transhuman
context
“Transhumanism”

Transhumanism is an international intellectual and cultural movement supporting the use of science and technology to improve human mental and physical characteristics and capacities. The movement regards aspects of the human condition, such as disability, suffering, disease, aging, and involuntary death as unnecessary and undesirable. Transhumanists look to biotechnologies and other emerging technologies for these purposes. Dangers, as well as benefits, are also of concern to the transhumanist movement.

The term “transhumanism” is symbolized by H+ or h+ and is often used as a synonym for “human enhancement”. Although the first known use of the term dates from 1957, the contemporary meaning is a product of the 1980s when futurists in the United States began to organize what has since grown into the transhumanist movement. Transhumanist thinkers predict that human beings may eventually be able to transform themselves into beings with such greatly expanded abilities as to merit the label “posthuman”. Transhumanism is therefore sometimes referred to as “posthumanism” or a form of transformational activism influenced by posthumanist ideals.

The transhumanist vision of a transformed future humanity has attracted many supporters and detractors from a wide range of perspectives. Transhumanism has been described by one critic, Francis Fukuyama, as the world’s most dangerous idea, while one proponent, Ronald Bailey, counters that it is the “movement that epitomizes the most daring, courageous, imaginative, and idealistic aspirations of humanity.”

According to philosophers who have studied and written about the history of transhumanist thought, transcendentalist impulses have been expressed at least as far back as in the quest for immortality in the Epic of Gilgamesh, as well as historical quests for the Fountain of Youth, Elixir of Life, and other efforts to stave off aging and death. Transhumanist philosophy, however, is rooted in Renaissance humanism and the Enlightenment. For example, Giovanni Pico della Mirandola called on people to “sculpt their own statue”, and the Marquis de Condorcet speculated about the use of medical science to indefinitely extend the human life span, while Benjamin Franklin dreamed of suspended animation, and after Charles Darwin “it became increasingly plausible to view the current version of humanity not as the endpoint of evolution but rather as a possibly quite early phase.” However, Friedrich Nietzsche is considered by some to be less of an influence, despite his exaltation of the “overman”, due to his emphasis on self-actualization rather than technological transformation.

Nikolai Fyodorov, a 19th-century Russian philosopher, advocated radical life extension, physical immortality and even resurrection of the dead using scientific methods. In the 20th century, a direct and influential precursor to transhumanist concepts was geneticist J.B.S. Haldane’s 1923 essay Daedalus: Science and the Future, which predicted...
that great benefits would come from applications of advanced sciences to human biology—and that every such advance would first appear to someone as blasphemy or perversion, “indecent and unnatural”. J. D. Bernal speculated about space colonization, bionic implants, and cognitive enhancement, which have been common transhumanist themes since then. Biologist Julian Huxley, brother of author Aldous Huxley (a childhood friend of Haldane’s), appears to have been the first to use the actual word “transhumanism”. Writing in 1957, he defined transhumanism as “man remaining man, but transcending himself, by realizing new possibilities of and for his human nature”.

Computer scientist Marvin Minsky wrote on relationships between human and artificial intelligence beginning in the 1960s. Over the succeeding decades, this field continued to generate influential thinkers, such as Hans Moravec and Raymond Kurzweil, who oscillated between the technical arena and futuristic speculations in the transhumanist vein. The coalescence of an identifiable transhumanist movement began in the last decades of the 20th century. In 1966, FM-2030 (formerly F.M. Esfandiary), a futurist who taught “new concepts of the Human” at the New School in New York City, began to identify people who adopt technologies, lifestyles and world views transitional to “posthumanity” as “transhuman” (short for “transitory human”). In 1972, Robert Ettinger contributed to the conceptualization of “transhumanity” in his book *Man into Superman*. FM-2030 published the *Upwingers Manifesto* in 1973 to stimulate transhumanly conscious activism.

The first self-described transhumanists met formally in the early 1980s at the University of California, Los Angeles, which became the main center of transhumanist thought. Here, FM-2030 lectured on his “Third Way” futurist ideology. At the EZTV Media venue frequented by transhumanists and other futurists, Natasha Vita-More presented Breaking Away, her 1980 experimental film with the theme of humans breaking away from their biological limitations and the Earth’s gravity as they head into space. FM-2030 and Vita-More soon began holding gatherings for transhumanists in Los Angeles, which included students from FM-2030’s courses and audiences from Vita-More’s artistic productions. In 1982, Vita-More authored the *Transhumanist Arts Statement*, and, six years later, produced the cable TV show *TransCentury Update* on transhumanity, a program which reached over 100,000 viewers.

In 1986, Eric Drexler published *Engines of Creation: The Coming Era of Nanotechnology*, which discussed the prospects for nanotechnology and molecular assemblers, and founded the Foresight Institute. As the first non-profit organization to research, advocate for, and perform cryonics, the Southern California offices of the Alcor Life Extension Foundation became a center for futurists. In 1988, the first issue of Extropy Magazine was published by Max More and Tom Morrow. In 1990, More, a strategic philosopher, created his own particular transhumanist doctrine, which took the form of the Principles of Extropy, and laid the foundation of modern transhumanism by giving it a new definition.
Transhumanism is a class of philosophies that seek to guide us towards a posthuman condition. Transhumanism shares many elements of humanism, including a respect for reason and science, a commitment to progress, and a valuing of human (or transhuman) existence in this life. […] Transhumanism differs from humanism in recognizing and anticipating the radical alterations in the nature and possibilities of our lives resulting from various sciences and technologies […].

In 1992, More and Morrow founded the Extropy Institute, a catalyst for networking futurists and brainstorming new memeplexes by organizing a series of conferences and, more importantly, providing a mailing list, which exposed many to transhumanist views for the first time during the rise of cyberculture and the cyberdelic counterculture. In 1998, philosophers Nick Bostrom and David Pearce founded the World Transhumanist Association (WTA), an international non-governmental organization working toward the recognition of transhumanism as a legitimate subject of scientific inquiry and public policy. 21 In 1999, the WTA drafted and adopted The Transhumanist Declaration. 22 The Transhumanist FAQ, prepared by the WTA, gave two formal definitions for transhumanism:23

The intellectual and cultural movement that affirms the possibility and desirability of fundamentally improving the human condition through applied reason, especially by developing and making widely available technologies to eliminate aging and to greatly enhance human intellectual, physical, and psychological capacities.

The study of the ramifications, promises, and potential dangers of technologies that will enable us to overcome fundamental human limitations, and the related study of the ethical matters involved in developing and using such technologies.

A number of similar definitions have been collected by Anders Sandberg, an academic and prominent transhumanist. 24

In possible contrast with other transhumanist organizations, WTA officials considered that social forces could undermine their futurist visions and needed to be addressed. 25 A particular concern is the equal access to human enhancement technologies across classes and borders. 26

In 2006, a political struggle within the transhumanist movement between the libertarian right and the liberal left resulted in a more centre-leftward positioning of the WTA under its former executive director James Hughes. 26, 27 In 2006, the board of directors of the Extropy Institute ceased operations of the organization, stating that its mission was "essentially completed". 28 This left the World Transhumanist Association as the leading international transhumanist organization. In 2008, as part of a rebranding effort, the WTA changed its name to "Humanity+" in order to project a more humane image. 29 Humanity Plus and

2. "Anders Transhuman Page: Acronyms"
17. Drexler 1986
Betterhumans publish *h+ Magazine*, a periodical edited by R. U. Sirius which disseminates transhumanist news and ideas. 30, 31

**Theory**

It is a matter of debate whether transhumanism is a branch of “posthumanism” and how posthumanism should be conceptualized with regard to transhumanism. The latter is often referred to as a variant or activist form of posthumanism by its conservative, Christian32 and progressive33, 34 critics, but also by pro-transhumanist scholars who, for example, characterise it as a subset of “philosophical posthumanism”. A common feature of transhumanism and philosophical posthumanism is the future vision of a new intelligent species, into which humanity will evolve, which will supplement humanity or supersede it. Transhumanism stresses the evolutionary perspective, including sometimes the creation of a highly intelligent animal species by way of cognitive enhancement (i.e. biological uplift), but clings to a “posthuman future” as the final goal of participant evolution. 35

Nevertheless, the idea to create intelligent artificial beings, proposed, for example, by roboticist Hans Moravec, has influenced transhumanism. Moravec’s ideas and transhumanism have also been characterized as a “complacent” or “apocalyptic” variant of posthumanism and contrasted with “cultural posthumanism” in humanities and the arts. 36 While such a “cultural posthumanism” would offer resources for rethinking the relations of humans and increasingly sophisticated machines, transhumanism and similar posthumanisms are, in this view, not abandoning obsolete concepts of the “autonomous liberal subject” but are expanding its “prerogatives” into the realm of the posthuman. 37 Transhumanist self-characterizations as a continuation of humanism and Enlightenment thinking correspond with this view.

Some secular humanists conceive transhumanism as an offspring of the humanist free thought movement and argue that transhumanists differ from the humanist mainstream by having a specific focus on technological approaches to resolving human concerns and on the issue of mortality.38 However, other progressives have argued that posthumanism, whether it be its philosophical or activist forms, amounts to a shift away from concerns about social justice, from the reform of human institutions and from other Enlightenment preoccupations, toward narcissistic longings for a transcendence of the human body in quest of more exquisite ways of being. 39 In this view, transhumanism is abandoning the goals of humanism, the Enlightenment, and progressive politics.

**Aims**

While many transhumanist theorists and advocates seek to apply reason, science and technology for the purposes of reducing poverty, disease, disability, and malnutrition around the globe, transhumanism is distinctive in its particular focus on the applications of technologies to the improvement of human bodies at the individual level. Many
transhumanists actively assess the potential for future technologies and innovative social systems to improve the quality of all life, while seeking to make the material reality of the human condition fulfill the promise of legal and political equality by eliminating congenital mental and physical barriers.

Transhumanist philosophers argue that there not only exists a perfectionist ethical imperative for humans to strive for progress and improvement of the human condition but that it is possible and desirable for humanity to enter a transhuman phase of existence, in which humans are in control of their own evolution. In such a phase, natural evolution would be replaced with deliberate change.

Some theorists, such as Raymond Kurzweil, think that the pace of technological innovation is accelerating and that the next 50 years may yield not only radical technological advances but possibly a Technological Singularity, which may fundamentally change the nature of human beings. Transhumanists who foresee this massive technological change generally maintain that it is desirable. However, some are also concerned with the possible dangers of extremely rapid technological change and propose options for ensuring that advanced technology is used responsibly. For example, Bostrom has written extensively on existential risks to humanity's future welfare, including risks that could be created by emerging technologies.

Ethics

Transhumanists engage in interdisciplinary approaches to understanding and evaluating possibilities for overcoming biological limitations. They draw on futurology and various fields of ethics such as bioethics, infoethics, nanoethics, neuroethics, roboethics, and technoethics mainly but not exclusively from a philosophically utilitarian, socially progressive, politically and economically liberal perspective. Unlike many philosophers, social critics, and activists who place a moral value on preservation of natural systems, transhumanists see the very concept of the specifically “natural” as problematically nebulous at best, and an obstacle to progress at worst. In keeping with this, many prominent transhumanist advocates refer to transhumanism's critics on the political right and left jointly as “bioconservatives” or “bioluddites”, the latter term alluding to the 19th century anti-industrialisation social movement that opposed the replacement of human manual labourers by machines.
What is the Singularity?

The term Singularity describes the moment when a civilization changes so much that its rules and technologies are incomprehensible to previous generations. Think of it as a point-of-no-return in history.

Most thinkers believe the Singularity will be jump-started by extremely rapid technological and scientific changes. These changes will be so fast, and so profound, that every aspect of our society will be transformed, from our bodies and families to our governments and economies.

A good way to understand the Singularity is to imagine explaining the Internet to somebody living in the year 1200. Your frames of reference would be so different that it would be almost impossible to convey how the Internet works, let alone what it means to our society. You are on the other side of what seems like a Singularity to our person from the Middle Ages. But from the perspective of a future Singularity, we are the medieval ones. Advances in science and technology mean that singularities might happen over periods much shorter than 800 years. And nobody knows for sure what the hell they’ll bring.

Talking about the Singularity is a paradox, because it is an attempt to imagine something that is by definition unimaginable to people in the present day. But that hasn’t stopped hundreds of science fiction writers and futurists from doing it.

Where does the term “Singularity” come from?

Science fiction writer Vernor Vinge popularized the idea of the Singularity in his 1993 essay “Technological Singularity.” There he described the Singularity this way:

> It is a point where our old models must be discarded and a new reality rules. As we move closer to this point, it will loom vaster and vaster over human affairs till the notion becomes a commonplace. Yet when it finally happens it may still be a great surprise and a greater unknown.

Specifically, Vinge pinned the Singularity to the emergence of artificial intelligence. “We are on the edge of change comparable to the rise of human life on Earth,” he wrote. “The precise cause of this change is the imminent creation by technology of entities with greater than human intelligence.”

Author Ken MacLeod has a character describe the Singularity as “the
Rapture for nerds” in his novel *The Cassini Division*, and the turn of phrase stuck, becoming a popular way to describe the Singularity. (Note: MacLeod didn’t actually coin this phrase - he says he got the phrase from a satirical essay in an early-1990s issue of *Extropy*.) Catherynne Valente argued recently for an expansion of the term to include what she calls “personal singularities,” moments where a person is altered so much that she becomes unrecognizable to her former self. This definition could include posthuman experiences.

**What technologies are likely to cause the next Singularity?**

As we mentioned earlier, artificial intelligence is the technology that most people believe will usher in the Singularity. Authors like Vinge and singulatarian Ray Kurzweil think AI will usher in the Singularity for a twofold reason. First, creating a new form of intelligent life will completely change our understanding of ourselves as humans. Second, AI will allow us to develop new technologies so much faster than we could before that our civilization will transform rapidly. A corollary to AI is the development of robots who can work alongside - and beyond - humans.

Another Singularity technology is the self-replicating molecular machine, also called autonomous nanobots, “gray goo,” and a host of other things. Basically the idea is that if we can build machines that manipulate matter at the atomic level, we can control our world in the most granular way imaginable. And if these machines can work on their own? Who knows what will happen. For a dark vision of this Singularity, see Greg Bear’s novel *Blood Music* or Bill Joy’s essay “The Future Doesn’t Need Us”; for a more optimistic vision, Rudy Rucker’s *Postsingular*.

And finally, a lot of singulatarian thought is devoted to the idea that synthetic biology, genetic engineering, and other life sciences will eventually give us control of the human genome. Two world-altering events would come out of that. One, we could engineer new forms of life and change the course of human evolution in one generation. Two, it’s likely that control over our genomes will allow us to tinker with the mechanisms that make us age, thus dramatically increasing our lifespans. Many futurists, from Kurzweil and Steward Brand, to scientists like Aubrey De Gray, have suggested that extreme human longevity (in the hundreds of years) is a crucial part of the Singularity.

**Have we had a Singularity before?**

The Singularity is usually anticipated as a future transformation, but it can also be used to describe past transformations like the one in our example earlier with the person from 1200. The industrial revolution could be said to represent a Singularity, as could the information age.

**When will the Singularity happen?**

In 1992, Vinge predicted that “in 30 years” we would have artificial intelligence. We’ve still got 12 years to go - it could happen! In his groundbreaking 2000 essay for *Wired*, “The Future Doesn’t Need
Us,” technologist Joy opined:

The enabling breakthrough to assemblers seems quite likely within the next 20 years. Molecular electronics - the new subfield of nanotechnology where individual molecules are circuit elements - should mature quickly and become enormously lucrative within this decade, causing a large incremental investment in all nanotechnologies.

And in the 2005 book *The Singularity Is Near*, Ray Kurzweil says the Singularity will come “within several decades.”

Longevity scientist De Gray says that our biotech is advanced enough that a child born in 2010 might live to be 150, or 500 years old. MIT AI researcher Rodney Brooks writes in his excellent book *Flesh and Machines* that it’s “unlikely that we will be able to simply download our brains into a computer anytime soon.” Though Brooks does add:

The lives of our grandchildren and great-grandchildren will be as unrecognizable to us as our use of information technology in all its forms would be incomprehensible to someone from the dawn of the twentieth century.

So when will the Singularity really happen? It depends on your perspective. But it always seem like it’s just a few decades off.

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Reality Hackers: Transhuman: Best-case scenarios

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Annalise has asked me to comment on what is the best-case scenario for posthumanity and what groups are working on putting that scenario in motion. This is the sort of question that invites utopian musings. I’ve become somewhat shy of utopian projections, which is maybe why I tend to interview other people and let them take the fall… but what the hell, I’ll give it a shot.

The fun, of course, would be in visions of tall, thin, beautiful blue skinned beings that are super bright rather than corny (Maybe winged, too. Winged would be nice.), a third arm for carrying groceries, skinny little fingers for ever-tinier portable devices, and everybody engineered at the germ line to be crazy sex freaks.

But being of nobler stuff, I’ll give you what I think is the best down to earth scenario for near-term enhanced humanity, and then I’ll also mention a few further out visions—some of which I’m fond of.

Here’s what I see when I’m wearing my optimist’s hat. The emergent property of a technologically networked culture is voluntary collaboration and sharing. It may seem distant now, but things can change fast (Berlin Wall), and I think it’s reasonably likely that some time in the next 10 to 40 years, the main way most people will engage in productive or creative or playful (or all of the above) activities—and the main way that value will be shared or exchanged—will be through open source, voluntary, collaborationist networks that also use some variation of p2p to make whatever available to whomever.

So here’s what happens when we add in the idealistic tech scenario. We get basic control over the structure of matter—nanotechnology as production technology. Matter becomes information that can be shared p2p. It’s tied to desktop manufacturing. You go online, pick up the code for what you want and “print” it. Even if there are still some people who aren’t that resourced, there are plenty of people who want to distribute the free stuff to those in need. Who? Your basic generous open sourcers… your left libertarian types, definitely… but hell, even Nicholas Negroponte wants one laptop per child. Well, one desktop unit per person shouldn’t be too difficult under these conditions. In essence, within a decade or less of production nanotechnology, there is no resource scarcity, with the exception of physical space, and no distribution problem.

We also get as much control over biology as is possible, so there are few if any diseases, aging is slowed down stopped or reversed, replacement
body parts are grown, skin color is self-selecting, we can eventually begin
to program desirable traits in and out of humans by engineering—both
interventions in the already born and at the germ line... ad infinitum.

The more optimistic AI projections pan out. We have smarter-than-
human systems resolving our technical and possibly our political problems
before they happen – it's largely about pattern recognition, after all. We
also take the intelligence inside us so that we have all the information and
intelligence in the human/cyborg system accessible behind our eyes. Add
to that technologies and substances for neural self control -intelligence,
moods, creative flow, ecstasies and visions that are accessible to our raw
brains with little or no downside.

So people are feeling pretty good, and they're long-lived, smart, bodily
modified if desired both internally and externally and there's no
more coerced work/wage slavery. And thanks to the activity oriented,
participatory DIY culture that has been evolving since the Whole Earth
Review... since punk... since the early hackers... since Make magazine... since open source biotech (ad infinitum), most people don't become
passive bliss ninnies (and even if most of them do, there is still a minority
in the billions made up of active people to keep things interesting and
expanding.) Work is play (Gamification). And we're not boring... we
still have an edge. There are still unforeseen challenges. Also, advanced
virtuality provides a safe zone for the most extreme types of acting out.

Of course, the real world is never this smooth. And there are always some
skunks at the garden party (and most utopias, being totalitarian in some
way, might deserve them.) Out of this truth, a million science fiction
stories have been born. But the argument can be made—and has been
made—that what I’ve described is broadly the direction in which things
will go provided that all or most of these technological advances actually
occur to the degree suggested (or close enough), and these advances will
do far more good than harm.

Ok, so who is working towards this eventuality? Well, if it happens this
way, pretty much everybody in the NBIC fields—everybody working
on nanotech and biotech and AI and brain science, whether as citizen
scientists in a collaborationist project or working for a corporation, or
those wacky surrealists at DARPA—they’re all pushing this potentiality
forward. Of course, we may have to “hijack the Singularity” from
them eventually—or even now (think gene patent v. open source bio).
But mainly, I think all the people who are engaging in open source
collaborationist tinkering and culture, the citizen scientists—particularly
the more sophisticated and educated young people that are choosing to
invest themselves in “garage” projects—I think they all may be taking us
there.

I also think the best, smartest critics and skeptics and SF writers and
creators are helping by problematizing these scenarios in advance, by
giving us arguments and narratives that remind us about human behaviors
and emotions and political and economic and scientific realities. Brilliant
fiction adds to our foresight... our pattern recognition... by playing out
dramatic, difficult, dark, challenging, ambiguous or dystopian scenarios based on similar technological possibilities.

So that’s sort of a simple bottom line upbeat vision of posthumanity, without anything so far out as Kurzweil’s vision of imposing our idea of intelligence on the entire galaxy and all creatures within; or Leary’s 1970s vision of spacefaring posthuman intelligence-amplified and immortal psychedelic gods heading home to “Galactic Central” after fully conquering the quantum realm; or David Pearce’s marvelous vision in the Hedonistic Imperative (look it up) of a post-Darwinian humanity engineered at the germ line to spend their lives at various gradations of functional ecstasy while abolishing suffering among all sentient beings.

As I said at the start of this, Annalee’s question invited these utopian musings, and it would require another essay of equal length to express all my doubts and ambiguities. But I’m sure the inevitable comments will take care of that. I know I can count on you.

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2.9 SMILE (Space migration, intelligence increase, and life extension). Excerpt from Neurocomics (Last Gasp Press, 1979).
In this underground comic book, Timothy Leary shared his ideas on how technology might transform the human race.
reflections
Transhumanism. The name sounds futuristic and slightly ridiculous, but the ideas behind it are more realistic than one might expect. Transhumanism is an “international intellectual and cultural movement supporting the use of science and technology to improve human mental and physical characteristics and capacities.” Basically, it’s humans using science to change humans with the idea of bettering the species in general.

