



TechTalk

Cryonics©

by John McCarthy

Hi and welcome once again to Tech Talk. We've mentioned on the program over the last couple of years the important role of technology in practically every sector of society. Education, every aspect of scientific research, especially medicine and organ transplant, improving the efficiency of farming (especially in the Third World), planning the logistics of feeding millions of refugees, delivering vaccines, creating new job opportunities ... the list is endless, and for a long time mankind has been reaping the benefits of technological advances, only occasionally stopping to consider the responsibilities these entail. Today, we're taking an all-too-brief look at cryonics, one of the more controversial 'sciences' which has featured prominently in the British press recently, and the reason why it is so contentious is that it may one day force us to re-think our understanding of humanity, death and the very concept of the body being a mere recipient for the soul. The philosophical implications are way beyond the scope of our humble TechTalk, so ...

On a very basic level, cryonics is a biomedical experiment in long-term suspended animation, an effort to save lives by using temperatures so cold that a patient who cannot be cured by contemporary medicine may, in decades or centuries to come, be restored to full health by future advances in technology. For today's terminally ill patients, it offers a hope – almost a leap of faith - that they might be resuscitated one day when a cure has been found. Some have described it as 'an ambulance to the future'.

James Bedford, a 73 year-old psychologist, became the first person to be 'frozen' in 1967, and others have followed, although because of patient confidentiality, it's unclear exactly how many people have undergone Cryonics. Oscillating somewhere in the nebulous area between science fiction and science fact, Cryopreservation already has many useful biological applications, such as the preservation of blood cells, sperm and embryos. To the layman, cells are frozen by ultra-low temperatures and stored almost indefinitely. In reality, once the patient has been pronounced dead, the process involves replacing blood with a cryoprotectant fluid – a hi-tech anti-freeze, if you like – in order to prevent ice forming inside the body, as ice crystals would expand and destroy all the cells. Cryopreservation has not yet been successfully applied to larger biological structures, such as major organs, which is why, at this particular moment in time, there exists no evidence that an entire body could survive the process.

A very recent case has reignited interest in cryopreservation. A 14 year-old girl who died of cancer, has been cryogenically frozen after winning a landmark court case in her final days. She was diagnosed with a rare form of the disease in August, began researching cryonic preservation online and found hope and comfort that science might bring her back to life one day. As she was too young to make a legally recognised will, she had to have the permission of her parents to undergo the process. Despite the initial conflicting opinions of her parents, a High Court Judge, Peter Jackson, granted her final wishes in what he called the first case of its kind in the UK, and indeed possibly the world. The judge said his decision was based on resolving the dispute between the parents and did not represent a finding on cryogenic preservation, as the concept is regarded with widespread scepticism by many in the medical community. He also suggested that proper regulation on cryonic preservation should now be considered.

Herein lies the dilemma. With the ever-increasing pace of technological innovations and the ethical questions these will inevitably raise, will jurisprudence really be able to keep up with the frenetic tempo of technological advances? In 1816, two hundred years ago, Thomas Jefferson wrote *"Laws and institutions must go hand in hand with the progress of the human mind. As that becomes more developed, more enlightened, as new discoveries are made, new truths disclosed, and manners and opinions change with the change of circumstances, institutions must advance also, and keep pace with the times."* This is as true now as it was then and will be one of the great moral challenges in the decades to come.