

Despite Skeptics and Critics, Cryonics May Be a Cool Way to Go

By BART KOSKO

Go ahead and laugh at cryonics. Denounce those who would suspend the late Ted Williams in liquid nitrogen in the hope that future science will somehow resurrect him, one cell at a time.

You're in good company: Church groups uniformly oppose cryonics. British Columbia outlaws it. The \$25-billion funeral industry opposes cryonics even more vigorously than it opposed cremation before the 1960s. It buries about 6,000 people every day in expensive coffins, while only a thousand or so folks have signed up for cryonics and only about 100 actually lie in cryo-suspension.

Bioethicists cringe at cryonics and call it repugnant and other names. Many physicians and scientists dismiss cryonics as a futile effort to resurrect the cow from the hamburger, even though most have no expertise in computer-chip or molecular engineering. The bylaws of the Society of Cryobiology even "refuse membership to applicants who promote any practice or application of freezing deceased persons in the anticipation of their reanimation." (Cryobiology is the study of the effects of low temperatures on organisms.)

No one can predict the course of technology decades into the future. Yet that is just what the naysayers purport to do. They argue in essence that science will never resurrect the frozen dead because no

one knows how to do it today. Absence of evidence now, however, is not evidence of future absence. Time all but stops for tissue suspended at minus-320 degrees Fahrenheit. Cryonics "patients" can wait centuries if they have to.

There is now only a small probability that science will work the needed miracle of resurrecting frozen brains and other tissue. Yet the future benefit would be an awesome increase in lifespan in a brave new world. The current cost of this gamble is substantial but not prohibitive—about the cost of a major medical procedure.

Is it worth it? Cryonicists think so, if only as a crude way to back up one's synapses until chip and neural-network technology makes some great leaps forward.

But let's be frank. Most attacks on cryonics don't come from reasoned scientific judgment. The real animus against cryonics comes from religion and its monopoly on the concept of an afterlife or heaven.

Cryonics challenges this ancient monopoly head-on and does so unflinchingly in the name of technology and materialism. It offers a fighting chance to achieve a digital paradise of nano-engineered brain synapses and computer uploads for the price of a life insurance policy. Digital heaven-in-a-chip by way of cryonics may be only a rough engineering approximation of what many would like, but at least it does not contravene any physical law. It also has on its side Moore's Law, which says computer chip

densities double every two years or so.

Religion offers instead a cynical swap of present and future value: Pay and believe now and collect your rewards forever after you die—even though there is no evidence that anyone has ever cashed in this eternal free lunch.

Cryonics further exposes the "moral hazard" at the heart of religious belief in an afterlife. Belief in heaven acts as cheap insurance against the finality of death. The easy promise of an afterlife undercuts the resolve to face death squarely and to take steps to combat death, just as owning fire insurance can make one lazy about making adequate fire precautions. It is far easier to just make the leap of faith—especially if almost every-

one else leaps with you. This argument suggests that the nearly universal belief in a religious afterlife may have slowed the technological assault on death and disease by decades, if not centuries.

Cryonics is ultimately a vast social experiment. Today, about a thousand have signed up for the experimental group. Everyone else, by default, is in the control group. So go ahead and laugh while the heartbeats last.

In a century or so we'll let you know how it turns out.

Bart Kosko, a professor of electrical engineering at USC and author of "Heaven in a Chip" (Random House, 2000), is on the science advisory board of the nonprofit Alcor cryonics corporation.