This is a broad idea and there are several categories of transhumanism that one might look into. Timothy Leary wrote about space migration, saying that the future is found in the movement of humans into space to colonize other planets. He believed that the only way for our species to survive is to keep expanding—off the planet—and to spread into other solar systems or galaxies.

Annalee Newitz, on the other hand, is into biohacking. This involves editing (modifying) a human being’s physical structure, again with the goal of improving it. “Improving,” by the way, could mean anything. Adding a tail to one’s rear may be desired by a few people; to them, it’s an improvement! Biohacking isn’t just DNA editing to change us up. It can also include adding cyborg-like machines to our bodies (I, Robot, anybody?) or taking drugs that help us work better (who wants to be the Hulk?).

Is it plausible that these goals could be achieved in my lifetime? Of course they can. This question seems absurd when you factor in Singularity theories about how fast technology advances these days. We’re already testing life extension drugs. We’re making breakthroughs in genetic sequencing; who knows where that will lead? We’re even making computers that can read our minds. What’s next?

There are already forces that might limit the progress of transhumanism. Ahoy, religion! Anyone who reads or watches science fiction (or history) knows that religion always opposes change. Tampering with “God’s image” is sure to be a big issue. And you know that politicians will just eat that up and limit progress for years on end. Gotta love it.

I’m gonna be honest and admit that I experience many emotions when I consider what the future could hold for myself and humanity in general. Transhumanism might as well be a religion to me with the amount of awe it inspires.

After learning about what this movement stands for and is trying to accomplish, I would have to say that the goals are inevitable in some distant future. People will figure out how to make changes to humans and people will want them. It’s that simple! At the same time... if we make space colonies then who won’t want to go to Mars after re-watching Total Recall a good nine times? The future is being dreamed up now, and with our increasing pace of technological advancement, that dream is turning into a reality faster than we think.
The objective of transhumanism is to improve the characteristics of the human race by the use of advanced science and technology. Literally, to be a transhumanist would be to transcend above and beyond the average human being. Transhumanism is something that essentially means the distinct line which once separated humans from technology, has been blurred. The coexistence of people and science will, through evolution, begin to fuse together.

The ideas regarding human enhancement in Timothy Leary’s article are beyond anything that I ever imagined possible. I don’t see mankind abandoning earth and migrating to space anytime soon. But, perhaps I underestimate the capabilities of the near future. He details what post-human life will be like after space migration and predicts different worlds forming for particular groups of people (e.g., bisexual vegetarians, Hell’s Angels, etc.) where they can be themselves and not clash with others.

This concept confuses me.

Who will govern these different worlds? Who will help control a society in space? Who will set the line for science and technology which we do not cross?

There has to be a place where these advanced beings can go and find simple earth qualities reminding them that they are, in fact, still human.

These questions are floating in my brain but they can be answered with time and intelligence increase working hand-in-hand. The concept of increased intelligence doesn’t startle me in the way space migration does because of the human evolution that has already occurred. My only worry is regarding the negative effects of human beings losing simplicity.

In a nut-shell, I suppose my feelings towards the ideas of enhancing human life are hopeful and excited with a dash of skepticism. The idea of a world with basically no limitations is fascinating and worries me at the same time. Maybe if my intelligence enhances I will feel differently about these ideas.
From what I have come to understand of the Transhumanist movement, its primary objective is nothing less than the complete liberation of the human race from its biological constraints through technology. It is an ideal that looks toward biotechnologies and other emergent technologies as potential catalysts for human enhancement that could eventually lead to a Technological Singularity.

This Technological Singularity is a point in time in which technology would allow humanity to finally transcend the limitations of organic life such as age, disease or even death and achieve almost limitless advancements in intellect and civilization. In short, it is perhaps the next step in the evolutionary history of our species.

Given the current rate of humanity’s technological expansion, it is not completely unrealistic to guess that the Technological Singularity could happen sometime in the near future. However, such insubstantial speculations on the future accommodate a number of wild assumptions and are ultimately futile. The “future” holds an infinite number of possibilities and trying to guess which course it will take is absolutely impossible. If it does happen in the near future then good for us. If it doesn’t happen, humanity has the rest of eternity to reach it assuming we don’t wipe each other out first.

There is a wide array of ethical concerns in regard to the Transhumanism movement, ranging from religious and social issues to political problems. One such claim against Transhumanism involves the religious/ secular hubris argument in which the attempt to modify the human body to gain godlike power is seen as a spiritual affront to a real god as an unacceptable risk to artificially guide the course of human evolution considering that we are products of predominantly biological functions.

Another argument is the possibility of eugenics wars wrought from notions of genetic/technological superiority between countries or even individuals that could ultimately lead to massive genocide campaigns to cleanse the genetic pool.

Finally, there is the perceived threat of dehumanization in which genetic engineering and other human enhancement technologies could produce races of genetic slaves or objectified sub-humans that exist to serve the master genetic race. There are many more arguments against Transhumanism than the three I have just listed but these are the basic contentions against it.

As an existentialist I am reluctant to accept any ideals which extol the future. Anything that detracts from the present in hope of something better in the future is just another way of trying to find meaning externally from one’s self that ultimately leads to a dearth in social and individual will power.
Why should we strive to better ourselves now when all this technology will answer all of humanity’s problems in the future? Also, it’s not like society hasn’t had these types of optimistic expectations before—Communism, Colonialism, Utopianism and so on.

Each of these movements failed miserably to produce the societal changes that their proponents promised and many of them actually made us worse off than we were.

Yet, despite my skepticism, I can’t help but feel approval for this movement’s monumental predictions. It does seem like the logical outcome of all this technology and after all hasn’t our desire for immortality been the overwhelming goal of humanity since our species’ very beginning.

2.15 “Flying saucers for everybody!” Frank Tinsley (author and illustrator), Mechanix Illustrated, March 1957. “Mass produced, the plastic saucer should cost no more than today’s medium-priced cars,” predicted Tinsley. “Could be that by 1965 you’ll have one flying out of your backyard, too!”
The concepts behind transhumanism appeal to me. Well, for the most part. Dr. Leary’s article on space migration sounded like one of his acid trips, although he did provide examples of why humans are destined to go to the final frontier. However, he included no evidence, which in the academic world means he is full of it. From what I gather, the overall goal of transhumanism is to enhance human life through the forging of technologies with the human body and mind.

I could argue that we are all transhumanists. I mean look at how much we rely on technology for our everyday needs. I bet you anything you do not know all the names and their numbers in your phone’s memory.

Ah, here is the best part: you could potentially argue that your phone’s memory is merely an extension of your own mind. If technologies such as the personal computer, smart phones, and your-whatevers that do-whatevers, have become such an integral part of your life, why deny that they are extensions of yourself?

Marshall McLuhan once said that, “the medium is the message,” and I think he was onto something. If we follow his argument, he states that different form media, such as television, are extensions of one’s senses and perception. This idea can be translated accordingly to transhumanist ideas.

Yet there are some transhuman concepts that I would shy away from, such as DNA manipulation. This idea reminds me of the movie *Gattaca*. We often associate eugenics with totalitarian governments that seek to create a master race (ahem, the Nazis), but this idea can extend even further.

What I’m referring to is liberal eugenics. This concept still has the basic foundations of eugenics, but manages to make it into a consumer commodity. This gives birth to many different problems.

Think about it: if we already have a huge disparity between the rich and the poor when comes to access to technology, imagine how liberal eugenics heightens this problem. Those who can afford to have their DNA modified so they are super fast, super strong, and super intelligent, will surpass those who cannot afford to do so. So as a result not only are the poor people poor, but they are now genetically inferior to their rich counterparts.

So when I say I support transhumanism, I can only go so far. I like the idea of having an exoskeleton, or a bionic arm, or anything that is an addition to my regular non-altered self. But when we decide to mess around with things that should not be changed, I find myself coming into a grey area. The potential is awesome, but so are the dangers.
Transhumanism is the application of science and technology to the human body in order to improve humans in all aspects of life. This includes higher mental capacity, the ability to live as long as you want, and ridding the world of diseases. While this appears to create something of a “superhuman,” people supporting transhumanism don’t focus on individual applications. Rather, transhumanists believe that—if we were able to apply all of these “enhancements” to the entire population—our world would be rid of poverty, disease, and other problems.

In the world today, enhancing yourself to perform at higher levels than those around you is looked down upon in many areas. It is seen as cheating in sports and in the classroom. We have to also look at how unnatural it would be. Homo sapiens have developed over thousands of years, and are continuing to do so. Using something artificial in our bodies would not only send this process out of balance, but could possibly cause other damage as well.

On the other hand, using this technology could lead us to new discoveries and other amazing things which we would never have found otherwise. You could also talk about survival in the context of transhumanism. The earth is bound to be encountered with some population threatening disaster, and having the mental enhancement to figure out a problem would be a necessary reason to have a higher form or intelligence.

I believe that this technology will be made available in our lifetime, however, as with any new technology, I think it will be incredibly expensive. That brings me back to my point of fairness. Those with the available money to spend on this enhancement will be able to, and those that can’t, the poor or the middle class, will have nothing to show for it. The rich will get richer and smarter because of this, and it simply wouldn’t be fair. Intelligence should be made available to all. Starving children can read history and English books in Africa, but they wouldn’t be able to afford the chip the goes inside your brain to make you smarter.

I personally think it would be awesome to be artificially enhanced. I would see the world through brand new eyes and it would be quite an experience. I don’t believe it would be fair to everyone, however, that wasn’t able to receive this intelligence. Until increased intelligence can be a mass produced commodity, I can’t see it gaining much support.
To me it makes sense that humanity would tend towards a movement such as transhumanism. It seems that with everything we do, we’re trying to make thing bigger, better, easier, and cooler. Man’s dedication to furthering knowledge has brought us so much so quickly that the idea of transhumanism and the technological advances that must accompany it are next in a line of mankind’s natural progression. To evolve further as a species, the use of technology is necessary. I do not, however, believe that this is a step to be taken lightly, if taken at all.

If space migration is ever integrated into general society, the reality of a transhumanist society will be imminent. To prolong the lifespan of humankind on earth as we are growing at such a rapid rate would be a death wish. The planet would over populate, resources would be completely depleted, and society would crumble. Even now, the number of diseases being cured increases, and our ability to survive through sickness is being finely honed. This technology is coming about rapidly, and the consequences it will have on society will soon be major.

Timothy Leary’s ideas for the future are the most appealing. His view of space as spurring the creation of new neural circuits through the presence of new and intriguing options is a noble one. If this is true, and if by leaving the planet we can open our minds more fully, then why not? The Earth can be left alone to recuperate from our stay here. Once humans have adjusted to the idea of living in space, the planet will be allowed to replenish itself as it’s children finally leave home.

The movement into space will also open up countless jobs. Every space habitat being lived on will need have job availabilities. The habitats themselves will also have to be built by teams of people. Space itself will need to be studied in greater detail in order to know exactly what would be necessary to create an appropriate environment to sustain human life for an elongated period of time. Then once the space habitats have been set up, there will be countless jobs available on each one. Even in ways we cannot yet imagine, this could provide a complete bolster for the economy. But getting the funding to be able to start the whole process may prove to be a hassle.

The transhumanist movement as a whole is a pretty scary idea, but I don’t think it’s one that can necessarily be avoided. If the technology is out there (which eventually, it will be), people are going to want to use it, regardless of the circumstances. Even though many of these ideas are dangerous before the exact consequences of their use is known, people are willing to take that chance to be able to perceive that they have made their life better then it could be otherwise.

What we need now is an in depth global discussion about what might happen, and whether or not taking this next step is worth it.

Our lives are at stake.
After doing the reading for this week’s class, I have been intrigued by the idea of transhumanism. I thought that the interview in *h+ Magazine* was particularly interesting. The interviewer brought up interesting questions like, if total happiness were the norm, would pain be a novelty that people would seek?

At first, biotechnology really freaked me out. However, the more I think about it and get used to it, the less scary it seems. The main problem is that by engineering our emotions, we trample into a very dangerous territory of engineering our personalities and our sense of self. There isn’t much point to having a life, if it is going to be predetermined for you.

I’m not sure if I would choose to be happy all the time if I had the choice to. Sometimes, the mere fact that I have managed to make myself happy is the most rewarding part for me. I strive to make any situation a positive one, and when I succeed, it is an even greater feeling than the one that I would’ve had if I had simply been happy despite a bad situation.

If everyone were in a state of absolute euphoria all the time, we might not know what a good thing we have going by being happy all the time. Part of the amazing thing about euphoria is that it is a rare feeling. It is the occasional presence of pain that makes joy so great. Of course, I definitely prefer to be in a greater state of happiness most of the time.

Some of the social and political opposition to transhumanism stems from these fears. Also, one giant obstacle that transhumanism needs to overcome is religion. The transhumanists will face much opposition from the religious sector of the world, and they need to find a way to accommodate this opposition. Elsewhere, *h+ Magazine* discusses the part of our brain that needs to have religion and the way that a person’s particular religion affects the rest of their life.

Religion will always be an essential component of our biology. Even if transhumanists find a way to make us happy, super-intelligent humans all the time, religion will continue to be necessary.
It is interesting to see the different stances that people take on transhumanism. To truly grasp the various arguments, one must first understand what exactly we are talking about. For this I am going to rely on the almost always trustworthy Wikipedia:

“Transhumanism is an international intellectual and cultural movement supporting the use of science and technology to improve human mental and physical characteristics and capacities.”

That sounds about right to me, and these improvements can range all the way from the far-fetched (like superhuman powers and immortality) to the plausible (like curing cancer or making drought resistant crops).

The arguments of authors in the course reading can be broken down like this:

Timothy Leary: S.M.I.L.E. = Space migration, intelligence increase and life extension. The first step is breaking out and dusting off the technology for humans to migrate into space and then you increase their intelligence so they don’t get bored in space. This solves the population problem and people can live longer.

Duncan: Duncan mostly discusses the use of gene modification to increase the quality of human life in outside ways rather than actually modifying humans themselves (genetically modified crops, curing disease, etc.)

Lynch/Block: These authors focus on neuroscience to end suffering. They take a scientific approach and inform the reader that further progress requires actually experimenting on humans.

Kent: Kent is a vegan animal rights activist who sees transhumanism as a chance to end all pain and suffering. This offers a similar effect as ecstasy but with more control.

Newitz: Transhumanism is fine when it comes to body modification, but using it to cure disease and creating immortality is taking it to far. People don’t need to live forever at this point in time.

Each of these authors takes a different approach to the idea of transhumanism but they all share a common goal of increasing the quality of human life. This a noble goal and in most ways transhumanism seems a viable way to achieve this goal.

I agree most with Newitz and Leary. Extending the lifespan of humans to 200 or 300 years offers far more problems than benefits. If your rich uncle
never died, you would never inherit his money.

Say you’ve lived 250 years, what are you going to do with yourself after the first hundred?

If we who are alive today were alive in the 1800s... wouldn’t it have been a shock for us to go from no electricity to today? (If you are shaking your head no then just think how hard it was for most your grandparents to a adapt to computers)

The biggest problem is the one Leary is trying to solve with his space migration theory: where are all these people and their children going to live? How are we going to sustain them with the limited resources we have? All of these problems need to be solved before we can even think about expanding the life span on human beings.

One of the most viable applications of transhumanism today does not actually involve changing the human body. Genetically modified crops are currently the big thing in the agricultural world and they are truly helping solve hunger issues around the world.

For all of you who are a bit weirded out by the idea of eating genetically altered food you have to consider that we have been doing it for centuries. Next time you bite into an apple you should know that no matter what type it is, it comes from only one genetic parent. How about bananas? Consider that every banana in the world comes from only one plant from Papa New Guinea that has been transplanted in pieces all around the world.

These are just a few examples, but we have genetically modified the majority of foods we eat through simple breeding practices. Now, we have simply reached the point that we can start at the genetic level in a lab and control things more actively. Companies have produced drought resistant and pest resistant crops that are being grown all over the world. Things can go wrong but you have to weight the benefits against the chance of catastrophic failure.

For those interested in these ideas, I recommend the book The Doomsday Key by James Rollins. It’s great fiction with a amazing scientific base where the plot revolves around genetically modified crops.

There are many costs and benefits to all elements of transhumanism but it will be at the forefront of the next technology boom. The only thing that we can do about it is try to keep it in check while rolling with the punches.

We stand on the precipice of changing life as we know it using existing technology. But we need to use these ideas to fix the problems we are currently facing before we do something like “cure death” and thereby open up a whole new set of problems.

Let’s just take this one step at a time.
Much of this course has dealt with the theme of transhumanism, which is loosely defined as the societal drive to enhance our minds and bodies through new applications of technology. Whether it’s the use of nanoscale robots in our bloodstream, the invention of robotic body parts that will turn us into cyborgs, or just the optimization of mind-enhancing substances for the achievement of maximum productivity and/or recreational enjoyment, the multivariate ways in which transhumanists predict our lives will be altered by technology is astounding.

One of the speakers from this course was a man named R.U. Sirius, who edits h+ Magazine. ‘H+’ is the symbol for the tranhumanist movement, short for “humanity plus”. As part of this class, we were told to peruse the magazine and write about things we found interesting. Well, in the course of my browsing, I was fascinated by an article titled “The Genomic Bodhisattva,” an interview with David Pearce, author of *The Hedonistic Imperative*.

Pearce believes that through intelligent use of technology, we can effectively end suffering, and then improve the human condition to such an extent that baseline levels of happiness to future human beings far exceed the imagined possibilities of today. The two technical mechanisms he focuses on are pharmacology and gene-therapy. One phrase Pearce likes to use is that technology can give us the ability to “recalibrate our hedonic treadmill,” which refers to the idea that people tend to stay at a “relatively stable level of happiness, despite changes in fortune or the achievement of major goals.”

That idea reminded me of a recent TED talk by behavioral economist Daniel Kahneman, about the way we perceive happiness differently through experience and memory. One of Kahneman’s key points is the idea that our idea of happiness in any moment is different from what causes us to remember events as having been good times. I think what Pearce is most trying to optimize is our experiential happiness, though he recognizes that the complex interplay of dopamine, serotonin, and other chemicals in the brain makes this a delicate operation. For a full rundown of Pearce’s ideas, I urge you to check out his site.

One of the first things to realize—according to Pearce—is that our brains are not designed to make us happy. All of our inborn urges and drives, pleasurable and painful tendencies, even our abilities to feel happy and sad, exist because they help our genes to propagate. As Pearce puts it:

> Blind selective pressures have acted on living organisms over hundreds of millions of years. Darwinian evolution has powerfully favoured the growth of ever more diverse, excruciating, but also more adaptive varieties of psychophysical pain.

Just the realization that we have no fundamental need to be happy is a game changer. If you look at recurring human behaviors that cause so
much pain and sadness, you might be baffled if you expected that humans were designed to rationally seek out happiness. This just isn't the case.

In an effort to enhance our ability to feel happiness, Pearce advocates the modification of human germline cells. The germline refers to genetic material that may be passed on to offspring, in contrast to somatic cells. The first thing that we need to do is “sabotage a small but vicious set of negative feedback mechanisms,” which are genetically coded into the mind and brain. He argues that today’s recreational drugs, “quick and dirty euphoriants,” don’t transcend these mechanisms, but they do offer an intriguing glimpse into what human life could be like if our underlying brain architecture were well modified.

Though I haven’t tried many of the euphoriants Pearce refers to, I recognize a gross lack of open-minded discussion about the effects of substances on our minds, especially—unfortunately—on the part of government officials, notably the DEA. In February 2010, in Missouri, a group of fully armed paramilitary law enforcement officers broke into a home after dark and shoot the family dog in front of a small child—all because of a misdemeanor drug warrant. Clearly, something is horribly wrong with our nation’s drug policy. (See: Radley Balko, “Video of swat raid on Missouri family” in Reason Magazine, May 5, 2010).

On the other end of the spectrum, it’s important to note that irresponsible use of substances can cause tremendous problems, as in the case of a drug user who castrated himself because he feared his testicles contained “monsters.” (See: “Tripper amputates, flushes monster-containing testicles” in The Arcata Eye, May 12, 2010).

Whether irresponsible idiots like this warrant the existence of our current enforcement mechanisms is hard to say, though I tend to veer on the side of a drastically limited government that stays out of people’s way until they present a threat to others. I distrust anyone who thinks it’s a good idea to legislate away personal freedoms.

Returning to the subject of gene-therapy, I think it’s interesting and encouraging to think about the kind of transformations that could take place if notions of Darwinian selection were replaced or altered with some form of intentionality. I wonder about the relative effectiveness of emergent versus top-down design, and whether this kind of program will be accepted within the moral standards of a Darwinian society, but I think it’s encouraging that we have people devoting so much energy to the abolition of suffering and the transcendence of human limitation.
First off, I think it’s awesome that R. U. Sirius is the editor in chief of h+. It makes total sense.

h+ Magazine is just—it’s awesome. There’s no other word for it. For starters, it’s got Dollhouse on the cover. Win. Instant points. The graphics are great, the layout is intriguing and different, and the content could occupy me for hours. The topics are super intelligent but they’re explained in a way that any fairly intelligent person with no prior transhumanism knowledge could understand.

Transhumanism doesn’t seem to be anything that ends or that we can ever ultimately achieve. The point of transhumanism is to keep pushing the boundaries of what we as humans are capable of doing, making, or imagining. Its objectives are twofold.

The first objective of transhumanism is to broaden mainstream views and beliefs about what it means to be human. In the editor’s corner on page 10, Sirius talks about the “beginnings” of transhumanism with the emergence of transgender people. I had no idea that transgender surgeries and hormonal treatments began shortly after World War II. As Sirius (bahaha... Sirius Black... come on they even look the same) points out, this idea of transgender people isn’t such a big deal to us now, over fifty years later: “Now, a woman-to-man gives birth to a baby and most of us barely bat an eye.”

