibility between profits and health. On the contrary, as the following four examples illustrate, companies make money by providing better health care products that people will want to buy.



Bayering the Pain

Had it not been for a German pharmaceutical firm, Friedrich Bayer & Co., your doctor would not be able to tell you to take two aspirin and call him in the morning. For it was a Bayer chemist, Felix Hoffman, who in 1897 discovered the miraculous powers of acetylsalicylic acid,

which could reduce pain and fever without the unpleasant side effects of previous painkillers.

The idea of aspirin is very old. Greek and Roman physicians, such as Hippocrates, Dioscorides, and Pliny the Elder, noticed 2,000 years ago that willow leaves relieved pain, and they prescribed them for women during childbirth. In the 18th century, a treatise from the Royal Society of London advised that patients suffering from pain take powdered willow bark every four hours.

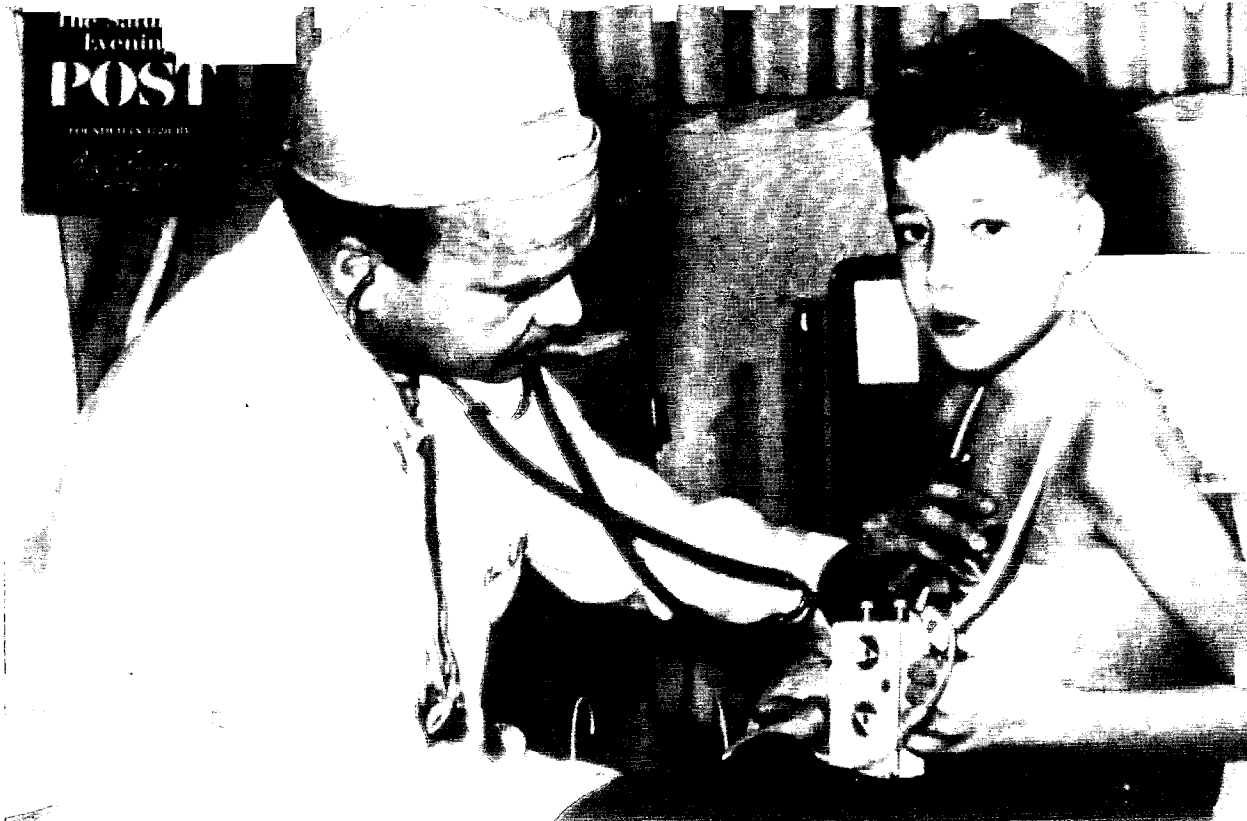
In 1826, chemists realized why willow leaves were so therapeutic. They isolated a fever-reducing ingredient, salicin, and six years later found a

way to synthesize a derivative for mass production. Salicylic acid, as this derivative was called, was the first synthetic drug to play a major role in medicine. It generated excitement throughout Europe, but unfortunately it frequently caused such side effects as nausea and unconsciousness.

