



Nano Nonsense and Cryonics

True believers seek redemption from the sin of death By MICHAEL SHERMER

Cryonicists believe that people can be frozen immediately after death and reanimated later when the cure for what ailed them is found. To see the flaw in this system, thaw out a can of frozen strawberries. During freezing, the water within each cell expands, crystallizes, and ruptures the cell membranes. When defrosted, all the intracellular goo oozes out, turning your strawberries into runny mush. This is your brain on cryonics.

Cryonicists recognize this detriment and turn to nanotechnology for a solution. Microscopic machines will be injected into the defrosting “patient” to repair the body molecule by molecule until the trillions of cells are restored and the person can be resuscitated. Every religion needs its gods, and this scientific vision has a trinity in Robert C. W. Ettinger (*The Prospect of Immortality*), K. Eric Drexler (*Engines of Creation*) and Ralph C. Merkle (*The Molecular Repair of the Brain*), who preach that nanocryonics will wash away the sin of death. These works are built on the premise that if you are cremated or buried, you have zero probability of being resurrected—cryonics is better than everlasting nothingness.

Is it? That depends on how much time, effort and money (\$120,000 for a full-body freeze or \$50,000 for just the head) you are willing to invest for odds of success only slightly higher than zero. It takes a blindly optimistic faith in the illimitable power of science to solve any and all problems, including death. Look how far we’ve come in just a century, believers argue—from the Wright brothers to Neil Armstrong in only 66 years. Extrapolate these trends out 1,000 years, or 10,000, and immortality is virtually certain.

I want to believe the cryonicists. Really I do. I gave up on religion in college, but I often slip back into my former evangelical fervor, now directed toward the wonders of science and nature. But this is precisely why I’m skeptical. It is too much like religion: it promises everything, delivers nothing (but hope) and is based almost entirely on faith in the future. And if Ettinger,

Drexler and Merkle are the trinity of this scientific sect, then F. M. Esfandiary is its Saul. Esfandiary, on the road to his personal Damascus, changed his name to FM-2030 (the number signifying his 100th birthday and the year nanotechnology is predicted to make cryonics successful) and declared, “I have no age. Am born and reborn every day. I intend to live forever. Barring an accident I probably will.”

Esfandiary forgot about cancer, a pancreatic form of which killed him on July 8, 2000. FM-2030—or more precisely, his head—now resides in a vat of liquid nitrogen at the Alcor Life Extension Foundation in Scottsdale, Ariz., but his legacy lives on among his fellow “transhumanists” (they have moved beyond human) and “extropians” (they are against entropy).

This is what I call “borderlands science,” because it dwells in that fuzzy region of claims that have yet to pass any tests but have some basis, however remote, in reality. It is not impossible for cryonics to succeed; it is just exceptionally unlikely. The rub in exploring the borderlands is finding that balance between being open-minded enough to accept radical new ideas but not so open-minded that your brains fall out. My credulity module is glad that some scientists are devoting themselves to the problem of mortality. My skepticism module, however, recognizes that transhumanistic-extropian cryonics is uncomfortably close to religion. I worry, as Matthew Arnold did in his 1852 poem “Hymn of Empedocles,” that we will “feign a bliss/Of doubtful future date,/And while we dream on this/Lose all our present state,/And relegate to worlds yet distant our repose.”

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