Transhumanism aims to protect the civil rights of transhumanists such as transgendered people. Sirius mentions that there is still “bigotry and a lack of legal protections” and he seems to say this with disappointment and some bitterness. Transhumanism aims to make these ideas mainstream so they are accepted and so people who are transhumanists—but who are first and foremost HUMANS just like you and me and everyone else—are accepted for who they are or who they want to become. Because really, who are we to judge?

The second objective of transhumanism is to explore how technology can help us change our definitions of how to be human. Our achievements are possible because of technology, and our self-worth as a species is defined by technology. As humans, we’re defined not by what we can physically do (like make fire or build bigger buildings) but by the technologies we build. Of course, these technologies will probably help us do other things physically. Some of the articles that explore this are “Can Robots Feel Joy?” or “Enhanced: My New Sense Organ” or “Transgender, Transhuman, Transbeing.”

In terms of ethical concerns, transhumanists are going to push the envelope no matter what. In the “Editor’s Corner,” Sirius mentions the idea of changing skin melanin to be trans-racial. “The Transgender, Transhuman, Transbeing” article raises similar ethical concerns over whether or not it’s ethical to download people into computers.
This all seems like science fiction almost but the fact is that it is happening and it is happening now. Sometimes I feel like I'm complacent where I am right now as if everything is going to stay exactly the same way as it is. Nothing could possibly get any more advanced. Maybe a few things here and there, but as far as big things go? Nah. We're set.

False. Big things are happening and h+ and transhumanists are bringing these ideas into the mainstream culture. In the last 20 years, the Internet has taken over the world, changed the face of all interactions, and created a new lifestyle.

So what's going to happen in the next 20 years? We will be in our 40s. What are our kids going to grow up thinking is normal? Are ideas that h+ brings up possible? I think so. And it's kind of terrifying. Robots that feel emotions? (CYLONS?! WHAT?!) Uploading our minds to a computer? But the thing is, during our lifetimes, these kind of things are going to become normal.

My gut feeling is a strong mix of "that is so freaking cool" with "that is so freaking scary." What if I become one of those old people who hates technology because I don't know how to work it? Those people are annoying. I don't wanna be them.

And isn't this the stuff of science-fiction movies? Really cool technology seems awesome and cool and everyone loves it until suddenly it's a disaster. Exhibit A: Battlestar Galactica. Exhibit B: Dollhouse. The list goes on and on. So my gut feelings are mixed. It's awesome in theory and I have no doubt that some (if not all) of this stuff is going to become reality, but my general feelings are proceed with caution.

Except I still don't think we're going to move to space. Sorry Leary.

I'm going to end with a final quote from RU Sirius that really struck me. He's very good with words, I'm really, really looking forward to his lecture. Also, it makes me feel like I'm at Hogwarts.

"As we move into an age of shifting identities, where we can be whatever or whoever we choose to be in our second lives; where biotechnology might soon offer changes in skin melanin bringing about the age of the trans-racial, as people start to evolve novel body ornamentations and eventually parts, as we learn how to control our hormones to amp up our estrogen or testosterone to suit the needs of the day, we should always remember to thank the transgendered. They have walked point for our basic right to self-alter."
A first shock of Joel’s life came when he saw a mirror for the first time. That elaborate affair of glass and wood was delivered to decorate Cassie’s room, and Joel approached it to investigate. He had not given much thought to his appearance, but assumed without ever considering that he looked like the people around him. He was conscious of some slight differences between himself and others, such as he walked on four legs, and did not speak. Still, he did not expect his reflection to be quite so grotesque.

He twitched his snout, discomfited, and the creature in the mirror did the same. A real snout with a flat fleshy circle surrounding his nostrils. Joel surveyed slack ears, nothing at all like Cassie’s, the small eyes hiding in the folds of fat, a long corpulent body supported by four stubby hoofed legs, and a comma of a tail. Joel had seen enough picture books to recognize the image. A pig.

He turned his back to the mirror and trotted away, his cloven hooves clacking on the hardwood floors of his home. He moved his legs carefully, afraid that an abrupt movement would shatter his heart, already aching as if from a blow.

Joel pushed a door open with his forehead and lay in the straw bed of his pen. The pen took up most of the open porch of a great, old house, and Joel had a view of flowerbeds, bursting forth with blue of irises and red and black of tulips, and a vast green lawn. He needed to think.

His discovery, as unsettling as it was, explained much. He now knew why Cassie and her father talked about him as if he were not there, and why newspapers were often snatched from under his nose. Most importantly, he realized why Cassie never acknowledged small signs of affection he offered. At least, it wasn’t about his personality. It was about him being a pig.

His ears pricked up, and he raised his snout to inhale the smell of gas and hot metal. Cassie’s Dad came home. Normally, Joel was not very interested in the old man – he seemed more of an aged barnacle appended to Cassie’s loveliness than a being in his own right. This time, Joel watched him.

Cassie’s Dad heaved his old body up the steps with the help of his cane, and spoke addressing a young man with a tape recorder in hand, who followed close behind. “I hope the tour of the farm assuaged some of your and your readers’ concerns. As you could see, it’s a perfectly scientific and humane operation.”

“Yes.” The young man stopped and cocked his head. “But did you have any issues with patients being squeamish about their transplants? About these organs being grown in pigs?”
The old man rasped a laugh. “You have to understand that people who need a transplant do not have the luxury of being squeamish. And think of the alternatives – would you rather receive a liver extracted from a human corpse?”

The young man made a small non-committal sound and looked away.

“You’re too young to remember it, but back in the day… ” Cassie’s Dad looked over the flowerbeds, his fingers tapping on the railing of the porch. “There was a lot of controversy over human cloning – human rights activists feared that people will be cloned only to harvest their organs. That never happened, of course – it is much easier to grow human organs in pigs, and there’s a whole lot fewer ethical questions. Animal Righters, of course, made a fuss, but they always do. Most of them don’t even know what they believe in.”

“Why pigs?”

“They are similar to us.” The old man smiled, and snapped his fingers at Joel. “Joel, come here, boy.”

Joel trotted up, obedient, hoping that his dark unease did not reflect on his face.

“Joel, here,” the old man said, “is a miracle pig. He has a human brain – he’s the only one of his kind. A real innovation. Hope your paper will enjoy this little factoid.”

The young man rubbed his face. “A brain? Forgive me, Dr. Kernicke, but a brain transplant reeks of a bad joke. Why would you need a brain?”

Cassie’s Dad rolled his eyes, and petted Joel’s sagging head. “Not a whole one. But you know that people suffer injuries, or – God forbid! – tumors. Wouldn’t it be nice to have a replacement frontal lobe in case you lost one?”

The young man nodded. “I suppose. But what about personality?”

Cassie’s Dad shook his head, impatient. “What personality? He’s a pig. He’s just keeping this brain warm, in a manner of speaking. It’s a blank slate. A person who receives Joel’s frontal lobe will eventually develop connections between his brain and the transplant, and gradually claim it as his own, regaining function as the time goes by. Brain tissue is just tissue until a human mind shapes it into something grander.”

The young man turned off his tape recorder. “Doctor,” he said in a hushed voice, and gave Joel a sideways look. “How do you know that this pig is not sentient?”

“Because pigs did not evolve with this brain!” Cassie’s Dad struck the boards of the porch with his cane for emphasis. “It’s like sewing albatross’ wings on a pigeon – it won’t make him a better flyer, and chances are that
he won't fly at all. Every animal is made by evolution, and all parts should fit together to function. Joel's DNA says that he's a pig, and thus he will remain a pig forever, whether we furnish him with a different brain or not. He has no other human equipment, such as neurotransmitters and sensory system, and thus he cannot make use of the brain. Interview is over.”

The young man ran down the steps, traipsed across the lawn, and disappeared behind the bend of the driveway. A part of Joel wanted to run after the man, to seek his help, while the rest of his soul reeled, as if an abyss had opened in front of his hooves. Betrayed by the very people who took care of him and pretended to love him – surely, Joseph did not feel worse after being sold to Egypt! If Joel could speak, he would've called anathema upon the old man's aging, balding head. If he could cry, bloody tears would have stained his face. Joel did the only thing he could do. He ran.

The gravel of the driveway exploded from under his hooves in small, angry fountains, and the greenery of the hedge melted into a green smudge. He careened around the turn, just in time to see the young man's car exhale a pungent cloud of exhaust and disappear behind the gate.

Joel's heart pumped harder than ever as he kept running. The metal bars of the gate came into motion, sliding, silent, smell of grease and black metal radiating from them. Through the opening, Joel could see a grey snake of the road, he could hear honking of the cars, he could smell an unfamiliar world that he had previously seen through the gate but never entered.

Until now. Joel's face thrust into the street, into the warm shimmering air filled with asphalt fumes, just as the gate slid into his flank. He could feel the pain of bruised flesh, followed with a jolt the likes of which he had never felt. Every muscle twitched with the searing shock that radiated from the metal grid of the gate. Then, it ceased. Joel planted his front hooves in the pallid grass that separated the gates from the sidewalk, and pulled. The pain renewed – another jolt, then another pause. Joel thought that he could smell burnt hair, but it seemed too inconsequential in the face of the necessity to free himself. He pulled and strained, until the next shock set his flank afire, radiating across his back and down every nerve. Joel looked outside, at the traffic that flowed by, oblivious to a pig stuck in the gates. The next shock exploded in his eyes, in a shower of white stars, and Joel saw no more.

* * * *

Joel woke up in hell. Before he even opened his eyes, he realized that he was paralyzed. He sent his muscles a signal to move, to close his mouth, but they would not obey. His throat and tongue felt dry as felt, and he could not swallow. His ears hurt.

Joel opened his eyes. The white light sliced across his retinas like a knife,
and he squeezed his eyelids shut. Cautiously peering into the whiteness through his sparse eyelashes, Joel discerned the shapes of people around him. They were dressed in white, and blended with the white walls, the instruments in their hands the same color as the chrome fixtures. The chrome fixtures that held his mouth open, thrust into his throat far enough to scratch it and make him want to gag. Steel shafts penetrated his ears, holding his head immobile.

This is it, Joel thought. They’ve found someone who wants my brain – wants me. He swiveled his eyes around, half-expecting to see the perpetrator. He imagined him reaching greedily for Joel, an unholy gleam in his eyes.

Cassie’s Dad came into Joel’s field of vision, moving his face closer. “You gave us quite a scare, Joel,” he said. “What were you doing, getting stuck in the gate? Did you want to get out?”

Joel would’ve nodded if the mechanical gear did not prevent him.

“Silly boy,” the old man cawed. “You got quite an electric shock, you did. Now, you just relax, and we’ll make sure that you did not damage anything.”

Despite his discomfort, Joel breathed easier. It wasn’t the time, then. If he was lucky, the time would never come. With all his heart he hoped that the old man would find something wrong. Some imperfection that would let Joel live.

The old man gave a signal, and his helpers, white-gowned people with their faces hidden behind white cloths, wheeled Joel’s table into a large, humming tunnel. Joel closed his eyes, and in his mind repeated the words he heard Cassie whisper before going to sleep. “Please Lord, have mercy on us all.” He thought a bit, and added, “Especially Joel.”

Lord did not listen – perhaps, because Joel was a pig, and not a young girl with curly hair and eyes like blackberries. After an eternity of loud humming and beams of light that shot at him from different angles, Cassie’s Dad wheeled Joel out of the tunnel, and patted his snout. “Good as new. Good boy.”

Joel wept silently as the masked people unstrapped him and freed his mouth from the ravages of steel. He was too wrapped up in his misery to look around as Cassie’s Dad nudged him outside of the low stone building into the yard covered in asphalt. The old man opened the door of his car, and Joel climbed onto a back seat. He looked out of the window, but nothing shook him out of the stupor – neither the flowering cherry trees, nor people milling about, nor the low wooden pens. He watched a row of pigs’ faces pressed against the bars. He guessed that they housed human livers, hearts and kidneys. But not minds, Joel thought bitterly. That cross was his to bear.

Since that day, Joel thought of ways to escape. He circled the perimeter of
the yard surrounded by thin wires. But the wires gave him the same jolt as the gates. He tried to root under the fence, and made good progress, but was discovered. The old man moved Joel’s bed into the shed, where he could be locked. His only solace was Cassie, who visited him occasionally. The old man tagged along on such visits, short and awkward as they were.

“What’s got into him?” the old man said, looking at Joel with consternation. He stood in the doorway, the afternoon sun creating a halo around his misshapen, hunched silhouette.

Cassie crouched down and patted Joel’s head. “Perhaps he knows.” She looked up at her father, her eyes rounded with emphasis.

“Nonsense,” the old man said.

Joel’s heart leapt with hope. He grunted and rubbed against Cassie’s knees, almost knocking her over.

“Dad,” she said.

The old man sighed. “There’s nothing I can do,” he said. “It’s not just my project. Perhaps it was a bad idea to keep him as a pet – I should’ve known that you’d get attached.”

Cassie stood. “What do you mean? Did you find someone?”

The old man nodded. “Ever since it’s been in the papers, we’ve been flooded with mail and phone calls. The Congress got involved, and the FDA is pushing for clinical trials. I think we found a recipient.”

“Who?”

“A young man,” Cassie’s Dad said. “He was in a car accident some years back, suffered a loss of a large portion of the right hemisphere. Think of it, Cassie – Joel will help someone to live a normal life. Think how you would feel if you were half a person.”

Cassie heaved a sigh, and thrust her hands deep into her jeans pockets. “I guess. I would hate to lose Joel though.”

The old man smiled. “You don’t have to lose him, dear. He’ll retain most of his brain – more than enough for a pet.”

Joel could not sleep all night. Cassie was an ally. If only he could send her a sign, let her know somehow that he was just like her, that he could think and understand everything… A sudden thought struck him. He almost laughed in disbelief – it was so simple. Why didn’t he think of it before? He picked up a twig with his mouth, and started drawing letters in the dust. Letters that he remembered since Cassie and he were both carefree and young, when she learned the symbols on the bright painted cubes. Joel was there, and he had learned too.
It was a hard going – the letters came out shaky and clumsy, and he had to start over a few times. He wanted them to be perfect, so that no one would doubt his abilities. He labored all night, often stopping to shake the salty drops of sweat from his eyes. By the morning, the inscription was ready. Large, blocky letters stood out clearly against the grey dirt. “Cassie,” he wrote, “I love you.” She would come in the morning and see that he had both a heart and a mind.

When the morning came, Joel circled around the cramped pen – a far cry from the luxury of the old house, where he could roam free and see Cassie whenever he wanted to. He even moved all the straw into the corner, so that nothing obscured his letter.

He heard footsteps outside, and his heart almost stopped, and then raced, once he realized that there were several people there. All of them came in, wearing green coats, loud and laughing. Their heavy shoes trampled his message back into dust, and their hands grabbed Joel. He fought back, crying out for help, until a needle jabbed his flank.

* * * *

The afternoon sun flooded the porch, and Joel closed his eyes. It was a nice day, although his aching skull told him that it might rain later. Cassie shifted in her chair, and tickled Joel's chin with her bare toes. He grunted and stretched his neck. He almost dozed off when he heard crunching of the gravel of the driveway. Someone was coming.

He opened his eyes. Cassie looked too, shielding her eyes from the glare, and put down her book. Joel glanced at the squiggly lines, and then at Cassie. For the life of him, he could not understand why she spent all day staring at the black worms that crawled on the white pages.

“Excuse me.” The visitor walked halfway up the steps that led to the porch and stopped, as if uncertain. “I was told that this is Dr. Kernicke’s house.”

Cassie nodded. “He’s at the Institute. It’s down the road, by the farm.”

“I know,” the visitor said. “I just wanted to talk in a more informal manner.” His eyes met Joel’s, and he whistled. “Say, is that the pig that…” He swallowed a few times but did not continue.

Cassie looked puzzled for a moment, but then smiled. “Oh yes, this is Joel, the wonder-pig.”

Joel lifted his head at the mentioning of his name. The rest of the words escaped him somehow, no matter how hard he listened.

“Joel,” the visitor repeated. “I’m Phil Marshall.”

“Oh yes.” Cassie looked at the visitor with awe. “You’re the recipient.”

The word evoked a vague displeasure in Joel, but the day was too nice to
get agitated over anything. He grunted and rolled to his side, trying to capture as many rays as he could before the sunset.

“And you’re Cassie,” Phil said.

“How did you know?”

Phil frowned, shook his head, and shrugged. “I don’t know. Probably heard it somewhere.”

“Probably,” Cassie agreed. “Father will be home soon. You want to see the garden meanwhile?”

Joel watched the two people walk down the steps and stroll across the green lawn. He tried to focus his thoughts, but they just stumbled about, unruly, chasing each other’s tails. There was something about that man, something about the way he looked at Joel that seemed familiar. The words ‘blank slate’ floated into his mind and dissipated, leaving no impression or understanding. Joel yawned. All the thinking made him tired, and he closed his eyes, savoring the warmth and the sun. No need to worry about things one could not change. And truly, Joel had no reason to complain. He was treated well, and he had anything a pig could desire. And it was getting even better – every day, he found that he had fewer things to worry about, that the concerns of yesterday made no sense today, and often left no memory. He had forgotten the smell of blood, and the searing pain, and the sickening sound of the tissue tearing like fabric. Soon, he would be truly happy.

Ekaterina Sedia’s short story “The Mind of a Pig” was originally published by Apex Book Company Online in March 2009. To learn more about the author, visit www.ekaterinasedia.com.
where is my mind?
The answer to the question “where is my mind,” is becoming increasingly difficult to answer. I would like to say that it is still “in my head,” though today’s society mandates that your mind be everywhere at once. We are not yet at the point described in “The Girl was Plugged In,” but we are certainly moving in that direction. While this can all seem very scary at first, I don’t think it is all bad. At this point in history, if someone asks me “where is your mind,” I can say with some degree of certainty that it is anywhere I want it to be.

Our history books are filled with examples of men and women who externalized their minds in some meaningful, lasting way. Egyptian engineers built the pyramids. Greek philosophers wrote volumes that still affect our society today. Great generals developed strategies that changed the landscape of the world. These people could have completed their great projects from the comfort of a chair, thinking about their craft and passing on orders to others. In this way, their mind was (and still is) embodied in their masterpieces.

Until recently, most people did not have this luxury. Most members of our species have made our livings with our bodies. Lately though, it appears that this is changing. Most of us don’t really use our bodies anymore, and survival is pretty much a foregone conclusion in this part of the world. We buy food in supermarkets, we take medicine when we are sick, and we use planes, boats, and cars to travel extreme distances. Daily life is no longer a struggle (again, in this part of the world).

These days, most of us use our minds for nearly everything. We wake up and check our e-mail, and send out our thoughts to others. We go to class or work, often by car, and rest our bodies in a chair while using our minds to fulfill our assigned tasks. In this networked society, we leave our mark in so many different places and in so many different ways these days that we almost take it for granted. It is a unique and exciting time, because we all have the opportunity to use our minds to make a tangible difference in the world, a privilege which we have never lived without, but has been reserved for the lucky few for the entirety of our existence.

Things are great now, but we have only lived in this society of opportunity for a very short period of time, and have no guarantee that it will last forever. It may not even last for my lifetime! If tomorrow you took away computers and the Internet and the means of mass production, what would happen? If our modern society crumbled and we found ourselves in the world that existed 100 years ago, how would we cope. Most of us don’t have any idea how to farm, build things, or produce clothing. These things are taken care of for most of us. We have never lived in a world that required us to use our bodies to survive, and if you asked us to suddenly figure it out, it would be a disaster. Living through your mind is preferable to surviving with your body, but as a society we must not forget how to take care of ourselves.
I would like to talk about the geographic location of the mind. Where my mind currently is—in terms of what I am thinking about—is how much work I have to do, the fact that I need to declare my major, and oh yeah, when the heck am I going to do laundry anyway? But I don’t think very many people care about that.

Sometimes I feel like there are two of me. I don’t mean that in the sense that there are actually two physical beings that I inhabit, or that I have multiple personalities. What I mean to say is that there is my physical self and my spiritual self. I feel like my brain controls my body, and that my mind controls my spirit, or soul if you will. However, I feel like they inhabit the same geographic location.

Maybe that sounds really stupid. I really do believe in people having souls, because from the genetic and biological evidence that I’ve read, I just don’t feel like the science we have in front of us can completely account for our personalities. For example, many times, there is no biological advantage to having a particular personality trait, like a specific sense of humor, but it is just as much as part of who I am as my genetic code.

To be more specific about the geographic location, I do believe that my brain is the home to my mind, but since my mind does not really come from any specific region of my brain—it seems like it’s a voice that fills my head—they seem to be separate entities. It is for this reason that I thought Tiptree made sense when she was talking about the person’s brain being in love with Paul, but through Delphi’s body. However, I think it is the mind specifically, and not the brain that falls in love.
On any normal occasion, I would say that my mind is located somewhere in the squishy part of my brain. Now that my spectrum of conceptual thinking has been fathomed tenfold, and after reading the pieces by Newitz and Tiptree, my mind could literally be anywhere. In an electrical hub attached to millions of wires. In a vat of goo. In South Africa. In my basement. Anywhere.

In Tiptree’s short story, the ‘girl’ in essence gets to escape her ugly physical reality and jump into a new body via technological advancements. Her new life is just great. Her new path is dandy. But this makes you think - where is her brain working? Which being is it operating? Because if a mind originally belongs to one being, how can it transfer to another? How do we know this mind is still ours? The answer is unknown, because we probably really don’t know and never could.

The human mind is one of the most extravagant phenomena our world will ever know. How could it ever be explainable if each is individually unique and one of a kind? How could we begin to define and pick apart something that is so vast and beyond what technology can aid? The scary part about today’s society is that we have found ways to ‘rewire’ our brains via chemicals, medicines, hormones, therapies, you name it. By altering the chemical makeup of our brains, we are changing our minds at the same time. Mood stabilizers, concentration aids, and even sedatives could play a large part in our cerebral evolution as a species.