Hoffman was searching for a less toxic pain killer when he stumbled upon the work of Charles Frederic von

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Gerhardt, who in 1853 had synthesized acetylsalicylic acid. To Gerhardt, the chemical was a laboratory curiosity; to Bayer & Co., it was an opportunity to make a fortune. Bayer & Co. worked out a simplified synthesis process, developed a method for mass manufacture, and heavily promoted the new drug, which became available to the public in 1899 under the name of aspirin. Today aspirin is the most widely used drug in the world; each year over 30 million pounds of aspirin are consumed. And Hoffman would be happy to know that aspirin is no longer just a pain reliever, but is used to prevent migraines, strokes, and even heart attacks.



The first portable pacemaker, built by Medtronic in 1957.

Birth of the Pill

Many have been given credit for the invention of the birth control pill, but none more than Margaret Sanger, founder of the International Planned Parenthood Federation, and the advocate of a national sterilization program for "dysgenic types." Mrs. Sanger popularized the search for the pill, and helped find funding in the 1950s for the laboratory work of Dr. Gregory Pincus, which led to the introduction of the first oral contraceptive in 1960.

But Dr. Pincus's work would not have been possible without the development of synthetic progesterones at a then-small pharmaceutical company named Syntex. In the 1930s, biologists had isolated progesterone as the female hormone responsible for inhibiting ovulation. However, research was constrained by the high cost of the substance, which was difficult to produce from natural sources.

Then in 1940 Russell Marker, a young professor of organic chemistry at Pennsylvania State College, discovered the steroid diosgenin, and a method of chemically altering it, to produce the first synthetic progesterone. After failing to interest his college in his discovery, Marker headed for Mexico to harvest the wild yam (*cabeza de negro*), an abundant, cheap source of the precious diosgenin. With two other men, he formed the Syntex Company. In less than a decade, the price of progesterone fell from \$80 a gram to less than one dollar a gram. Progesterone, for the first time, was cheap and abundant, making birth control research feasible.

Marker's synthetic progesterone, however, did not in-

hibit ovulation when used in pill form. In 1951, Syntex began searching for a solution, and within six months synthesized nonethisterone, the first orally effective synthetic progesterone. The discovery was indispensable to the creation of the pill. G. D. Searle was the first to capitalize on this discovery, and Syntex produced its own pill in 1962.

Setting the Pace

The human heart beats 100,000 times each day, pumping five quarts of blood every minute. But over two million people with heart disease depend on pacemakers to help do the job. These people owe their vitality to the innovative work, at two critical junctures, of Medtronic Corporation.

The pacemaker, small enough to fit in the palm of a baby, is implanted in the patient's chest, where it regulates the patient's heartbeat with electrical impulses. It bears a price tag of as little as \$3,000-\$4,000, lasts as long as 10 years on Star-Trek-like lithium batteries, sends signals to, and receives signals from, the physician's computer, and self-adjusts to the patient's changing needs.

But this was not always the case. In the 1950s, open heart surgery patients, suffering from abnormally slow heart rates, were hooked up to external pacemakers, the size of television sets, and plugged into AC wall outlets. These patients faced multiple problems. Their movements were limited to the length of their extension cord. Wires passing through their skins caused infections, and they were vulnerable to power failures.

Earl Bakken, the founder of Medtronic, solved this problem with his invention in 1957 of the world's first portable pacemaker. "I looked in my *Popular Electronics* magazine," explained Mr. Bakken, "and found a circuit for a metronome . . . I took the circuit, modified it, and got the right voltages for the heart, left the loudspeaker off, put a couple of terminals on it, and that was it. The

entire process took just a few weeks." The new device was small enough to fit on a patient's belt. Medtronic was then a tiny medical equipment repair shop housed in a garage.

In two years, the company manufactured 72 portable pacemakers, which were used in America, Canada, Australia, Europe, Cuba, Africa, and South America.

In 1960, Medtronic made its second contribution to pacemaking, when it obtained the exclusive rights to produce and market the first implantable pacemaker. Neither doctors nor other businesses at that time recognized the pacemaker's potential. Indeed in the 1960s a company walked out on a merger with Medtronic, when a market research study incorrectly placed the worldwide need for pacemakers at only 10,000. But Medtronic's gamble paid off, both for heart patients and the company itself. Today it is a \$300 million a year business.

Sound of Music

The cochlear implant will enable thousands of Americans, condemned to a world of silence, to hear the splash of rain, the honk of a bicycle horn, and, to some degree, the sound of a human voice. It is the result of a joint effort between the private, non-profit House Ear Institute and the Minnesota Mining & Manufacturing Co. of St. Paul (3M). President Reagan commended the two organizations for their "remarkable achievement," the "result of a combination of resources and talents in the private and public sectors."

Some 200,000 to 300,000 Americans are unable to hear with the standard hearing aid. This group, known as the "profoundly deaf," suffers from damage to the cochlea, the snail-shaped bone in the inner ear which, if healthy, converts sound waves into electrical impulses by means of 15,000 tiny hair cells. The cochlear implant translates sound into electricity, so that the brain can interpret it.