Could we train our brains to be perfect? Even scarier is that there are large parts of the brain that are still unexplained; doctors and psychologists don’t know what these parts of the brain are for. Perhaps technology advancements could soon lead the way in revealing these physical phenomena. Or maybe we’ll be forever ignorant! That sounds like bliss.

So we come back to the question: Where is my mind? I would like to think it’s located in my gooey brain. But let’s put it into perspective. If our minds are so powerful enough to create hallucinations and imagine scenarios and scenes very life-like and close to reality without being tangible - imagine all the possibilities! Our minds could be another world that we have yet to truly tap into.

As for my mind... it’s a squishy little world I carry around with me everywhere I go. Deal with it.
PATRICK CRIM
“Is your mind in the gutter?”

The common phrase “Get your mind out of the gutter!” is used daily when people say something inappropriate or somewhat crude. It is interesting to say someone’s mind is not in their head, as it can’t really leave.

Or can it? We must remember it is our brain which is inside our head. The argument is that a person’s brain is separate from his or her mind, just as a body is separate from a soul. Then it also goes to the whole “thinking outside of the box” principle as well. Can our minds be somewhere other than right here, right now, inside my head? Personally, I believe the answer is yes.

Our minds are the greatest creations of all time. With them we form the most entertaining movies, innovative designs, and beautiful images. They also, unfortunately, create terrorist plots, bombs, and racist mentalities.

Our minds travel to wherever we want to take them. When we dream both day and night we are not in the moment. If you say you have never been caught spacing out then you are lying. In those moments you have absolutely no idea what is going on in the present because you are drifting. I have found myself reading a book and get to the end of a paragraph and snap to and realize I have absolutely no idea what I just read because I was thinking about something else. Either I have ridiculous ADD which needs to be addressed or my mind just likes to wander.

The way we use our minds, however, is directly influenced by media and other technology. Medicines such as Adderall were invented to keep our minds focused on what we need to do rather than on things we want to do. The media also give us things to constantly think about. Video games, women, and sports all are distractions which some of us think about throughout the day. The beauty of our minds is that we can think the way we do. It is up to us to decide where our minds are.

My mind drifts a lot. I like that it does this because it never lets me get bored. Having a great imagination allows you to view things in many different ways. Sooner or later, there will be technology which controls what we are allowed to think about and when we can think it. When those days come it will suck.

Our minds can take us anywhere we want on earth, and no restrictions should be placed on where we go. When we control our minds inside our own brains inside our own heads, we are truly in power.
This question has been weighing on me ever since reading the “Brain in a Vat” scenario in philosophy during the second semester of my freshman year. The idea that every perceived moment of my life could be the creation of a variety of electrical impulses shooting through a disembodied brain is disconcerting to say the least.

Once one realizes that there is really no way to know whether or not your thoughts are really your own or the production of someone else, the idea of living life takes on a new meaning. What is there to live for if there’s the possibility that every single moment we experience is completely fabricated by outside sources?

Newitz takes this idea one step further with her discussion of a movie where a disembodied mind takes over that of a living human. What does this mean for the mind? If our minds can be hacked in such a thorough manner, who’s to say that anything we do is of our own creation?

The ability to do mental labor then becomes a commodity. Being able to control one’s mind is a power, and those who have it are successful. But this does not diminish the threat that our minds are hackable. The disembodied head of a bitter deceased wife can call upon the wrath of an unkempt creation to destroy their common creator.

This concept is frightening. If the mind truly can transcend the boundaries of our bodies and influence the actions of others, there is no telling what will happen. The population as a whole consists of too many mean spirited and truly bad components for mind control (or takeover as the case may be) would prove to be devastating. Yet, these fears have not been realized. So far as we know, our minds have not been able to reach out and influence the minds of others, but technology may bring about a vehicle for which it may do so.

Upon reading Tiptree’s short story, the movie Avatar comes to mind. It seems like the technologies in this situation are of a similar type. A body is created, and through somehow plugging one’s consciousness into said body, one can control as if it were their own. And in both situations the driving factor for the whole operation is a simple matter of greed. Tiptree’s Remote serves as a walking advertisement for GTX. Delphi stays plugged into the life of a “God” in a society where covert advertisements are a lifestyle for the rich, famous, and remote controlled.

Create the perfect product model, and find the perfect brain to control it in a way that will create the most profit. Though Delphi is the merely the receptacle for neural output, she serves as the body for the entire population. Once the goddess Delphi is seen doing something, or using a new product, the consumer world follows suit.

P. Burke’s plug in goes past the shell of Delphi, and directly into the lives of the consumer population. In Avatar, the remote is used to aide
in obtaining an invaluable mineral. An entire planet is on schedule to be thrown away for the love of money.

So when I read the question “Where is your mind?” I can’t give a definitive answer. For all I know, my mind may be the result of a computer program running through a brain sitting lonesome in a vat of brain juice. But I know where humanity’s collective mind is headed, and it’s being lead by the outreaching influence of the minds at work in advertising.

Though they may not be directly altering our brains or transferring our minds into the body of another, they influence our though processes, choices, and actions nonetheless. This being the case, it’s scary to think about what might happen when *Avatar* style technology comes out. The worry is present- there are even movies coming out and addressing the situation.

Where is my mind? Heading towards insanity because I’ve been thinking about these concepts far too much.
Where is my mind? The Pixies suggest that if your head were to collapse you would be left asking yourself this very question. However, how can we be sure that your mind is actually located in your head?

Through readings such as James Tiptree’s, “The Girl Who Was Plugged In,” we are provided the possibility that a mind could span across space and locate one person while feeling and thinking for another.

This “girl,” that Tiptree tells us about, has been provided with the opportunity to escape the body that her mind once occupied. By attaching metal and wires to her brain they are able to transmit her thoughts and feelings into a new body. This futuristic idea gets us thinking about the possibilities of the future and the question of where our mind is located; is it in just one spot?

I began to think about this. When I think, it feels like it is coming from my head, but is that because I am told that is where my thoughts fester? Maybe I am thinking with my heart or my stomach, two organs central to human survival. Or maybe my thoughts do not come from any one place, but rather, they are a compilation of all of my organs and body parts working together to develop my thoughts.

If this is the case, I wonder if it would ever be possible to transmit the mind of someone into another vessel. By attaching transmitters and futuristic technologies to a human being it may be possible to send through space or wires that persons thoughts and make them sink with the functions of another being. Then our mind would no longer be in a specific place, rather, it could be everywhere or anywhere we wanted it.
“Where is my mind? Well, it’s right here... I think.”

I know where my brain is.

It is floating around in my head somewhere (which, by the way... ew). I know that generally when we think of the mind we think of the brain as well. But are they the same thing? Nope.

Just as the organ that is the heart and the idea of the soul are distinctly different, so are the brain and the mind. When I think of the brain and the mind, this is how I imagine the difference. I imagine the brain controlling the typing motions of your hands, making you be able to put one foot in front of the other, being responsible for arranging the muscles in your face to make you have a smile.

The mind, in my opinion (I almost said “in my mind”... ironic, huh?), is responsible for the conscious decisions you make to type something, to walk, to smile. I imagine the brain telling your mouth to smile and the mind being what processes the fact that you should smile. Of course, this is just how I think of things and is in no way, shape, or form scientific at all.

The question is “where is my mind?” Well, it is wherever I am. If I am watching a sad movie, then my mind is processing the sadness of the movie and telling me/my brain to react accordingly. In terms of actual geography I have no clue where it is, but for convention’s sake I’m going to say somewhere in the vicinity of my brain.

What Newitz and Tiptree are talking about—mind control and such—seems like such a strange, foreign concept. Technologically we are not far away from being able to do the things they describe. However, will we ever actually go for that? I mean, I’m sure some people will jump onto the mind-control bandwagon for curiosity or whatever’s sake. But humanity as a whole?

At least at first, people will be very resistant. People tend to like being in control. At least I know that I do, and the idea of someone else dictating my actions or thoughts or movements or, well, anything kind of terrifies me.

I do not know if my conceptions of where my mind is are correct. But I do know that, wherever my mind is, I like being in control of it and being the only one who knows what’s going on in it. And I’d like to keep it that way.
My mind is where I want it to be, but others may control it in the near future. The mind can be changed by many things: the environment, others, and social interactions. What if I told you that the environment you live in was constructed for people like us just to buy things? That’s what James Tiptree’s short story “The Girl Who Was Plugged In” suggests. I know this is much for one to wrap their mind around, but let me explain my points.

Media are the most obvious controllers of the mind. Remember all those advertisements that you laugh at? Research shows that those are the ones you remember the best and thus cause you to buy the product. What about shows like the OC, in which drama seems to lurk at every turn? Sure enough, you may start acting like the characters and buying products to seem more like them.

The corporations portrayed in the short story “The Girl Who Was Plugged In” seems completely unrelatable to present day corporations, but it’s not a stretch to imagine the scenario unfolding. All those celebrities you love can cause you to do things like buy products, watch their media, and relate yourself even further with the celebrity puts money in the corporations pocket.

These people are obviously controlling your mind now, so why is it so far-fetched that the corporations right now are controlling you? When you went out last time to buy a gallon of milk you probably bought the same one that you have been buying all your life, but when you looked at the other brands of milk you may have remembered a slogan, or a commercial from that other brand. While you didn’t buy that brand of milk now, later on when you switch brands of milk, you might remember the slogan or advertisement and buy the milk.

Yes, I think honestly that the brain is easily corrupted, but we still have some control over it. Even though we think that all our decisions are ours to make, we may not have as much power over our thoughts that we believe. At the moment, the answer to the question “where is my mind” is “where I want it to be.”

In the future, the answer may be “wherever I am told.”
Many people believe that the mind may not necessarily be in the brain. Many religious people believe that their soul controls much of what they do. Or their God controls their actions, meaning that their mind is not completely their own but run by something else. Others believe in reincarnation so their mind or soul can be transplanted to have a fresh start while trying to become closer to perfection. I believe that the mind and the brain are the same thing.

I think that the brain and the mind is just an organ with signals that stores information and makes decisions about ourselves and controls our body. Bionic arms can be controlled by the brain, but there has to be the correct signal. A brain or mind can control something that is not hooked up to it.

A technology such as that described in “The Girl Who Was Plugged In” is plausible, but the technology in the movie Avatar is not. In Avatar, Jake’s mind is transported into another body. But a mind cannot be transported without the brain.

Tiptree’s story works because their is not much feedback from the body. But, during the sex scene in Avatar, Jake has genital feelings without a machine telling his brain that he should feel it.

I also believe that when the brain dies, the mind dies with it. The brain deteriorates with age. So how can people live that much longer if their brains start to malfunction with memory loss and slower processing?

I also don’t believe that a machine can have a mind. So transferring the knowledge of a brain to a computer doesn’t make the computer equal to the mind. So in conclusion, a mind is a terrible thing to waste, and trying to turn a mind into a machine would mean the loss of the mind and the brain.
I haven't lost my mind. I assure you, I am completely sane.

The question posed was “Where is my mind?” Because of my interest in psychology, I argue that it is in your brain. This seems fairly straightforward but others argue that your “mind” is in your heart or well... other places.

Without getting too philosophical, how do you define mind? I define it as that part of a person that makes them human; it's what allows us to learn everything from mathematics to new social cues, and it is also what processes and regulates emotions and stores memories. There is obviously more to our mind than that, but those are the criterion I intend to focus on.

On the subject of memory storage, the brain is where your memories are stored. No doubt about it. We know that memories are stored in the brain; we just aren't sure how this happens. “How do you know?” you might ask. Have you ever heard of a person receiving a heart transplant and suddenly possessing new memories? Or a new kidney? Or did they lose their arm and subsequently the memory of their wedding? No. No you haven't heard of such things. But have you heard of someone getting Alzheimer’s—a neurological disorder affecting the brain—and forgetting words and events and people’s names? If you said “no” then you, sir/madam, are a liar. Memories are only affected when parts of the brain are affected. This is inherently tied to the learning aspect of the brain as well.

As for emotions? This one is pretty easy. Emotions are regulated by the brain. The brain processes neurotransmitters and interprets different levels of serotonin, melatonin, dopamine, endorphins, and adrenaline as emotions. This has been documented. Happiness, sadness, depression, anger, and all the emotions you feel are interpreted by the brain. The transmitter might be produced elsewhere, as is the case of adrenaline, but nothing happens until they get to the brain. The brain is emotional center of humans.

My mind is in my brain. If you were to switch my brain with another person, I would still be me, just in their body.
Well, not exactly; mescaline seems a bit extreme. Throughout history the advancement of modern medicine has slowly but surely unlocked the keys to our brain, allowing our minds to go places never before imaginable.

The study of pharmacology has allowed us to understand how drugs and supplements affect the different parts of our body, especially the brain. Today there seems to be an endless amount of ways that one can alter their mind or state of consciousness. Even widely used drugs like caffeine allow us to enter into an altered state of mind, no matter how small that shift may be.

Moving up the ladder, we have drugs like Focalin, Adderall, and Ritalin. These psychoactive drugs make us focus and concentrate at the task at hand; really, they are pretty much like cocaine, as they all have similar chemical makeups.

Now lets get to the good stuff.

As Timothy Leary once said, “you’re only as young as the last time you changed your mind.” As we found out in class last week, he was a huge advocate of the psychoactive drug LSD and its ability to allow us to “tune in, turn on and drop out.” Modern medicine has debunked the thought that LSD and other psychedelic drugs take us somewhere and reveal great truths to us. Rather, they simply make neurons in our brain fire in irregular ways. This might be true, but ultimately it is up to the individual experiencing the drug to interpret it however they choose, whether it is an experience of spiritual or religious enlightenment or something lesser.

These experiences can drastically change the individual, but it is more likely that the user will be opened to new ways of thinking about everything. The mind can be pushed in many directions.

I am in no way advocating the use of these drugs. The mind is a fragile thing and we only get one. These technologies are best in moderation. It takes time and research to prepare the mind for such possible shifts in consciousness and these tools are not for everyone.

The mind is truly the most amazing thing about our biology.

We have only scratched the surface of the places where it can take us.
projects
ANDREW COE

“Singularity survival”

My project is a blog on how to survive after the Singularity, hence the name “Singularity Survival.”

In my blog I talk about the different types of technology and their future implications and uses. The blog started off as me just highlighting various technologies and then turned into what it is now, as I realized that was not going to be enough. Many of the ideas from my blog have come from pop-culture as well as concepts and themes discussed in the class. The blog is designed to educate and provoke thought in the reader but at the same time be entertaining to read. The posts are shorter than news stories, but I feel that helps in today’s Internet world, where readers are moving from one site to the other and often have five or six separate sites open at once.

I start the blog by giving instances of current technology and then taking the underlying concept behind them and re-imagining that device in the future. The ideas are not so far off and are absolutely, in my mind, realistically possible. For instance, the idea that your house could be individually powered by these “Bloom Boxes” or that everyone could be using the “glove-mouse” in their homes one day, are both definite possibilities.

I then move into the next part of the blog: things that I would like to see in the future. In this section I talk mainly about sports and flying cars. The flying cars post is more of a rant than it is an informative post. The sports post is designed to have the reader think about what he/she would like to see in the future, although I do give an example of something I would kind of like to see.

In the final section of posts, at the time of this summary, I give cautions about the future. In particular I talk about the idea of robots taking over the world. While I may not specifically address the issue of artificial intelligence (AI), the point is there nonetheless. This section is meant to provoke thoughts in the reader such as: are robots replacing humans really a good thing? What are the implications of programming them to do things such as cut and slice and how could it potentially affect humans in the future if AI comes into existence.

Charging Mats will Be Everywhere
Posted in Energy, Technology on March 25, 2010 by andrewtcoe

Today’s post is on those charging mat things that have come out in the past year. You know what I’m talking about.

You’ve seen the ads for them everywhere and any time you walk into BestBuy they’re right there at the front. You know the basic concept of how they work too. You put this extra shell on your device of choice and it has this extra pad on the back which receives wireless energy from the mat and transmits it to your device to power/charge it. Well imagine this technology taken to the next level. You come in from a long day at work you sit down at your desk at home and your Internet surfing device is dead. Currently you would have to go get the charger, find an outlet, plug in the charger then plug in your device. With the Powermat technology in
combination with the Bloom Box from the last post you merely walk over to your desk, which is made of the Powermat technology, and set your device on the desk…instant power! And there are no cords attached to the desk because your house is powered wirelessly by the Bloom Box. Why won’t my DVDs from the US play in Europe? Because companies make things unnecessarily complicated and I do not see that changing in the future. So that is my post on the Powermat! Don’t be caught without your Powerdesk in the future!

Sports in the Future
Posted in Uncategorized on April 13, 2010 by andrewtcoe

Alright so this is something that is near and dear to my heart: Sports. How will sports work in the future? How will athletes be? What new drugs will they use to enhance performance? Will they be illegal? I don’t know. Will there be new sports? I think so. I think there will always be new sports coming into the market. I don’t think they will be original though, I could see some sort of futuristic football or soccer or any combination of other sports. I would love to hear what ideas other people have.

Medical Science post-Singularity
Posted in Uncategorized on April 20, 2010 by andrewtcoe

Medical science has come a long way in the past 100 years: Anesthesia, Penicillin, Aspirin, etc… and—after the Singularity—it will continue to advance as it has. In fact there are already some incredible devices available today.

Imagine being able to do get all your medical data to any doctor that sees you. No more messing with files and getting them faxed over. You can keep digital copies for yourself and on you at all times. Instead of working in hospitals with huge equipment, everything is getting smaller and doctors can now take their gear with them, which means remote areas of the world are now able to get medical care. With these technologies we can help curtail the infant mortality rate in countries like Burkina Faso and Ghana and Angola. The opportunities are endless!

Also a future with less disease is a distinct possibility. Can you imagine if there was an AIDS vaccine or even an anti-viral? Or if someone developed a way to detect cancerous genome sequences and alter them? Or being able to have fully functioning prosthetic limbs like that from the previous post? I am very excited about the future of medical science and it is one of those areas you should definitely keep your eye on!

A Public Service Announcement – Brought to you by SkyNet
Posted in Robots on May 11, 2010 by andrewtcoe

Ladies and gentlemen, I am here to talk to you today about a very serious issue: robots with weapons. You may not know it but robots are a very serious threat to humanity. Recently, the Chinese government has built...
robots to help with jobs in hazardous environments where it is difficult for humans to go. The problem with this is one of those “scientists” gave one of the robots a sword!

This is not a rumor based on a photoshopped image. This is real. It is a very real threat that the population of the world needs to be aware of. While they might look cute, they will inevitably turn into Terminator assassins.

For now, just be wary. Hopefully someone will come up with a way to combat these things when they eventually decide to take over the world.

This has been a public service announcement.

UPDATE on Robots – They like to stab things

Posted in Robots on May 11, 2010 by andrewtcoe

Apparently German scientists wanted to see what would happen if they gave a robot a knife. Well, they stab things. Not even joking. They gave a robot a knife and stuck a whole bunch of stuff that is similar to human tissue around it just to see what the hell would happen.

What the hell did you think was gonna happen? It was gonna magically grow a conscience and be like "I can’t cut this, this is similar to human tissue.”? NO! If it was thinking anything, it was thinking “KILL KILL KILL". I tried to warn people but noooo, now we’re giving them weapons and letting them know that they are, indeed physically superior to us.
ANDREW TRUELOVE

“Hacking humanity”

For my project, I decided to make a movie. I mean, I would like to go into film production as a career path, so I figured now was as perfect an opportunity as any to see what I could do here. Now as far as format and subject matter went, I decided a documentary approach may be the best way to go, seeing as I wouldn’t have to worry about a script, actors, narrative and any other things that could bog down the message. In the end, I decided to interview students I know from around Trinity, asking them some basic questions about the transhumanist movement to see what their gut reactions were. I wanted people outside our class, to see how someone who hasn’t really been exposed to these kinds of ideas would respond to them. So I ended up with eight legitimate interviewees: Ryan Darley, Indy Jones, Erika Friedmeyer, Derek Leader, Alexa Harrison, Laura Izzo, JJ Lubinski, and Hilary Elaine Moore and asked them a few questions regarding transhumanism.

In addition to these eight people, I also enlisted my roommate Nick Theccanat and classmate Chris Kradle to provide some comic-relief to keep things from becoming too monotonous.

By the time the interviews were done, I got a decent range of opinions. Admittedly, most of the people I interviewed were wary of neuroceuticals with Ryan asserting, “I don’t agree with drugs that are going to change how you feel.” And while Erika conceded that it could “help control mood swings and what are considered undesirable emotions” she feared that “when we take away people’s emotions it kind of takes away their humanity.”

As far as life extension goes, most students were fine with using technology to extend our life spans but drew the line at striving for immortality. JJ explained that “the idea of becoming immortal is essentially becoming a god,” and Laura pointed out that unless immortality is attained for everybody, then eventually we’ll realize that while we’re still alive, “everyone [we] know has died.”

Using transhumanism for “fun” purposes got more mixed responses. Indy was quick to comment that walking around with four arms “would be awesome,” and Alexa figured that “if someone wants a third hand … and is rich” they could get it and join the circus, but otherwise, she didn’t “see it as very practical.” Hilary seemed to be thinking along the same lines and finished by commenting, “It seems pretty dumb to me.”

As for concerns with the whole movement, Chris, in his fake interview expressed concerns regarding artificially cultivated meat and my other fake interviewee Nick expressed fear of a terminator situation. The others were more concerned with more realistic issues. Both Erika and Ryan pointed to how with all new technology, there plenty of potential for things to “go wrong.” They all also speculated about who would be in charge of developing and distributing any of this technology, with many students pointing to the private sector, though Derek explained that there will
inevitably be some sort of government regulation and JJ expressed concern over intellectual property rights.

When asked if this technology will be attainable in our lifetimes, responses were again somewhat mixed. While Derek was quick to point out groundbreaking progress we’ve made already, citing how bionic eyes are already on the way, and Ryan said he “wouldn’t be surprised to see it in ten to twenty years,” others like Indy and Laura were not as convinced that we would be this advanced any time soon. Similarly Alexa did not see this coming about in the near future either, but not because of our scientific ability, but rather because of the “ethics issues” surrounding these advancements. In the end, what they all were able to agree on was that this was “a crazy topic.”

After recording the interviews, I sat down with Windows Movie Maker and intertwined short portions of each of these interviews together into one cohesive thread of responses and answers to my questions. I also made use of DragonForce’s Through the Fire and Flames and Mussorgsky’s Promenade movement from his Pictures at an Exhibition for the segments between each thread of responses. In the end, I was pretty happy with how this movie turned out. I got about thirteen minutes out of nearly two hours of interviews, and I think I did pretty well getting the key moments from each interview into the final cut.
When Jason Graves awoke he found himself curled up next to the very edge of his bed and instinctively flinched in fear that he was about to fall to the floor below. As he shifted back toward the center of the bed, Jason sat up with a wince and glanced at the venetian blinds that covered his apartment window. A muted stream of daylight filtering through the cracks suggested that he had been torn from sleep in the still early hours of the morning. His internal processor sensed his desire and pulled a clock into view on his HUD. It read 6:08. The heated covers slid off as he turned to let his legs hang over the side of the mattress. Sitting there for a moment, Jason sighed and clutched his head.

Dreamt on my own again, he thought while trying to recall the stream of broken images still drifting at the back of his head. I remember floating in a sea of clear, oily liquid and I had been alone there for a long time. There was heat; an unbearable heat all around... the sky above me cast a dim light as if the sun had just passed through a thick red membrane. But then the light went out and the heat was gone. I could feel the sea around me grow cold, crystallizing until my entire body was enveloped in the ice.

Piece of shit dreamware, it was supposed to be about flying... I guess that's the last time I download a freebie. Jason looked up from his hands and toward the door of his apartment. I might as well get up now.

After Jason stood up and began walking towards the bathroom his eyes automatically switched to IR illumination mode, bathing the faintly light room in a phosphorescent white. The door slid neatly into the side of its frame as he approached and the lights blinked on softly so as not to hurt his now light sensitive eyes. With a sharp hiss the shower turned on to the appropriate temperature and the glass door slid open graciously. Jason allowed his eyes to return to their normal setting, taking in the shadows splayed upon the white tiled walls for a brief moment before the light gradually brightened to its full intensity. The recessed television within the bathroom mirror flicked on from behind but Jason took no notice of it as he disrobed and stepped into the shower. He remained fixated on the wall in front of him, trying to ignore the advertisement for a new body model playing in the background.

Commercials, I can already hear that empty voiceover playing out its mock love song desperate for my attention:

Are you unsatisfied?
Do you have a body?
Flesh that reeks?
Bones that creak?
Hollow cheeks?
Veins that leak?

Order now and be fulfilled.

With a thought Jason changed the channel to the local news station. The newscasters were in the middle of a story concerning recent developments in spaceflight that would greatly lower the costs of immigration to the growing number of colonies in orbit. They talked back and forth about how the colonies had once been the exclusive locale for the rich or politically powerful but would now permit even the common man to earn his place among the stars. The program then shifted to a report on the growing descent among many of the religious sects in regard to human immortality and genetic engineering. Some of the more fundamental groups had begun advocating terrorism and mass suicide as an act of righteous rebellion against humanity’s permanent separation from God.

Jason turned the television off as the air around him began to thicken with steam and he felt its heavy heat spread to the very bottom of his artificial lungs. He made a motion toward the shower door but before his fingers could even make contact with the glass, the water slowed to a trickle and the door slid open before him. He stepped out onto the slick tiled floor, took a towel from the silver plated rack and ran his hand across the layer of condensation that had accumulated upon the mirror. The excess water ran down to the bottom rim, leaving a polished network of veins in its wake.

He stood there and gazed at the figure that appeared before him. It seemed impossible that Jason was in his late fifties yet had the perfect build of a man no more than thirty years old. Lean and muscular with a head full of wavy black hair—he looked as though he was still in the prime of his life. However, the most striking aspects of his body were the two completely black eyes set deep within his brow. They were unsettling to say the least since without any pupils or irises it was impossible to tell precisely where he was looking at any given moment. But while Jason knew they were not as appealing to look at as some of the more designer friendly sets made to resemble real human eyes, they were far more durable and easier to modify when the circumstances demanded it. After another quick onceover Jason toweled off and crossed back into his living room.

He dressed quickly, throwing on a few articles of clothing that he found laying at the front of his closet and a pair of heavy boots that had been kicked off in exhaustion the night before. Jason’s revolver was still in its shoulder holster and draped over the banister of his bed. He drew it out, loaded it with a few spare shells he kept on his nightstand and slid it back into place as he pulled his arms through the nylon straps. The sun’s early morning glow had begun to weave its way throughout the room, blurring the boundaries of the retreating shadows. Jason looked over toward the window blinds.

Up. With a jump the blinds collected to the top of the window and Jason peered out into the dense urban landscape of Chicago. The entire
city was still steeped in the dark amber glow of the morning sun while at
the center a distant streak of light glinted off the windows of the tallest
buildings like a sputtering flame.

*Better grab something to eat before I’m called in.*

His HUD indicated that it would be cold outside that day so he grabbed
an old coat on his way out.

Jason emerged from his apartment complex and shivered when a bitter
wind spilled out through the open streets. Sticking his hands deep into
his jacket pockets, he began to walk down the narrow sidewalk and
straight into the heart of the city though it wasn’t long before the relative
peace of the residential areas was devoured in the shimmering deluge of
sounds and shapes that had began to wink on around Jason. They flitted
about in garish colors and called out his name in demand that he pay full
attention to their witty little slogans and promises of lower prices. Jason
tried to ignore their collective shrieks, knowing that they weren’t really
there but merely bits of holographic data projected into his augmented
mind. Yet, there were so many of these floating billboards that at times
it looked as if the buildings around him were consumed in an immense
neon inferno.

By the fourth block it had already started to get crowded as a wave of
pedestrians swept out against Jason and enveloped him into their fold. It
was that same dull and frantic movement that Jason had always known;
people clambering past each other, so eager to find themselves among
the tasks at hand. However, there was no end to the variety of forms on
display. There were, of course, the standard human chasses which were
worn by the vast majority of people and almost indiscernible from their
organic counterparts. Nevertheless, it was impossible to tell if what was
being worn resembled the actual person on the inside. As Jason worked
his way through the mass of people a five year old girl wormed past him
and disappeared between the legs of those ahead of him.

> There could be a sixty or seventy year old man beneath the little red wool coat.

Still, every so often the more conspicuous anomalies could be spotted
within the flourish of pedestrians. A dark pink girl with smiley faces for
eyes walked out in front of Jason from a shoe store. On the other side of
the road a couple of furries laughed together outside of a coffee shop, their
tales flicking about absent mindedly. Further down a man with four eyes
and two curved horns on his head stood waiting for the light to change at
a crosswalk.

After a few more blocks Jason stopped in front of a small building at the
corner of the street. Its front entrance was flanked by a few empty tables
and chairs that remained largely unused during the winter time. An old
awning hung overhead, snapping back and forth in the breeze with the
words “The Unreal Café” printed neatly on it. The door slid open and a
balmy breath wafted out against Jason through the raw morning air. He
could smell the sweet scent of baked bread and coffee mingling together
from within the back kitchen.

Jason seated himself in a small round table in the corner of the room and opened the virtual menu that had popped up at the bottom of his HUD the moment he entered. After mentally flipping through it at least twice he closed the document and ordered a large cup of coffee, two eggs and a piece of toast. The cost was automatically deducted from his checking account.

While Jason waited for his order to go through he looked across at the other occupied tables. One of the people nearest to him was a well dressed man sitting bolt upright with a slightly dazed expression on his face. As Jason continued to stare, a bright red ring of text appeared around the man’s head with the word “Online” repeated over and over again until it circled back around to the beginning. A box of text opened up directly below it, displaying the man’s personal profile; birth date, phone number, hobbies and all of the other labels that people brand themselves with. At another table a couple sat together, chatting pleasantly over their meals. Jason’s mind recognized their mouth patterns and automatically translated it into a stream of text that appeared at the bottom of his HUD. They were on vacation and talking about all of the different places they should visit that day.

Eventually, a young looking girl in a uniform emerged from the back of the room with a white ceramic plate in her hands and set it gently in front of Jason, careful not to spill the brimming cup of coffee out onto the clean tablecloth. She flashed a sycophantic smile at him while setting down his silverware.

“Enjoy your meal, sir.”

Jason nodded slightly in her direction, “Thank you.”

Once she had retreated back to the kitchen Jason put the cup to his lips and drank deeply. The coffee was still too hot but the prickling feeling at the back of his tongue was the perfect pick-me-up in the morning. After setting the cup back down, Jason picked up a knife and fork and began to cut into his eggs. They weren’t ‘real’ eggs though—they were artificial. Most food was heavily modified on a genetic level in order to provide the specific set of nutrients and vitamins necessary for prosthetic bodies to survive. These foods tasted real and looked exactly like their natural counterparts but they were nevertheless different on the most fundamental level.

I wonder if it even has a taste at all. Jason thought while examining a piece of egg impaled on the end of his fork. Or is my brain just simulating the flavor of real eggs while I’m eating some kind of bland, spongy substitute?

As he took a bite into his egg, Jason noticed that the phone icon on his HUD had appeared and began to flash. The number below it showed that the call was coming from David Ledford, the chief of police. Answer.
-Hello Dave, what's going on?

-Graves, I need you to get over to North Michigan Avenue right now. We have a big situation on our hands.

-Well, I did just start eating breakfast...could you give me a few more details on how serious it is before I have to drag myself all the way down there?

-I don't have time for any of your crap today Graves, just get down here immediately!

-Fine, I'm on my way.

Jason took a couple more bites from his plate then finished off with a swig of coffee to wash the taste of grease down his throat. Wiping his mouth on a napkin, he stood up from his seat and walked back out into the cold.

Back on the sidewalk, Jason glanced to his left and then to his right. The streets were becoming more congested with traffic and pedestrians with each hour.

I could try to go back home and get my car from the parking garage. No, that would probably take even more time. The place isn't that far from here anyway. I could just run there.

At first Jason set off at a slight jog, carefully working through the horde of people that covered the sidewalks. Yet with each step the pace of his augmented legs quickened and his stride grew impossibly long and powerful. When Jason finally broke out onto the road the world around him had melted away into a torrent of indistinct shapes and pigments that flowed so swiftly that only his enhanced mind could unravel their meaning and guide him in the right direction. The only sound was the edge of the wind constantly shrieking in protest past his ears.

While moving at speeds in excess of 40 mph, Jason reached his destination in a few minutes.

Looks like Dave wasn't lying.

The entire street was blocked off by police officers and SWAT team members, the majority of which were huddled around a group of parked police cars in front of the crime scene. It was an expensive lunch and breakfast restaurant called “Marie’s” and like most of the modern buildings the outside was streamlined, with less bulk customary of the previous decades. It had a glazed façade made of dark plated glass and was supported by a light-steel frame. A large holographic sign still floated above main doorway. Jason approached the barrier of bright yellow tape and transmitted his digital badge at the officers on guard. One of the guards studied him for a moment and then waved him through.

“Okay, come on in. Chief Ledford wants to speak with you.”
Jason leaned under the tape and walked over to the pack of squad cars. Ledford was there, leaning on the hood of one of the cars with a lit cigarette in hand and a large mound of burnt out butts in a coffee cup next to him. A considerable number of officers stood alongside him, each with their guns trained on the doorway as if they expected something to leap out at them from within.

“What’s the trouble Dave?”

Ledford glanced back at Jason and stood up.

“You sure got here quick Graves.” He took a drag on his smoldering cigarette and blew out an even ribbon of smoke, “I didn't even expect you to show up at all.”

“Well you know me Dave, always willing to serve and protect. Now tell me what’s going on before I come to my senses and go back home.”

Ledford turned back toward the restaurant and beckoned for Jason to come closer to the car. Jason came forward, inching his way past the throng of anxious looking officers and took a spot next to Ledford.

“We got a call at around 6 o’clock from a bystander in hysterics. She said that she had been out on a walk with her husband this morning but when they passed by Marie’s she noticed that nobody was moving on the inside and some people were lying on the floor. Her husband had rushed inside to try and help some of them but he also collapsed the moment he stepped through the doorway. We got here, secured the perimeter and ran a sweep over the entire area. It turns out that it's some kind of fast acting viral field being emitted from within the restaurant. I’ve never seen anything like it before so I called you, seeing as you're the expert when it comes to cases like these.”

Ledford snubbed out his cigarette on the hood of the car.

“Do we have any leads on suspects? From the sound of it whoever we're dealing with here has access to some pretty high end equipment.”

“That's the thing,” he said while taking out another cigarette from his pack. “Our scans indicated that there’s still one living person inside and that he’s the source of the virus, but he hasn't made any demands or anything else yet. He's just sitting in there.”

Jason’s eyes narrowed.

“Who is it?”

Ledford lit up and gave a few thoughtful puffs before answering.

“His name is Robert Koch, a high class chef who works further uptown. We did a complete background check and he doesn’t seem to have ties with any known terrorist groups. Here I'll send you his profile.”
A picture appeared in Jason's HUD. He was a slightly older looking man, with tightly curled blond hair and rather thick facial features. Below it was the man's personal information and a list of the more notable augmentations that his body was equipped with. As a cook his prosthetics weren't quite as sophisticated or powerful as Jason's but his hands were modified with the latest in cutlery and other cooking utensils required for his job.

“I assume that you’ve tried shutting down his body remotely?”

“Yeah we tried that, but no effect. He must have some type of heavy duty encryption code on his cyber brain or a blocking device on him.”

Jason kept going over the record in his mind. There wasn’t a trace of advanced computer or cyber hacking in the man's past but the kind of skills that would have been necessary to pull off something like this were far beyond even the most advanced levels.

_Something’s not right. How could a simple cook be able to hack this well without any sign of previous experience?_

“I’m going in.”

Ledford stopped short of taking another draw on his cigarette and turned to Jason.

“Are you insane? I just told you that anyone who goes through those doors is dead. I called you up so you could tell me what we’re dealing with here, not to storm the fucking place.”

“Listen Dave, it's possible that something much bigger than a simple killing spree went down here. I don’t know what it is yet, but the only way we're going to get any real answers is if someone goes in there and takes this guy down without killing him. Since I’m the only person here with the encryption knowledge to counteract the virus, it looks like it'll have to be me.”

Ledford scowled and turned back towards the building. He stood there for several minutes, taking nervous draws from his cigarette and glancing back at Jason every once in a while. Jason remained rooted to his spot next to the car, staring unflinchingly at Ledford. Finally, Ledford hurled his cigarette to the ground and stomped on it in frustration.

“Fuck!” He turned back towards Jason, “Fine, go kill yourself for all I care. Just know that if you get into any trouble I won't risk any of my men to bail you out once your inside.”

“Thanks Dave. I knew you’d see it my way”

Jason waved a small salute behind him as he walked towards the main entrance.
The gun slid out readily from its holster—a double action revolver, chambered for .357 Magnum cartridges with a four inch long barrel and nickel finish. It was a good gun; accurate, never misfired. Jason cocked the hammer and pulled the gun closer to him as he pressed himself up against the door. He had been waiting there for a while, but the extra time was necessary to implement the proper encryptions that would keep the virus from affecting him. He had to be careful; there was something different this time.

A line of text appeared on Jason’s HUD. Encryption process complete: advanced viral protection systems operational.

Looks like it’s time to go. Open.

When the door slid open, Jason rounded it with his revolver drawn while his mind scanned the entire area for possible threats. But there was nothing moving in that room, nothing alive at all. The bodies were slouched in their seats with plates of cold, unfinished meals still set out in front of them. Even the crystal glasses of water next to their plates hadn’t been disturbed when they died. There nothing of immediate danger in the room so Jason stepped into the restaurant and the door closed shut behind him. One of the corpses was laying face forward on the ground near the entrance.

Must have been that woman's husband.

Jason leaned down, grasped the man by his shoulders and turned him around. Jason’s eyes widened. The man looked as if he had been left to starve weeks ago; his skin was leathery, stretched tightly against his jagged skeletal frame. Both his chest cavity and his cheeks were completely sunken. When Jason dropped him against the marble floor his withered body made a hollow, rattling sound.

As Jason proceeded to the center of the dining area he made a check of each body.

Bones. Just bones and ragged pieces of skin. The virus must have amplified their artificial metabolisms until they all starved in a matter of seconds.

All of these victims are customers though. Where are the staff members?

Jason could hear something now. A dull knocking sound, coming from the back kitchen. It was barely there but Jason’s augmented ears picked it up.

Thok thok thok thok thok

Jason moved softly down past the tables and took cover near the bar. On the other side there was a pair of double doors leading into the kitchen, one of which stood slightly ajar. The knocking sound was getting louder.

Thok thok thok thok thok
With his gun drawn at arm’s length, Jason looked though the doors. All he could see were the vague motions of someone’s arm moving up and down over a table in the far corner of the stainless steel room.

*Zoom in.*

Jason’s vision blurred for a moment and then magnified, bringing the man into full view.

*There you are.*

Robert Koch stood there in a dark blue double breasted jacket and apron with a butcher knife in his hand, continually chopping away at something on the table in front of him. Jason couldn’t quite make out what it was though; the entire table was cluttered with several piles of bowls and plates.

*Why would he be trying to cook anything?* Jason edged closer to the door, making sure he was still clear from view. *I guess I’ll figure it out soon enough.*

With a solid kick the double doors flew open and slammed with an echo against the side of the walls. Jason rushed into the room with his gun aimed squarely at Robert’s head.

“Don’t move! Police!”

Robert stopped mid cut and looked calmly over at Jason.

“So they finally sent someone.” He wiped his knife off on his apron, “Good, this would have started to get boring if I had to do it alone.”

“Drop the knife. Drop it right now.”

“Oh I will, but first don’t you want to see what I’ve been making here?”

“I told you to drop the knife.” Jason took a step forward and saw what was lying on the table, “No…”

Mutilated body parts. Ground bits of lung and liver. Soup bowels filled with a couple of hearts and stomachs, basting in their own visceral fluids. Winding strips of intestines were heaped in mounds upon a trail of plates. The remains of a partially diced spine on a chopping board. There was a man’s head sitting on a silver platter. His mouth lolled open.

As Jason reeled back Robert raised his knife high and flung it as hard as he could at Jason’s heart. With his mind awash in shock Jason’s body reacted automatically, dodging the blade as best it could and squeezing off a few rounds into the kitchen in one fluid motion. The shots went wide though and Robert had already disappeared from the room.

After Jason had recovered he noticed a sharp twinge of pain spreading
through his left shoulder. While his body had narrowly avoided any fatal lacerations, the knife still managed to wound him somewhat. It was a deep gash too; the fat beads of artificial blood had already begun to coil down the curvature of his arm, pooling at the edge of his knuckles.

*No time to wait for the nanites to heal it, I need to take this bastard out now.*

When Jason began walking toward the door that Robert had ran through, he glimpsed at the macabre feast once more. He noticed that there was something carved into the decapitated head in the middle of the table. It was beginning to scab over but Jason could read it well enough.

*Sic transit gloria mundi*

A text box opened in Jason's HUD and translated it into English: “Thus passes the glory of the world”.

There was no one out in the main dining area of the restaurant.

*He couldn't have gone outside so he must have gone to the upper level.*

Once Jason had looked around for a bit he found a small flight of stairs off in the back corner of the building. He made his way up little by little, carefully trying not to let his boots resound on the wooden steps. At the top of the stairwell Jason leaned out tentatively and examined the area. It was an extension of the lower dining room, filled with the same tables, chairs and a couple of starved bodies as well. However, instead of a single large room the layout was a long corridor with a high arched ceiling. All of the lights had been turned out and the shades were drawn over the windows, making it harder to see.

Jason's eyes switched over to IR illumination mode and once again the world lit up in a ghostly pallor. As far as Jason could tell there was no one in the corridor, but there were four wooden doors along the side of the wall that led into the restaurant's private dining rooms. Jason positioned himself in front of the door nearest to him and held his gun out ready. *Open.* The door sprang open and Jason looked in; nothing but another table inside.

*"Having fun yet?"

Jason jumped at the sound of Robert's voice and spun around expecting to see him about to impale him from behind. But there was no one there either. Jason realized that the phone icon had been activated on his HUD.

*How could he have hacked directly into my phone line in such a short time?*

Slowly, Jason moved back out into the hall.

*"Who are you working for Koch? Some type of religious terrorist group? I know that the inscription on that poor man's head comes from one of the old..."*
papal coronation ceremonies. Is that your little group’s motto?

While Jason was talking he moved in front of the next door and opened it. There was nothing inside either.

-I don’t think I would be willing to divulge that information without at least knowing the name of the person asking. Would you care to share it with me?

Jason didn’t like this at all. Koch had penetrated his mental defenses far too easily—he felt exposed.

-My name is Jason Graves, now answer me.

-Well Jason, since you answered so quickly I’ll tell you that I’m not affiliated with any religious sect and that my reasons for doing this are completely my own.

Jason moved to the next door and opened it. Nothing again.

-What reason would that be?

There was a long pause.

-Tell me Jason, have you ever considered the implications of consumption?

Jason was barely listening. They always had some kind of weighty message to deliver; some sort of insight that made them think they were the next messiah. Jason just needed to keep him distracted long enough to find him.

That in order survive by eating one must also be willing to destroy and even…

He slammed the final door open.

Nothing? Then he must still be… Jason turned around to see Robert dropping down from the ceiling right above him. A blade jutted out from a seam in the edge of each hand.