The House Ear Institute began work on a cochlear device in the 1960s, conducting 400 successful trials. But the Institute lacked the engineering, manufacturing, and marketing know-how to make the cochlear implant available for widespread use. 3M filled this gap, when in 1979 it entered the audiology field as a partner of the House Ear Institute. 3M also dealt with the complex regulations of the Food and Drug Administration, providing them with 18 volumes of data. On November 24, 1984, the "3M Cochlear Implant System/House Design" became the first, and only, cochlear implant to receive FDA approval.

Today 3M, with 50 new research and development technicians on their staff, is fully committed to the further development of the cochlear implant. In addition, 3M provides the House Ear Institute with grant money as well as royalties on the device. "Our eventual goal," says Robert Oliveira, 3M's manager of Otologic Products, "is that a profoundly deaf person be able to carry on a conversation in the dark—without the aid of lip reading."

An uncompromising critique of liberal panaceas IDEALISM, REALISM AND THE MYTH OF APPEASEMENT

by Jeane Kirkpatrick

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ECONOMICS REVIEW

THE FAT OF THE LAND

What is the Farm Crisis?

JAMES BOVARD

The average farmer is far wealthier than the average taxpayer who supports him. Indeed, the average net worth of full-time farmers is over five times greater than that of the average American household. Farm programs are perhaps the government's least equitable transfer program.

In the 1970s, farmland values soared \$465 billion (in 1983 dollars). Most of this bonanza went to the larger farms, and Federal Reserve economist Emanuel Melichar estimates that it may have averaged \$400,000 apiece for the largest one million farms. Farmers received one of the largest windfalls in American history—yet no one dared suggest a windfall profits tax for agriculture.

Since peaking in 1981, farmland prices have fallen an average of seven percent nationwide. In some parts of the Midwestern Corn Belt and Wheat Belt, land values have fallen by as much as 30 to 40 percent.

But in real terms, the fall in farmland values since 1981 is only one-third the gain in values during the 1970s. The average full-time farmer is still wealthy beyond the dreams of the typical typist, plumber, or ditchdigger. According to raw data provided by the Federal Reserve Board and the Census Bureau, the average American household's net worth (assets minus liabilities) is \$136,000. According to the U.S. Department of Agriculture (USDA), the average full-time farmer (farms with annual sales of over \$40,000) can boast a net worth of \$791,000.

This huge disparity is not a statistical fluke. Over half of all farmers have no debts on their lands, while 63 percent of American households own no land. Many of the farmers in the deepest cash-flow trouble own hundreds of acres of valuable topsoil.

But our agricultural policy is still premised on the idea that farmers are paupers. No matter how many acres a farmer owns, he is still treated by Congress as a charity case. Almost all of the USDA's major programs—price

supports, target prices, and credit subsidies—aim to boost farm income. But this usually only means transferring money from the comparatively poor to the comparatively rich.

There is no way agricultural programs can escape this pattern. Some have proposed that government benefits be targeted to small and medium-sized farms. But the large majority of farms with sales under \$40,000 a year are unprofitable tax shelters, and these "farm families" earn almost all their income off the farm. The \$40,000–\$99,999 sales class—the full-time farmers with the lowest sales—have an average net worth of \$532,000. Current farm programs must be either ineffective or inequitable—giving money to small farmers who produce little or nothing, or giving money to farmers who are far better off than taxpayers.


Nor is farm income as low as it is often painted. In 1983, a year that set records for federal farm handouts and "crisis on the farm" stories—average farm family income actually exceeded the average for all families (\$29,048 v. \$28,638). Average income for the 284,000 largest farms that produce most of our food and earned almost all the profits was \$76,130 in 1983.

Growing Pains

These are troubled times for many American farmers. Last year, the American Bankers Association estimates that 2.6 percent of the nation's farmers went bankrupt. This year, even more may have to sell their property. The problem is especially severe for those who borrowed heavily in the late 1970s, using as collateral farmland valued at inflated prices. These farmers thought they would get even richer. Instead they were clobbered by falling exports and soaring interest rates.

But however painful it is to make an involuntary career change, many full-time farmers are in a much better position to make the adjustment than displaced auto workers, coal miners, or school teachers. By selling their property, they can look forward to a few hundred thousand dollars to tide them over to the next job.

Since 1981, the federal government has spent the equivalent of over \$70,000 for every full-time farmer. Farm programs will cost over \$25 billion this year—more than the combined costs of federal food stamps and AFDC. The easiest way to understand current agricultural policy is that taxpayers take most of the losses while farmers keep all the profits.

It is sad that thousands of American farmers will have to give up their chosen livelihood this year. But we should not forget that the average farm family is \$650,000 wealthier than the average American household. 

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