“…kill?!”

Jason fell back into the room, barely avoiding Robert’s overhead cut. He heard the blade sing as it sailed just inches past his face and rasp against the floor when it hit. Robert had landed in a crouch though and was already running toward Jason for another strike. But just before he got into range, Jason drew his pistol up and fired a round directly through Robert’s outstretched hand. It crumpled back, bursting in a rush of sound and smoke.

Robert staggered back for a moment and collapsed onto one of the chairs behind him, sending a few plates crashing to the ground below. All that remained of his hand were two fingers and some scorched mechanical pieces embedded in his wrist. The table cloth was spattered in artificial
blood. Robert examined it for a little bit and suddenly smiled at Jason.

“Looks like I could use a trip to the doctor.”

Jason got up slowly with his gun still pointed at Robert.

“It’s over Koch, take down the virus and we might be able to get some paramedics in here to save you.”

Robert was still smiling.

“No, that won’t be necessary. I’m through playing with this toy anyway.”

Jason glared at Robert and drew closer to him.

“What do you mean by ‘this toy’ Koch?”

Robert sat up in his chair and looked straight into Jason’s eyes.

“Koch?”

“Don’t call me that. Call me Mr. Mundi.”

With that Robert brought the blade on the side of his good hand up to his neck and slowly drew it across from ear to ear. With a strangled gurgle his body pitched forward and tumbled to the ground.

Jason took a seat in one of the chairs across from Robert’s broken corpse and watched as the rim of blood gently crept to the bottom of his boots.

“Dammit.”
If you lived forever, what would you do with it? Would you travel to every country in the world? Would you work to find the cure for cancer? Or would you sit around waiting to do something, simply because you know you have forever to get around to it? Maybe living forever isn’t quite so different from living only a short while. According to Aidan Warren Erickson, one of the world’s first ‘immortals’, it isn’t how long you live, its simply how you live and what you live for.

This story includes some of the concepts we discussed in the Lennox seminar—including space migration, life extension, genetic enhancement—and the potential social issues that will arise from it. My goal was to make the reader think.

T.S. Eliot once famously wrote, “This is the way the world ends, not with a bang, but a whimper.” Those words never truly resonated with me until this very moment, because I always thought that the end of the world was impossible. Today being alive forever is a given. I never thought the end would be like this. It’s not nearly as dramatic as I expected it might be, but perhaps that is because I stopped living ages ago.

Dannie and I were best friends. We had been ever since we were born. Our parents were the co-founders of a technological company that changed the world. In 2337: The two of us were the recipients of a new drug that allowed us to live forever. Among other extensive modifications, the drug essentially allowed our DNA to function like a cancer cell. See, on natural humans, DNA has an expiration date. It begins to erase the important bits after it runs out of the useless code called telomeres. This helps to trigger the aging process and begins the “shut down” process of normal humans. The drug keeps the DNA from “deleting” any of the code when it replicates, allowing us to stay young forever. I never appeared to age past 25.

Dannie and I were forever young and forever in love. I had a great family, good friends, and everything I could ever possible want or need. For awhile, everything was perfect, until the day I lost her but I’m getting ahead of myself. My name is Aidan Warren Erickson, and this is the story of my life.

It took Dannie and me about seventy years to realize that we would never run out of time. We grew up as normal children running around in the sprinklers with our goofy looking swimsuits and fingers sticky from popsicles. We went to elementary school and high school with other kids who were just like us—kids who were given the-money to receive the gene therapy. The rich kids: It wasn’t until we went to college that we
met people who weren't as fortunate. For the most part, they seemed just like us, only we were a little stronger, a little smarter, and a little bit more perfect. Dannie and I made friends with many of them despite their inherent disabilities.

A young man by the name of David became a close friend of ours. We graduated college with him, lived in the same town as him, and he was even the best man at our wedding. Dannie and I stood by David's side when he married and had children, which was something we never got around to. We saw him care for his family and watched as he grew old and fragile. Dannie and I stood hand in hand with his children, by that time old enough that they looked like they could've been our grandparents, as David's coffin was lowered into the ground, 150 years to the day that we had met him during college.

It was then that we realized that we had all the time there is to accomplish the things we wanted to, while some people had so little. It was time for us to figure out what to do with it.

One night about 200 years later, I was sitting at the counter doing some exercises for the Mayan language class I was taking. Dannie came storming into the kitchen, slamming the door behind her.

“Bad day?” I asked nonchalantly.

“Not particularly,” she replied airily.

“The door to the kitchen seems to say otherwise,” I remarked pointedly.

“Well, it's not like anything particularly bad happened, it's just that nothing really good happened either.”

“I don't understand why that warrants abusing the door frame that way.”

“I'm just sick and tired of doing the same exact thing every single day,” she lamented. “I'm tired of going to court and sitting across the aisle from a hateful, evil person and fighting as hard as I can to see that he can't ever hurt another person ever again, only to turn around and, in a few years, be sitting in the same court room across the aisle from the same scumbag that I just put away!”

I got up from the counter and went around it to hug her.

“You are doing good in this world Dannie,” I told her. “Lots of the people you've prosecuted have been put away forever. Hell, some of them you've destined to a life of work on Ganymede! They're not coming back.”

“I know,” she sighed. “But it just seems like no matter how hard I try, there is always going to be another girl who winds up scarred because some monster raped her.”
“Give it time love, you’ve only been at it for 170 years,” I reminded her. “You have forever.”

It doesn’t take long for the motivation you have in your younger life to fizzle down-dramatically. After 500 years, Dannie and I began to wonder what we were doing with our lives, and whether or not it was even worth it. Dannie continued with her work as a prosecution attorney and became well known all over the world for her success in the court room. There wasn’t a lawyer alive who could sit across the aisle from Dannie and still feel like he’d win. Her reputation preceded her, and as the years flew by, that turned out to be a boon as Dannie lost her drive. She needed that extra intimidation factor to make sure that none of the defense attorneys ever really brought their “A” game. She never admitted it but I could see her losing her drive every day.

It wasn’t boredom that got to her—despite all of the advances society had made, crimes continued to get more and more creative—it was that same feeling she had so many years ago: No matter how hard she worked, there were still going to be people out there who she couldn’t get rid of. One more victim without justice, one more crime unpunished. Dannie was never satisfied with being the best – she never measured herself by the performance of others. No, Dannie wouldn’t settle for anything less than perfect.

As for me, I became something of a Jack-of-all-trades. I learned 25 different languages, became a medical doctor and practiced medicine for awhile, then went back to school to pursue doctorates in history, anthropology, artificial intelligence and music. History was my real passion, because, surprisingly, it was this field that challenged my thinking the most.

It’s funny how the more things change, the more they stay the same. Society really hasn’t done much to further society as a whole in the past few thousand years. We still have crimes, war, social class struggles, betrayal and scandal. We have done a lot to help with personal issues though. Life extension, neuroceuticals, eradication of disease. You would think that, considering much of our society now has to spend eternity together, that we’d at least try to make it a little more bearable to be together. Take some advice from an old man, reader, anything you can do to benefit society as a whole will eventually make life better for you too, so step it up.

The problem I ran into was essentially the opposite of Dannie’s. My problem was complete and utter boredom. I simply ran out of things I wanted to do. I used to sit in one of the ancient museums that showcase books all the way from the time of Gutenberg’s printing press to the cyberspace revolution, when the world was completely plugged in and online. It used to overwhelm me, how many things there were to read in the world, and I made it a mission to read them all. However, I quickly learned that just because you have an endless amount of time to read books on the biology of hookworms doesn’t make you any more inclined to do so.
Have you ever wanted to go to Mars?” I asked Dannie one day. We were sitting on the patio behind our house, enjoying a bright, perfect garden on a pleasant Sunday afternoon.

“Mars?” she replied looking perplexed. “I guess I haven’t really thought much about it. Why do you ask?”

“I just realized that it has been awhile since we took some time for ourselves, to just see what’s out there.”

“But what about work? And your classes? We can’t just pick up and leave can we?”

“Why not?” I challenged. “It’s still going to be there when we get back. It’s always going to be there.”

Dannie grinned at me slowly.

“Okay.”

“Okay?”

“Okay. Let’s go to Mars. I could use a vacation. Go book the tickets while I pack. You know what? While we’re at it, let’s tour all of Earth too. All six continents – Atlantis, California – All of the underwater cities, Antarctica, the jungle, everything.”

“You got it.”

“Let me just take care of a few things first”

“Don’t bother. We’ll take care of them when we get back.”

One of my favorite memories of Dannie is from our trip to the Great Barrier Reef. The reef had just recently recovered from all of the oil spills and pollution that humanity had subjected it to before it switched over to renewable energy. Luckily, it was one of the beautiful, natural areas that we managed to save.

At this point, Dannie and I had settled on not going home. While on our visit to Antarctica, I made sure that we sold off our house, I dropped out of my classes at the University, and Dannie transferred all of her court cases to an associate and submitted her resignation. We’d lost our head and been swept up in adventure. Every day was something different, thanks to the teleportation technologies that were finally implemented at the turn of the fourth millennium.

I remember the Barrier Reef because Dannie was completely happy there. She was the Dannie I fell in love with, completely filled with the wonder that comes from experiencing something new. She wasn't stressed out or depressed because of work, and she was smiling.
It was like entering an entirely new phase of life, which was a refreshing change since it felt as though we had settled, what with Dannie having won her first dozen or so cases and our financial situation being, well, stable, to say the least. Our major accomplishments were achieved, everything else was just icing on the cake.

These days, anytime I think of Dannie, I picture her as she takes my hand and leads me over to a coral reef covered in brilliantly colored fish. Not far off the reef, there are a couple of dolphins playing together. I remember Dannie swimming over to them and interacting with them as if they were old friends. Just Dannie and the dolphins, swimming around each other, the dolphins doing flips and even allowing her to pet them and be towed around. Seeing the dolphins, just as they were, not genetically enhanced or improved, with all of their flaws, was the most perfect thing I had ever seen.

I remember the day I stopped living. It was the day that I consciously made the choice to say goodbye to Dannie forever. An accident, the doctors called it, a terrible accident. It was no accident though. I think in the end it was what we were both looking for. An escape. That's what caused us both to behave more and more erratically, seeking out bigger and bigger thrills. Finally, in an accident involving hoverboards in the Amazon I lost Dannie.

Oh there were a time that we spent in the hospital while a team of doctors tried to patch her up. Physically, they did a great job. Dannie lay in that hospital bed with the same sun-kissed smooth skin I was used to seeing every day. Her soft, wavy blonde hair spilled over her shoulders. All signs of the crash—the bruises, gashes, broken bones—all healed and good as new. She lay there sleeping just as peacefully as she had back in our home during a long weekend.

She never did wake up. No, science had yet to perfect the anatomy of the brain, a study I’m inclined to believe they never will. There is something inexplicably beyond our capacity for logic that resides in the brain, something we cannot know through simple experimentation and study. Call it the soul if you will, or the mind or whatever it comforts you to call it—but that is what Dannie lost in the accident. After that, she merely became a vessel. Dannie's soul had left this world.

After weeks of sitting in the hospital, looking for signs of consciousness, the doctors informed me that she would likely never come back to me.

“It’s a very simple process,” the doctor told me. “She’s unresponsive. Dannie’s already gone. She won’t feel a thing. Perhaps it’s time for some closure.”

In other words, they needed the bed. Amazonian genetic enhancement wasn’t quite as advanced as it was in the U.S. and, well, medical staffs down there still have their hands full.

Euthanasia. Like putting down and old, sick dog, they injected Dannie
with a substance to stop her beating heart. Any hope of her returning to me was swept away.

After that, I’ve done nothing. Hundreds and hundreds of years of nothing. What is the point? Nothing is worth the effort.

So to all of you who are reading this, consider the following my last will and testament:

All of my worldly possessions please give to some useful cause or other. I never got around to having any children to give them to.

As for my body, I suppose you can donate my brain to science. Maybe they’ll figure out that piece they didn’t have when we lost Dannie. I doubt it though. Heck, give them my heart too. Maybe we’ve been approaching this all wrong. Everything else you can scatter along the Great Barrier Reef. May as well live out the rest of my usefulness in the last place I was truly and perfectly happy.

My dying wish for all of you is to be kind to one another. Love yourself, love another, and love everything around you. It is quality that matters in this life, not quantity. If you’ve lived well, it doesn’t matter how long you live, it’ll be enough. But don’t waste your time because you think you have forever. It goes by faster than you think.

Perhaps I’ll see you all on the other side. My only hope is that this pitiful existence isn’t all we’ve got. I hope my Dannie is still waiting for me.

Signed,

Aidan Warren Erickson

Aidan Warren Erickson
April 4, 2337 - September 18, 4390
A better life is set in the year 2100. In this time, three classes exist, the Post-Humans, the Transhumans, and the Necessitan Class. The Post-Humans are the upper echelon of society, fully bioengineered humans who do not age in any way. The Transhumans are the middle-class members of society who can afford some biotechnologies but are not fully transformed into Post-Humans. The Necessitan Class is the lower-class members of society who can afford no biotechnologies and live just as you and I do today. My story follows the life of Leana Roxbury, an 80-year-old Post-Human. The story takes place during the two days surrounding her 80th birthday. During these days, her childhood friend, Bailey Huesner is coming to visit for her birthday party. Bailey and Leana have not seen each other for years but keep in contact through e-mail, sharing stories and reminiscing about their childhood. When Bailey arrives at Leana’s home, Leana is in for a surprise. Bailey is a Necessitan, and cannot afford any bioengineering. She looks just as any 80-year-old today would look. Having lived in a bubble in her new Post-Human life, Leana is taken a back by this realization. She finds Bailey’s visit very eye-opening and after her departure, is left questioning whether or not her life is even real and wishing for a way out.

She had always loved the beach, the smell of salt and the sound of waves crashing against the shore, burying her toes deep into the cool sand, the sun beating down on her skin. As she lay in the sand, not thinking about one thing or another, she opened her eyes to see a seagull perched on the sand at her feet. Startled, she sat up. The gull remained at her feet, unfazed by her sudden movement. She reached her hand out; the gull cocked its head to the left, all the while looking into her eyes. Slowly, she stretched her arm out towards the gull to touch it; it seemed so real. As a girl on the beach in Nantucket, she remembered watching seagulls swoop down to the water, catch a fish, then fly back, high into the sky. But never had one been so close to her, she couldn’t resist the idea of feeling its soft white feathers. As her hand approached the gull she came to the realization that she controlled it. She wasn’t really on a beach she remembered, she was in her home in Alaska, sitting in the Simulation Room as she did every day. This gull would not fly away as long as she didn’t want it too, nothing would happen that she didn’t want. Leana Roxbury loved the beach, but she hadn’t really been to one in over 60 years.

Reality

Suddenly, the beach began to fade away, the waves stopped crashing against the beach, the sand started to disintegrate beneath her, the sun slowly transformed into a fluorescent light above her, and finally, the gull began to disappear. “Leana!” she heard, someone was calling her name. “Leana! Honey! Where are you? The party starts in an hour.” It was her husband, Caleb. She had almost forgotten about the party. It was Leana’s 80th birthday and they had been planning the party for a few months now. She snapped out of the calm, relaxed state she had been in on the beach to answer, “Coming! Sorry I was just getting some sun before the
big day!"

Caleb and Leana have been married for fifty-five years. Caleb came from a wealthy family who had come into their money by finding a way to make an alternative fuel out of snow. Married in the year 2045, Leana and Caleb had moved to Alaska to take over the family business. The couple has two children, Lucas and Naomi, fraternal twins who were now in their late 40’s. Now, in the year 2100, some things have changed since Leana first started her life with Caleb. Biotechnologies have allowed for Leana to genetically modify her body and increase her cognitive capabilities and health to that of a twenty-five year old. Leana is part of the Post-Human Class, the upper echelon of society with the money to pay for these genetic enhancements. Two other classes exist in this society, the Transhumanist middle class who has the funds to purchase some modification technologies, and the Necessitan lower class who live and look just as you and I do today.

This birthday was extremely special to Leana. Not because she was reaching 80, which was not much of a feat anymore, and not because they had a party planned, but because a very special visitor was coming, her childhood best friend, Bailey Huesner. Bailey and Leana had not spoken since she moved to Alaska except over e-mail about major life events. Leana could hardly wait to see the woman she had once spent countless hours with, braiding each others hair, gossiping about boys and planning their dream lives. Although they had been distant for some time, Bailey was the only person Leana had ever felt a true connection with. Leana had saved every e-mail over the years and read them when she felt lonely and missed her past life. Suddenly, a knock came on the door.

The Reunion

Butterflies filled Leana’s stomach as she turned towards the door. She swallowed, a lump forming in her throat. As she turned to walk to the door, she stopped at the mirror to make sure she looked okay. The same as always, brown hair flowing down her back, her makeup perfectly done, skin smooth and wrinkle free, she was the image of perfection. As she reached the door she could see a hunched reflection outside, she thought Bailey must be holding rather heavy bags and swung the door open immediately to help. But the woman standing outside the door wasn’t Bailey, it couldn't be. She stood, hunched over, grey haired, her skin sagging, an overweight 80-year-old woman, just as Leana remembered her grandmother looking when she was a child.

Leana could hardly believe her eyes. She choked back an exclamation of surprise and managed a muffled, “Bailey? Is that you?” The woman replied, “Yes! Of course! Leana, how are you? It has been far too long!” Still Leana could hardly speak. Why did she look like this, had she been living in a hole, had the technology not reached her? Pulling herself together, she embraced Bailey, exclaimed her excitement to see her and invited her inside. They lingered in the atrium awkwardly for a few minutes as Leana searched for the right thing to say. Bailey beat her to it, “Happy Birthday, old friend!” She exclaimed, “It is so good to see you.”
She handed her a small, gold package with a green ribbon on it, “It’s not much, but I wanted to give you something,” she said. Leana took the package, unable to restrain herself any longer she finally said it, “You, you look so...old...I mean...why?” Bailey’s cheeks turned a bright red color and she giggled awkwardly. “I’m a Necessitan,” she said, “My husband Ted and I don’t have the money to pay for all of these technological advances.” Leana couldn’t believe it. Living in an almost secluded existence, she had forgotten that there were people who could not afford the Post-Human advancements. Feeling slightly embarrassed by her comment, Leana quickly changed the subject, “How was your flight?” she asked. “Oh, quite nice.” Bailey said. They lingered a minute more, finally Leana pulled herself together and said, “I’m so glad you could make it! You are making this the best birthday ever. Remember all the birthday’s we had together as children?” Bailey smiled, “Of course I do! I could hardly contain my excitement when you invited me here. This is going to be a great weekend!”

After a short conversation, Bailey and Leana gathered Bailey’s things, brought them to the guest room and went to the kitchen where the rest of the guests waited for Leana to start the birthday festivities. All of Leana’s closest friends were there, the food was delicious, the music was great and the atmosphere was lovely…but something didn’t feel quite right to Leana. The more she tried to enjoy herself, the less she did. She turned to find Bailey; she was talking to one of Leana’s closest friends from home. They seemed to be having a good time, Bailey laughing away, apparently telling childhood stories about her and Leana. However, Leana couldn’t help but notice how old and worn down Bailey looked, especially next to all of her bioengineered friends. It just didn’t seem right.

**Until Death Do Us Part**

After everyone had left and Bailey had gone to sleep, Leana snuck downstairs to the Simulation Room. She walked into the all white, fluorescently lit room, took off her shoes, and stood on the cold, hard floor. She closed her eyes and thought, “beach, take me to the beach.” She began to feel the breeze on her face, she could smell the salt, and hear the waves. She opened her eyes and found herself standing alone at the beach, it was night now, the sky was clear and full of stars, the moon shone down on the water, its reflection flickering in the distance like a light about to go out. Leana felt at home.

This was the only place she could relax. There wasn’t a person to be seen, all she could hear was the crashing of the waves. She took off her clothes and started walking into the water. The cold waves hit her ankles, and then from her calves up to her thighs, then moved up her waist and eventually submerged her shoulders. Leana thought, “warmth,” and the water became a little warmer. She let her body be caught by the waves, lying on her back she looked up at the stars as the waves threw her back and forth, back and forth, rocking her to sleep. “Leana!” she heard a scream. She thrashed in the water, her feet hitting the sandy ocean bottom; she stood up. It was her husband; he had entered the simulation room, and seeing her lying in the water motionless, though she had
drowned. “I’m fine! I’m fine Caleb.” “Come here crazy!” he called out to her. Reluctantly she swam back to shore. Caleb threw a blanket around her and pulled her into his strong arms. They stood there on the beach for a moment, not saying a thing. Finally Caleb asked, “How was the party? Did you have fun?” “Sure… I mean, yes, it was lovely, thank you.” Leana answered, her voice shaking a bit. “Good, well let’s get back to bed, it’s not safe Simulating such things alone at night.” Caleb warned, and they walked back up stairs together, leaving the beach scene to continue on through the night.

Leana lay in bed next to Caleb, still feeling shaken by the rude interruption of her relaxing midnight swim. Although she was tired, she couldn’t sleep. Her mind turned to Bailey. She began to wonder what it felt like to be so old, to have grey hair and wrinkled skin. She wondered if Bailey wished she could be young again, not have to worry about her health or wish she could take a vacation. She wondered what her relationship was like with her husband. Did they have more problems because they were Necessitans, or less? Caleb rolled over in bed. Leana turned to look at her husbands sleeping face, the same face she had fallen in love with fifty-five years ago and wondered what he really looked like, how aged his skin was supposed to be, what color his hair really was and how much of it should he still even have? Without Caleb, Leana’s life would have been just like Bailey’s, she never had the money to afford the things she does now when she was growing up, was she lucky or was she missing out on real life? Was it Caleb’s fault her life felt so empty? She closed her eyes and tried to remember what her mother looked like at this age, her hair thinning, deep crows feet surrounded her eyes, her skin adorned with age spots. Sure it wasn’t the clean, perfect image she now portrayed, but it was natural, and that was beautiful. Slowly she felt anger boiling up inside her. Caleb had changed her life forever; she was stuck in this body for the rest of her life, a life that had no end in sight! Why was that better, was she really living this “better life” that the Post-humanist movement promised?

Forever Young

The next morning Leana woke up hardly having slept at all and went downstairs to see if Bailey was awake. To her surprise, Baileys feeble body was already up, bustling around the kitchen, cooking what smelled like Eggs Benedict. “Good morning!” she called out when she saw Leana enter, “How did you sleep?” “Oh fine,” Leana replied, “What are you cooking? You really shouldn’t have done that! I would have made breakfast!” “No, no problem at all! I’m just making Eggs Benedict, your favorite, right?” Bailey replied. “Yes, you remembered? Wow, it has been so long since I’ve had them. Thank you Bailey.” Leana said, smiling to herself, remembering how kind Bailey had always been. They sat together, eating the delicious food; Caleb came downstairs briefly, grabbed a cup of juice and went off to work. After breakfast Leana and Bailey reminisced about their childhood for a few hours. Laughing about all the trouble they used to get into, joking about how everyone used to think they were twins. “That sure wouldn’t happen now!” Bailey said, jokingly. “No, I guess not.” Leana replied, feeling slightly awkward.
“So how did they do it?” Bailey asked, “How do they make you look twenty-five again?” “Oh,” Leana stuttered, “I… I don’t really know all the technology behind it, Caleb and I did it so long ago, when everything had first come out. I remember hearing about it on the news, feeling hesitant. Caleb never was though, he called our doctor the day after the technology came out and signed us and the kids up for the anti-aging, cognitive enhancement package which was guaranteed to make you look and feel whatever age you chose. We chose twenty-five because that’s how old we were when we got married, Caleb said I was the most beautiful woman in the world when I was twenty-five… So, just a few weeks later, we went into the lab. I remember it being so cold, everything metal, harsh lights beaming down on us as they assessed the work that needed to be done. We were in the hospital for a month. They cut open my head and implanted something into my brain. They took my skin and injected things throughout my whole body, the pain was excruciating. Finally, after a month of lying in a black room, only semi-conscious, feeling my skin tighten over my body and my brain swell inside my head, I woke up a totally different person; I could hardly believe it! I remember being so happy, every time I saw myself in the mirror I was nearly brought to tears. I was twenty-five again!” Leana concluded feeling a little taken aback about her excitement. “That sounds wonderful!” Bailey exclaimed, “I mean not the pain and the month of darkness but the change, and after only one time?” “Yep, I guess it’s pretty amazing” Leana said. They sat for a moment contemplating the story. Then Bailey realized the time and insisted she must be going. Bailey thanked Leana for sharing her home and her life with her. Leana offered their Teleporter to Bailey to get home, hesitantly, she accepted and within minutes was gone. Leana found herself alone again. More alone than she had ever felt. She wished she had jumped into the Teleporter with Bailey, escaped this fake life she lived and joined her to age and die just as people were supposed to.

But she hadn’t, and here she was, standing in her atrium again, contemplating the emptiness of her life. Reverting to her daily routine, she walked towards the simulation room, opened the door and stepped onto the smooth sand. Immediately, the sun hit her face and she squinted. For a moment she felt at ease again, walked towards the water and let the cool waves wash over her bare feet. She reached into her pocket and felt the small gold box that Bailey had given her. She opened it; inside lay a gold charm bracelet that had belonged to Leana’s mother. Her eyes filled with tears at the sight of this small piece of her old life. Then she remembered where she was, that this beach wasn’t real. A feeling of panic hit her and she could hardly breath. Suddenly the smell of salt was suffocating her, the breeze felt like a 40 mile-per-hour gust of wind, and the grains of sand were scraping her delicate feet. She ran to the door beyond the beach and hit the button, the button that would turn it all off. Again, the sound of the waves faded away, the sun began to turn into the fluorescent light, the sand disintegrated beneath her and there she was, in that empty white room that had once provided her with so much relief. She wondered if she would ever feel peace again. She wondered when she would die, if she would die. She wondered what was real about her life. Finally, she wondered, how can I get out?
Tiny little nano-machines. Stored in a miniscule computer. What’s on your mind? A series of actions performed by these nanos to control your actions. They heal you, that’s why you let them put the little machine in. The government knows best, right? Of course they do! And now they know everything. Everything down to your last meal. Your last illicit drug use. Your last moment of true happiness.

But they don’t like the happiness. What do happy people do? Live contentedly. Settle down with their families, do what they love, feel as though they’ve finally reached their goal. Not productive enough for the government. We need competition to get farther.

And farther
And Farther
And FARTHER.

So let’s heal them. All those people who wish they could be happy. Let’s give them life. The nanos can do it- connect them to The Server. It’s got all the remedies. They’ve been saving those remedies for the day where we can use them to their best advantage. The scientific elite is part of the machine, you know. They work for the government; the government funds their endeavors. So much has been discovered- more then we can ever know. They know everything. About science, about the earth, about human nature, about US. They know more about us, about our bodies, about our emotions then WE do. We don’t even realize what’s going on.

Why can’t we just be happy? The American Dream- a beast that has evolved into something foreign to those who still hold on to those last vestiges of the past. There are no white picket fences; there are no nuclear families, no dinnertime chitchat about your day at work with those who love you. The American Dream is unattainable. Money, a mansion, a wife and three mistresses, a husband and a robot playmate, computer nannies for the kids with dinner cooked up by the house itself. School, Work, Competition, these are our loves.

Our bodies stay strong thanks to the nanos- thanks to The Server. It’s our lifesaver. It’s what lets us keep up the competition. Those little nanos run through our bodies playing fix-me-up every time we step out into the sunlight. Skin damage? NO! Oh, the nanos noticed that you stepped outside before you’re designated Out time this morning, why was that? Were you violating your Restrictions? There’s an unusually high level of serotonin in your blood this evening. Did you overspend your Enjoyment time today? You know what that does to productivity! That’s three days Enjoyment Free for you!

I saw that you were engaging in sexual activity outside of your allotted reproduction time. You learned in school that sex complicates things- that
sexual relationships lead to a conflict of competitive interest. You could argue the case that the act was competition in itself, but they can see those love chemicals in your body, and they won't let you get away with it.

You don't want to be connected to The Server? Try living without the nanos. Here's the catch- you can't. That atmosphere isn't going to sustain you. Those diseases are going to attack your body so hard. Decades without need of an immune system- the nanos will just take care of it. The machinery is a necessary part of us.

There are enclosures for those who choose to go without- but they're not places that anyone would want to live. Thousands of people all shoved into one air locked living centre on the outskirts of town. Clichéd as ever, keeping in pattern with human civilization. Push those miscreants out to where they can't bother us with their sensitivity anymore. Ingrates who would rather suffer then accept the necessity of technology. They think they're “happy”. But the government knows better. The Server says that “happiness” is not the ideal state we think it is. Because, as they've proven, happiness does not a productive society make.

And that's what it's about, right? One hundred and sixty years apiece on this chunk of earth. No more, no less. One hundred and sixty years to live and then, true to style, a lethal injection. Until it ends.

Theodore Foster was the end of the Server Society. Theodore Foster was the death of the United States of America. Theodore Foster has shown the world what happens when you let technology rule your life, and let the government rule technology.

This story starts with the technological revolution of the 2050's. When the first nanoneurochines were created (that's an entire machine approximately one nanometer in size) and tested in the brain of the ever-suffering lab rat. Of course, it was found that these little magic machines could be sent out and used to take care of business inside the body. And of course those little lab rats were the first ones to realize the dream. Unfortunate. But after ample testing, the technology was found to be safe enough to test on the real target—the human being. Scientists realized that the nanoneurochines could be used to fix any ailment that could possibly plague the body. They were little all-purpose doctors that could be used to keep their hosts damage-free for the duration of their time in the body.

By 2070, the nanoneurochine was a staple in human healthcare. Nanos programmed to could do pretty much anything be injected into the bloodstream. But injection into the blood stream means that we must be aware of the ailment to bring about the cure. This led to the production of another life changing piece of technology- the nanoneurocomputer (NNRC). This device was placed at the base of the brainstem, and could intercept and interpret all signals that pass through. All NNRC devices were connected to a government run wireless server, in which every piece of medical knowledge was stored, in addition to the health records of every citizen connected to The Server. All information intercepted by
the NNRC is sorted and stored in The Server. As the NNRC registers information, The Server responds with corresponding information on how to program the nanos. If one stays in the sun for too long, nanos are sent to the skin to repair the damage done by the UV light. If a toe is crushed, the nanos are programmed to encourage cell growth and provide support as the bone mends. If you eat spoiled food, the nanos can get rid of it before the symptoms are even present. If you ingest an illegal substance, the NNRC can tell exactly what type, how you ingested it, and exactly how to counteract it and incapacitate you until the authorities can be alerted. If you overstep the amount of happiness the government deems allowable for the most efficient society possible, the nanos can be programmed to block the creation of the chemicals that bring about your happiness, and instead provide you with the motivation to work harder to earn your happiness back. But you don’t even have to know any of this is happening. It’s like... magic. You accept the way things are, as we all do.

Emotions are dead. After decades of oppression, they have sunk back into the brain with no hope of escape. As long as The Server tells the nanos that emotions aren’t allowed to show their volatile faces, they are banished into the depths of the mind. Server State citizens are programmed. They make decisions throughout the day, yes, but if they come close to making the wrong decision (one the Server deems to be wrong, that is), they can be stopped. Stopped before they even knew they were going to make a different choice. Love is no longer an issue.

The family unit has been decimated. Family bonds create contentment, which create a lull in motivation for work. Of course, this is not to be tolerated. Mothers are assigned to children to create an optimum growing environment. Children attend boarding schools until they are through with their education and living on their own. Parentage is carefully chosen in hopes of creating the most intelligent, efficient, contribution to society. They’ve figured out how to engineer the perfect child for each role that needs to be filled in society. Children are no longer born in the Server States, they’re bred. Bred to do what they’re told, bred to excel at their given jobs, bred to perpetuate the government’s control over it’s people.

Theodore Foster was the product of the most public parentage choice in American history. The government set out on a decade long search to find the most intelligent individuals in the nanotechnology and computer science fields. They held aptitude competitions across the States in pursuit of a man and a woman who could pass on their abilities to the next generation. Computer Scientists and Nanotechnologists from across the country clamored to prove themselves, and achieve the ultimate reward for their hard work—being chosen by the government to publicly produce the Server States’ next idol. After much deliberation, two were chosen; genius level nanotechnologist Howard Werkblatz, and equally brilliant computer programmer Michelle Carson. They were heroes. The best and the brightest in their fields, dedicated to their work, idolized by those they worked with, and chosen by the government for the most publicized child engineering campaign ever to be had.

So Theodore Foster was bred, born, and idolized. He entered society on
in a flurry of excitement tinged with the highest of expectations, and stayed suspended in that cloud for the duration of his life. He was the exemplification of what it meant to be a citizen of the Server States. He excelled at school—as was to be expected. Throughout his schooling, Theodore surpassed his teachers in his abilities. He scored perfectly on every test he took, never considered enjoyment until he had finished his societal duties, and felt his most contentment and happiness after completing his work. He was the perfect citizen.

During high school, when most students become unruly and difficult for the government to control, Theodore stayed immersed in his education. His enjoyment hours fell by the wayside as he soaked in as much information as he could about his subjects. He knew he was created for a reason—creating a new, more efficient NNRC. Gotta translate those electrical impulses from the brain even MORE quickly. Make society one slick machine, working out the kinks before the kinks even know they’re going to be kinky. This was what Theodore was brought into the world to do, and this is what he dedicated his time to working towards. Theodore Foster was a government wet dream in the form of a charismatic, dedicated young man.

By the age of 28, which in the Server Society is barely considered adulthood, Theodore had achieved his life goal. He had created a new, more efficient nanoneurocomputer. The government granted him the most gracious gift they wanted to offer (for gifts do not make an efficient society), and allowed Theodore to be the first to test out his new creation. After all, who better to test it out on than the very man who created it?! But of course Theodore doesn’t see it this way. For him, being the first with this new technology is his ultimate achievement. He has created ultimate efficiency, and cannot wait to be a part of the future.

The insertion of a nanoneurocomputer is a dangerous task. Though once the computer is installed, one is completely protected from the elements (past beheading, or other instantly fatal occurrences), but in the interim time between the preparation for insertion, removal of the old hardware, and installation of the new, the body is a giant sack of vulnerability. Insertion rooms are the only places in the Server States that are required to be 100% sterile at all times. If a disease can infiltrate the body during the time where the nanos are out of commission, that body will be infected immediately and has very little chance for survival. The utmost care must be taken in the room’s preparation, and the sterilization of every person present for the procedure. In the time of the nanos, the diseases that have been cured and left to float throughout society, gaining strength and resilience as new cures are created for the nanos to keep the body safe from harm. Consequently, though Server citizens never succumb to these illnesses, their lands are wrought with powerful diseases that pack a whollop.

On the day of Theodore Foster’s insertion, in the excitement of the golden boy’s ultimate achievement, someone forgot to wash their hands. Though under regular circumstances Server watchers would notice this oversight, even the government was anticipating the day’s events and wasn’t paying
enough attention. So, as the States’ team of best inserters worked on
giving Theodore the first access to his new technology, infection worked
itself into the brain stem. The area surrounding the NNRC became
inflamed and unresponsive to the technology. The computer wasn’t
receiving any signals. The infection was spreading. Years of reliance on
the nanos to do the jobs of doctors had lead to an almost complete
eradication of the profession. There were ways to treat illnesses such as
these, but to gain access to them, one must venture into no-mans land:
The Bubble States.

There are always those who question government. The Bubble States
not only opposed the government, but the ruthless advancement of
technology at the cost of humanity and a fully functioning nature.
With the ability to heal from anything, and government control of the
mind, The Server State population let the planet and it’s health fall to
the wayside. Waste plants that contaminated the drinking water were
no longer an issue if the nanos could fix you up right away, right? The
Bubble-goers of the Sterile States disagree. Their compounds are enclosed
in what looks like a giant bubble- hence their derogatory identification
as Bubble-goers. The bubble keeps their society safe from the disarray of
the Server States. Life inside the bubble is natural. There are no brainstem
computers, or nanos, or government mind control. They coexist with
one another, occasionally feeling sad, angry or jealous. More often feeling
happy, content, and fulfilled. They know the choice they’ve made—to
live a shorter, more dangerous life in payment for their freedom. Server
citizens have been bred to believe that their way is the only way. Bubble-
goers see the truth: The Server government is using its population to
further it’s global standing and acquire as much monetary gain from it as
possible. Nothing else matters. To the Bubble-goers, this is the blackest
form of blasphemy. The sacrifice of emotion and control far outweighs
any benefit of health once might receive. They view the Server States with
a sort of hostile disgust. But their rejection of the nanos kept alive the
only thing that could help poor Theodore Foster: healthcare.

The Sterile States still functioned like the societies of old. Though
technology had advanced greatly over time, humanity prevailed over
machine and the human essence was kept in tact. Doctors were still held
in high esteem, now with the ability to cure any disease, for it was their
research that had provided such extensive information for The Server. The
relationship between Sterile and Server States walks a thin line between
cooperation and outright hostility. Both societies openly disapprove of
each other, but must work together to preserve the peace in place of the
warfare that would ensue otherwise. The government stays out of Bubble
affairs in return for medical information. This was Theodore’s only hope.
With next to no immune system, and no doctors available in the Server
States, the government was forced to place its most valuable citizen’s life in
the hands of the Bubble-goers. But not without warning.

Without the nanoneurocomputer and the control of the nanos,
Theodore’s mind would be unguarded for the first time in his life.
Emotions, free from their nano oppressors, would fling themselves
back into use with a force strong enough to drive a man insane. So they warned him of the danger. Of the emotional influx. Of the ways that these emotions cause problems in life, regardless of how great it may be to finally feel them. Emotions make for an inefficient human. Who wants that? The Bubble-goers. They'll tell you their way is right, and that you're being controlled. They just don't understand. They don't realize that this is the right way. They don't realize that they're living like heathens; dying so young, their bodies decaying, emotions running rampant. No efficiency there. So don't listen to them, they know not of what they speak, Theodore. You understand the importance of control and efficiency. You are the model citizen. All you have to do is heal and come back, so we can re-insert your NNRC and get back to life as it should be.

And so Theodore found himself in a hospital room on the other side of the bubble. People were so strange there… Theodore was witnessing old age for the first time. Old age and… some strange feeling he couldn’t put a finger on. He felt it in his chest… in his stomach… but it wasn’t an ailment. It was a sort of ache. A dull throb. His heart beat more intensely as the nurse approached him with his next dose of medicine. She noticed, as his EKG spiked the second she walked into the room. Theodore was confused. He’d seen beautiful women before- much more beautiful than this one—but had never responded in such a way. Emotions. He remembered what he had been told. Evil, manipulative emotions. He closed himself off immediately. The nurse smiled kindly, injected Theodore’s medicine into the IV, and walked out of the room gracefully.

This confused Theodore. Where were the heathens he had been told about? These people seemed civilized enough. They were kind to him, never accosting him about the evils of his society as he had been told they would. Theodore felt another strange feeling rise in his chest, this time more soothing. Emotions. Evil emotions? They don’t seem so bad…

The Nurse entered again, carrying a tray of delicious looking food. Another fallacy fed to him by the government- they had told him the food would be horrible! As the nurse handed him the tray, he noticed a nametag. LuAnne Simmons. Theodore feels that uncomfortable feeling in his chest again and cannot resist the urge to ask her who she is. Which, you would think, would be obvious, but in Server Society is always the first question one asks of a stranger. It is important to know the status of another when interacting with them in the most efficient manner. LuAnne shares: She is a Nurse at the Simmons Hospital, where Theodore has been taken. Yes, the Simmons of her last name is the Simmons of the Hospital. Her father is a doctor, and her mother… never mind her mother. Theodore doesn’t need to know that her mother is the most influential anti-Server activist in all of the Sterile States. Theodore doesn’t need to know that LuAnne is the second most influential anti-Server activist in the Sterile States. Instead LuAnne smiles kindly again, offering information about her childhood in the Bubble, sharing how amazing the clean air and green grass can be on a warm summer’s day. LuAnne shared the story of her first love—a boy who died after a Server State citizen attempted to infiltrate the Bubble.
Theodore begins to feel a mixture of strange pressures in his chest again. This time both pleasant, jarring, and... strangely... melancholy. He’d heard of melancholy before, but to feel it was a whole new animal. He found himself wanting to reach out and touch this beautiful, heartbroken woman. Heartbroken. This could never happen in the Server States. Nothing is ever broken! But this other feeling... this light, feathery, uplifting one. This was something Theodore could get used to. He felt himself start to embrace it.

Theodore and LuAnne grew close during his time at the Simmons Hospital. They shared much about their lives. Theodore explained in detail the society in which he lived—something he would never have been able to do while still under the control of The Server. In his explanation, Theodore made a realization. This control was not natural. Though this may seem like a blatant fact to those on the outside, for Theodore to admit this to himself proved something important: embracing human nature will always prevail over technology and control. He felt for the first time. He felt happiness at the prospect of being able to stay like this, he felt anger for being deceived, and for his people’s entrapment in the rut he had the unfortunate good luck to escape. He felt warmth for LuAnne, and her kind smile. He felt love for the sun, the grass, the birds, and the earth. Theodore felt human. Theodore felt natural. Theodore felt the need to make a change.

During his last days of treatment, Theodore shared his hopes for change with LuAnne. She immediately took interest. Theodore was still unaware of her ties to the anti-Server sentiment, and took her excitement as happiness for his revelation. He was still new at this whole emotional sh*tick, after all. She fed him ideas. No, the government won’t see reason, no the people cannot be persuaded when they are being controlled, no we can’t shut off the Server—everyone would die. What can we do?

Theodore can do what he does best: computer programming. On his last day of treatment, Theodore wrote up the plans for a computer virus. He would install it in the nanoneurocomputer he created, and have it inserted as normal. Once the computer connects to the Server—BAM. The government can’t steal any information that’s not directly medical. No emotional control, no monitoring every citizen’s every move. The nanos fix what’s wrong and then go back to the computer, ready for another ailment. It was a perfect plan. But LuAnne never shared with Theodore how much she truly hated Server Society. LuAnne hated it, and Theodore ended it.

There was a glitch in the plan. As soon as the virus got uploaded onto the Server, it took effect. But unlike Theodore, the rest of the population was not warned about the surge of emotions they would feel. The rest of the population was barely even aware of what emotion meant. Yet, all at once, they experienced it for the first time. Anger, jealousy, hatred, confusion. All felt simultaneously, and passionately. Imagine: every suppressed emotion surfacing at once, and you don’t have the slightest idea of what is happening. The Server States went from a population of carefully controlled quasi-humans to crazed, confused, full humans with no idea of...
what is happening.

Theodore, having already experienced the emotional rush and not reacted in such a volatile manner, was at a loss for what to do. In a fit of passion for the life he now felt all should have the right to live, he overlooked the fact that a mass scale dip into insanity could cause such massive societal disarray. But Theodore could never have anticipated what happened next, for he had not planned it to be so.

In the moments before he returned to his home, LuAnne asked to look over his formula for the program he would use to set his people free. LuAnne, having spent her childhood learning from her mother every possibly way to take down the Server Society, had immersed herself in computer science. To better understand the enemy, she always said. So in those few minutes of reviewing the plan, she made a tiny change that would decide the fate of Server Society.

And so Theodore Foster brought about the end of his people. After a few hours of insanity pervading every area of Server Society, the illness started. LuAnne had removed the code differentiating between medical information and the information used to control. Theodore, in his haste to free the minds of his people, overlooked this as he programmed him NNRC. Every nanoneurocomputer was made obsolete within minutes. The super-diseases that had been bred since the implementation of the Server were ravaging the population into a disgusting breed of half-insane, disease ridden, confused monsters. The fears of past societies were realized in that moment. Zombies can exist. And Theodore created them.

Theodore, in an attempt to find LuAnne, broke through the sterilization chamber separating him from the Sterile State line closest to his home. He headed straight for the nearest hospital, for he also needed to be treated for the ailments he had acquired without the aide of the nanos. But Theodore was a role model. And as soon as the Server population, infected with emotion and disease alike, saw him head to the hospital, they all followed suit. The Bubble was broken. These infected monsters headed straight for the doctors to get healed. But though the Sterile State doctors had the cures for the diseases they were accosted with, they did not have the time to heal before they were infected themselves. Hospitals across the Sterile States were made redundant as every doctor succumbed quickly to the barrage of illness brought upon them by the crazed people of the Server States.

The doctors were dead. The Server was infected with a virus. The Server Society and Sterile Society alike were heading towards the fate of the doctors. Theodore died with his brethren, confused and alone. LuAnne had achieved her goal—at the cost of her own people. Reliance on technology destroyed the society that created it, and the society that rejected it.
Dr. Leslie Hamilton stepped back from the table and surveyed her work. Lying across the cold, stainless steel surface was what looked to be a normal human male. The figure was entirely ordinary looking—his wavy brown hair, lanky figure, and laid back attire would not catch people’s eyes. His eyes were closed and he lay perfectly still. If someone had walked in just then, they probably would have thought he was dead. Until Leslie slowly, hands shaking slightly, reached into her pocket and pulled out a small device with a red button on it. She took a deep breath and squeezed her eyes shut, as though bracing herself, and pressed the button.

No loud alarm sounded. Nothing exploded. It seemed as though Leslie had been tense and scared for no reason. The only difference was in the figure on the table, whose chest was now rising and falling. Leslie’s eyes opened warily and a smile broke out on her face as she saw the results. She put her hand over her mouth and let out a loud, semi-hysterical sounding noise that seemed like it might have been a laugh. She emitted the noise again, before bursting into full on, glee-filled laughter. The figure opened its eyes, blinked a couple of times, and turned to face Leslie.

Leslie just shook her head, tears forming at the corners of her eyes. “You’re alive,” she finally managed to say, staring at the man in wonderment. She spent a few more minutes just shaking her head and laughing, her own way of celebrating. The man simply stared at her, unmovign apart from his blinking eyes. When she finally composed herself, she stood a little straighter, pulled a pencil out from where it had been tucked away in the bun her hair was tied up in, and gave the figure a smile.

“Hello, Adam,” she said.

The man who Leslie called Adam was not human. He was, for lack of a better term, a robot, although a highly advanced one. Leslie had been working secretly and tirelessly to create artificial human life—Adam was on all surfaces a perfectly normal human. Tomorrow she would wake him up, with his personality and fake past in place, and would set him out into the real world. She would follow him, observing how he acted and responded to different situations. The purpose of Leslie’s little experiment was to ensure that he was predictable—she wanted a robot that she could understand, control.

Adam continued to stare, just blinking his brown eyes. Leslie sighed and opened her mouth as though to say more, but just ended up waving her hand as though to say not to worry about it and walked over to her computer. There she sat, fingers poised over the keyboard, ready to record what had happened that day.

Leslie slept restlessly that night, excited for the next day. She had shut
Adam down for now, but she couldn't stop thinking about him. The breathing simulation had worked. He was responsive. He knew to look in her direction when she talked. He’d done similar things and been on multiple times before, of course, but never when he was complete. Never before he was ready to have his personality put into him. Before she knew it, her alarm was buzzing. Normally, Leslie would groan and hit snooze for a good thirty minutes longer. Not this morning.

On an average day, Leslie had no trouble getting dressed in the morning. She usually had nobody to impress; she lived in her lab, which she owned privately with money earned from previous work. Money was no issue for her. Because the lab was her home and her entire life for the past three years revolved around perfecting Adam, she didn’t get out much. She ventured out maybe once a week, to get groceries or other supplies, and when she did she never really talked to anyone. Instead, still in scientist mode, she would often simply observe the world around her and the interactions between different people, sometimes making notes on her phone of different fashion or other trends for input into Adam. Thus, she did not put much effort into her appearance. She was once conscious of how she looked; she once had friends who she would go out with; she once was a social person. Now, she could easily and correctly be summed up in one term: scientist.

Today, as she stood in front of her wardrobe, she hesitated. Today was a special day. She settled on a pair on black slacks she hadn’t worn in years and a nice green blouse. She surveyed herself in the mirror, amazed at how different she looked from the last time she’d worn these clothes. She looked… old, the clothes fit her a little tighter than they had last she wore them, and for the first time she noticed just how pale she was. She sighed, knowing she would have to settle with her appearance, and walked downstairs to wake Adam.

Adam was lying exactly as he had been the night before. Leslie put on a lab coat, both for an air of authenticity and so that later while she followed Adam he wouldn’t recognize her by her clothing, plugged a thick cord into the sole of his left foot, where a socket that she would later conceal was located, and stood by her computer, fingers poised over the mouse. With one last deep breath, she pressed the button to upload. Adam remained perfectly still, eyes still closed, for a few minutes while the compressed data Leslie had assembled was put into Adam, making him into the quasi-person she had created. When the computer gave a small ding to let her know the process was complete, she unplugged Adam and pulled the device with the button out once more and pressed the button. This time, instead of gradually awakening, Adam’s eyes snapped open.

“Hey…so um…am I done now?” he asked, giving Leslie a wary look. She felt a surge of pride, watching his facial muscles move accordingly as he talked, admiring the fact that he could form sentences and accurately react to social situations. She was so busy admiring her creation, she almost forgot to respond. She snapped out of her reverie as Adam spoke again: “Um, sorry, excuse me, but…” he said, trailing off at the end of
his sentence, just as Leslie knew he would. He was programmed to be
direct, shy, and a little awkward around people, very unlike Leslie who
was much more blunt and direct.

“Yes, you’re done. Now get on, and you’ll receive your check in the-mail,”
Leslie said, trying to sound professional and to keep any excitement
out of her voice. Her experiment was going perfectly so far. Adam was
reacting to situations exactly as was expected, and the fake memories
she had tirelessly created for him were obviously functioning well; she
had inputted a recent memory for him of deciding to go donate some
plasma for a little extra money, explaining why he would be waking up
in a lab. Of course, the actual process of donating plasma was completely
different, but Adam didn’t know that, and Leslie hadn’t been able to
come up with a better explanation to input into him.

“Um, thanks, I’ll, er, be going,” Adam said, giving Leslie a sheepish
smile before heading out the door. As soon as the door shut behind him,
Leslie began running around the lab, gathering supplies. She grabbed a
notepad, her phone, her camera, her laptop, a jacket, a different shirt to
change into in case it seemed like Adam was beginning to recognize her,
and threw her lab coat off somewhat haphazardly, not noticing or caring
when it fell to the floor, which seemed very out of place in her otherwise
spotless lab. She picked up her bag, walked across the lab, and opened
the door.

The first step into the outside world, as always, was a bit of a shock. It
took her eyes a couple minutes to adjust to the brightness of it all, and
to how many people were around. She knew the first place Adam was
heading today, his apartment, although after that she would have to be
able to see him to predict what he would do next. Leslie could predict
how Adam would likely react to different situations and what he would
want to do, although she was not able to say what he would be doing
at, say, 3:45 next Tuesday. She could tell you which restaurant he would
likely be at if she knew he was going out to eat, but she couldn’t know for
sure when he would be going out, or with who. He could not be entirely
predictable; that was the point of artificial intelligence, to allow the
machine a degree of flexibility and the ability to analyze situations and
make their own assessments and decisions based on that. However, the
entire experiment Leslie was conducting at the moment revolved around
ensuring that there was a degree of predictability to Adam.

Essentially, she wanted to ensure that while she didn’t know exactly
what he would be doing at all times or be able to predict everything, she
needed to be sure he didn’t do anything completely unexpected. Before
she introduced her technology to the world, she wanted to ensure it
would be safe. The entire time she created the experiment, no matter
how many parameters or safety features she included in Adam, images of
a robot apocalypse, of them surpassing humans in intelligence, of them
taking control ran through her mind. She imagined Will Smith having to
go save humanity, like in *I, Robot*. She might have been paranoid, but she
figured that it was better to be safe than sorry. Plus, with test data, she
would have a better chance of getting a good buyer for her technology, a
buyer she could really trust.

Leslie headed to her car and drove to Adam’s apartment complex where she parked across the way, at the building across from his, giving her a clear view of his apartment from the outside but sitting far enough away that he wouldn’t notice her. Her windows were tinted so nobody could see into her car and see what she was doing. She climbed into the backseat to be more comfortable and settled down, opening her laptop and double clicking on the live video feed she could access from the cameras she’d set up in Adam’s apartment. She had bought Adam the place a week earlier and gone over there to get it set up, putting things the way Adam was programmed to like them, and setting up discrete cameras all over the apartment. Adam was made to be relatively unobservant, which she hoped would carry far enough for him not to ever discover the cameras. But with them, she could observe his behavior in his apartment. She saw him sit down at his table and pour himself a bowl of cereal before devouring it, leaving the box of cereal and a Cheerio that fell off the spoon on the table, something Leslie itched to go clean up. Unlike Leslie, Adam was programmed to be rather messy. He sunk into the couch and turned on the TV, flipping channels. Leslie watched him do so through a camera facing the TV, so she could at least watch it along with him and not be too bored. After about an hour, Adam turned the TV off, stretched, and gathered up a stack of papers from a nearby table. Leslie smiled to herself; it was time for Adam to get a job.

Leslie had, years ago, back when she still had a social life, encountered a man who made fake documentation for a living. He was probably the least reputable of her social circle, but he was a useful connection to have. She’d called him up a while ago and purchased many kinds of paperwork for Adam to make it easier for him to get a job. She’d also equipped him with many of the basic skills he would need, although she did ensure that he still seemed young and inexperienced. She wanted him to seem like a very average, recent college graduate to the employers.

The first place he went was a bank, where Leslie had set up an interview for him that he remembered setting up himself. He shuffled in, stammering that he was here for his appointment, before walking into the interviewer’s office. As he neared the office, he looked calm, cool, and collected until you looked at how he was gripping the folder he’d brought with him containing his resume and other paperwork he needed to apply for the job. Leslie knew he was racked with nerves, and would probably stutter and stammer through parts of the interview. But, she knew he was qualified for the job he was applying for, of working with their computer databases. Leslie had decided to give him a background in computer skills, as it was something she herself knew about, so she wouldn’t have to learn a new skill set to program into him. Leslie stood in the lobby of the bank, pretending to peruse brochures, her eyes darting up to glance at the office door every couple of minutes. After what seemed like forever, she saw Adam leave the office, shaking the interviewer’s hand enthusiastically with a wide smile on his face. Leslie knew he must have gotten the job. She watched as Adam climbed into his car and, thinking
nobody was watching, pumped his fists in the air. She walked outside as he began to crank up the radio and roll the windows down—just as Leslie would expect—and drove off.

At this point, Leslie knew several places Adam might go, but Adam was reaching the point where she couldn’t say exactly what he would be doing at all times. Therefore, she quickly got in her car and began to follow him, being sure to be careful not to be noticed while still keeping track of him. She had a tracking device in his car, so if she lost him it would be OK, but it was easier if she could just keep up.

Adam ended up going back to his apartment. Leslie couldn’t say she was too surprised, in his mind he had just moved in to his new apartment and the new city a week ago. He didn’t really know anyone in town yet, so he didn’t really have anywhere to go celebrate with people. Leslie watched from her car again, this time parked farther away, next to a different building in the complex so as to not arouse suspicion, as he grabbed a beer from his well-stocked fridge and settled down to watch TV again. Leslie watched him until he made his way to the bedroom, readying himself to sleep, and then started up her car again. It was time for her to go back home, she would quickly review how he slept in the morning before beginning another day of observation. The day of following Adam around, constantly on edge that he would do something out of the ordinary, of being around so many people, had tired her out. She let out an audible groan, at the realization that every day for the next six months, how long she planned to observe Adam before telling the world about him, she would have to do the exact same thing. Hopefully Adam would make some friends soon, and it would all get more interesting.

Over the course of the next few months, everything went according to plan. Adam began to make some friends at work and fell into a pretty clear routine that made Leslie’s life in observing him easy. He would wake up, go to work, eat his lunch at one of a few places near the office with some of his colleagues where they would laugh about things that had happened that day, go back to work, finish up, either go out for drinks with some friends at a local bar that had happy hour until 7 or head back to the apartment to relax by himself, and then go to bed. One thing Leslie did begin to notice was that Adam’s personality was starting to evolve a bit—he was becoming less shy about opening up to others, about initiating conversations, and about breaking from his routine. He began to go out with his friends more and more, although he still spent a solid half of his nights in his apartment by himself, relaxing. Leslie continued to follow him, taking precautions to blend in as much as possible and changing clothes often so she would not be noticed. She didn’t mind most of it, although the one activity she didn’t enjoy was when he went out for drinks with his friends—Leslie would usually sit at the bar and order something non-alcoholic for herself, but as a woman alone at the bar, men would sometimes come over and try to charm her. Some were men she might have once been interested in, many were not. But regardless, her priority was Adam. No matter how wistfully she might watch some of them walk away after she would bluntly
inform them she was not interested, no matter how much some of them persisted, she figured she would have time for that later. But it made her feel lonely, knowing that she was rejecting all these people while Adam, who wasn’t even a real human, was laughing with his friends at their usual table. Leslie felt he was better at being human she was.

No new groundbreaking developments occurred over the course of these few months. That is, until one day, while sitting in her place at the bar, Leslie could hear Adam telling his friends how he had managed to obtain a date. His friends gave him high-fives and Adam acted appropriately embarrassed, but she could tell he was proud and reveling in it. Again, Leslie felt a pang of jealousy, but shoved it aside. Adam had come a long way, but his personality was evolving fairly normally, and he still had not done anything out of the ordinary. She was still able to easily predict his movements and actions and, from what she could hear of Adam’s conversation with his friends, he had acted as nervous and bumbling as ever when he was asking the girl out. Leslie was eager to observe this date happen, to see how Adam would interact.

The next day was the day of the date. That night, Adam stood leaning against the wall in front entrance of the restaurant with his cell phone in hand, pretending to look cool and unaffected and busy with a text message conversation, but really sneaking a glance up at the door every couple seconds, to make sure she hadn’t arrived. He took a brief break from his (fake) text messaging session to check his wrist, forgetting he was not wearing a watch. He blushed, hoping nobody had seen that (nobody had, as nobody cared enough to watch him except for Leslie, who was sitting at the bar, absentmindedly stirring her drink while taking notes on the small pad in front of her), and returned to pressing random buttons on his phone to diffuse the awkwardness of waiting. Leslie was rather amused by the whole situation; by trying to be less awkward, Adam was actually being more awkward.

After about five minutes of this, a girl finally entered. Adam’s date, a girl he’d met in the elevator at work, was pretty in a very plain sort of way. She was very indistinctive looking, which was possibly what attracted Adam to her. Together, they made a perfectly average looking couple. She looked around nervously, shifting her weight to different feet, before she spotted Adam, who was determinedly continuing his fake text message conversation and pretending he hadn’t noticed her, trying not to look too eager or like he’d been waiting long. Leslie watched as they said hello to each other, then watched as they sat down—in a booth, as Leslie knew Adam preferred. Leslie watched Adam order chicken parmesan, his favorite dish (Leslie’s favorite too, coincidentally) and marked on her notepad that everything was going according to her predictions. There was nothing that Adam had done so far on this date, just as in every social situation before, that she had not been able to see coming. Leslie drummed her pencil on the bar and continued to watch.

The pair seemed to be getting along well. The girl laughed at something Adam said, he grinned at her, and the conversation continued. Adam talked more and more as the date went on, opening up and becoming
less shy around the girl. The girl proved to seem less and less shy as the evening went on. She talked enthusiastically, waving her hands around. Adam seemed a bit taken aback at her at times, but overall, they both looked happy. As the date ended, Adam walked the girl to her car and kissed her on the cheek. Leslie smiled to herself; it was so very Adam for him to be so gentlemanly on a first date. The girl smiled and climbed in her car and remained smiling as she pulled out of the parking lot and began to drive away. Adam did the same, blasting music again from his car, a sign that he was happy.

On the ride back to follow Adam to his apartment, something hit Leslie. She had been so focused on Adam and how he was experiencing the world and things around him, she had never thought about the cost of unveiling him for what he was on him, or on the people he’d formed relations with. Until this night, Leslie had largely viewed Adam as an experiment. As a pet of sorts. It was the kiss Adam gave his date that finally made Leslie realize; to her he was a machine, a creation, while to everyone else he was a human. A person they were becoming attached to, a person they would feel betrayed by when they discovered what he really was. This newfound realization made her job much harder. She knew she would never be able to stop thinking about this from then on, as she observed Adam interact with people. How would they react when they found out? Did she really want to watch Adam continue on a relationship with this girl, only to a few months later reveal to the poor date of his, who seemed so happy at the end of the date, that Adam wasn’t real, and was going to be disassembled? The answer was, of course, no.

That night, Leslie tossed and turned in her sleep. Nobody suspected the truth. Adam had no idea, as far as Leslie could see, that he was any different from anyone else. He had acted as Leslie had expected and he had never deviated from how he was inherently programmed. Her experiment, so far, was a success, and to be honest Leslie could not see anything dramatically changing in the next couple months to make her experiment not a success. She had done what she set out to do. With the technology to create a new person, a new personality, well, to be honest, she wasn’t entirely sure what the purpose of such technology would be and what it would be used for. She had ideas, of course, but she would leave the fleshing out the ideas to the companies wanting to buy. Her plan was to hire good, expensive lawyers and have businesses pitch their ideas for the technology to her until she found one she liked enough to sell it to. But she had come up with the idea for the creation and she had done it. She had created life complete with a personality. It was a huge milestone in science, in technology, she would receive acclaim and recognition and awards…but what Leslie had not truly thought out was how it might be a huge step back in humanity. In how people viewed each other. What if the general public knew about people like Adam? What if many of them existed, integrated into society? Would people be constantly paranoid that their new friends, their loved ones, were in fact robots? Creations? Artificial personalities? Fakes? Or were they? Were they really fake? Adam didn’t seem to think so, and the attachments he’d formed were genuine to Adam’s friends and to Adam himself. So even
though Adam wasn’t human, did that mean he was truly not real? Leslie sighed. She didn’t know what to think anymore and she was getting a headache.

She never truly fell asleep that night; her mind was going too fast. Her alarm went off and she glared at it. She had no desire to go follow Adam today, to see him relaying the stories of his date to his friends, to see him interacting with this girl farther, to see him happy. Only to know that if everything went according to plan, all that happiness would be gone with the revelation of Adam’s identity. But she’d been working at this for so long. The ideal situation, on the surface, with the guilt she was feeling at the moment was to just let Adam live his life, to never tell anybody. But Leslie hadn’t discovered a way to make him age like any other human and if he ever got injured, medical professionals were bound to notice that he was a machine and lacking things like blood and organs.

There was no way he could go on living as a human secretly. He either needed to be shut down now and the technology destroyed, throwing years of Leslie’s work and devotion down the drain, or Leslie would have to go through with her original plan and reveal him to the world.

She rolled out of bed anyway and went to work observing Adam; the day was just as heart breaking and terrible as she’d expected. Adam spent the entire day smiling and she had to watch him “just happen to” walk by his date from last night’s office, although the girl was in a different department on a different floor and they both knew he had no logical reason for being there. Even at the bar later, when Adam was laughing with his friends, an act which had never bothered Leslie before, she couldn’t get the idea that the relationship he was with these friends of his would end as soon as the revelation occurred. They would feel hurt, betrayed, and confused. Some might go on to brag later about how they were friends with the first robot; some might genuinely miss Adam’s company; some might be scared by the whole experience. Leslie could predict Adam. She could predict his reaction to a sad moment in a TV show, how he would approach someone he was meeting for the first time, what he would order at a restaurant, the kind of people Adam would be attracted to for relationships and friendships. These human people, though, Leslie could not begin to predict. And that, Leslie realized, was the prime difference between Adam and the rest of the world. He seemed fully integrated. He seemed like a human. But he never would be. Not as long as Leslie knew she’d created him.

That night, as Adam was sitting in his apartment, watching TV before it was time to go to bed, he did something unusual. He called the girl. At that moment, Leslie made a decision. She couldn’t let this continue. She exited her car without a moment’s hesitation, slamming the door behind her. She marched up to his apartment on the second floor and banged on the door. Adam opened the door a few seconds later, his cell phone still held to his ear. “One second,” he mouthed to Leslie, telling the girl on the phone that he had to go but he would talk to her tomorrow. Once he’d hung up, he turned his attention to Leslie. “Can I help you?” he asked politely, looking taken aback to find a strange woman in her forties
on his doorstep.

Leslie stared at Adam, at the man she’d created. She’d grown attached to him in observing him. But, after everything, it was like he was a character on a TV show to her. Because she knew he, like characters, was written and scripted and, as much as he seemed real, he just wasn’t. She cared about him and about what happened to him, but ultimately, Leslie knew, he was fake. It might seem real, but it wasn’t. And the world wasn’t ready for it.

Leslie drew in a shallow breath, tears forming at the corners of her eyes. She took the phone from a dumbfounded Adam and closed it quietly.

“Goodbye, Adam,” she said quietly. Adam had barely a moment to register what was happening before Leslie pulled the device with the button out of her pocket.

“What…” Adam started, but it was too late. Leslie pushed the button. Adam’s face wiped of any emotion and his eyes closed. He was gone, and it was as simple as pressing a button. He would be remembered as real among those who didn’t know, but Leslie knew. A human hadn’t died just then. She hadn’t killed Adam. She had just written the character off the show.