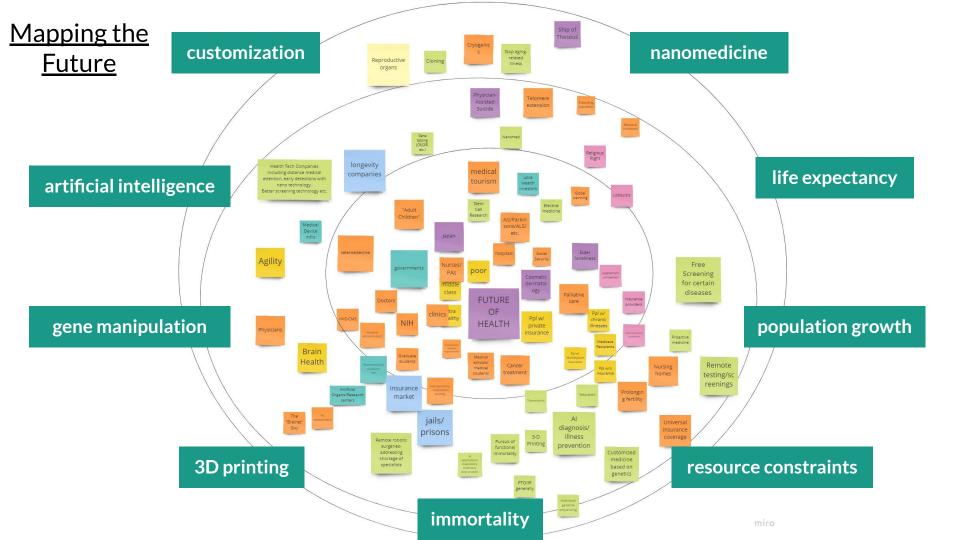
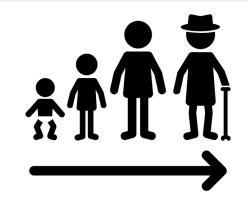
The Future of Healthcare

Nicholas Elger | Amanda J. Ray | Antonia Todorov | Kaan Yamanturk | Garrison Coward

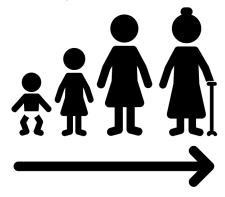


Aging: The Future of Healthcare

- Anti-aging industry currently valued at \$110 billion; estimated to be worth \$610 billion by 2025
- Research areas include nanomedicine, tissue regeneration, genetic manipulation, cryogenics, and beyond



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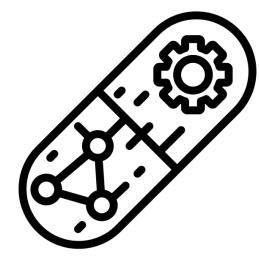
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Probable Future

Miracle Grow

A Pill for What Fails You

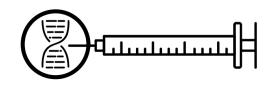
When Margaret Jones, age 52, was diagnosed with Stage IV Breast Cancer, she was distraught. Tens of thousands of Americans die each year from the disease; those that survive typically face harsh chemotherapeutic treatments. But when her oncologist referred her to a study led by Dr. Erica Johnson at Stanford University, her hope was renewed. Combining traditional imaging methods with genomic sequencing, Dr. Johnson's team created a pill - no larger than a Tylenol - that combined tiny machines called nanorobots with anti-inflammatory drugs, stem cells, growth factors, and RNA sequences which, in combination, worked to kill cancer cells, re-grow healthy cells, and change Jones' very DNA to eradicate the faulty genes that had allowed cancer to ravage her body in the first place.



Created by dDara from Noun Project

Customized Nanomed Approaches to Disease

- Commercial genome sequencing is becoming cheaper and faster and can facilitate customized therapeutics
- CRISPR technology can be used to eradicate disease-causing genes
- Nanomedicine will allow targeted, non-invasive delivery of life-saving treatments
- When combined, we can dramatically reduce rates of cancer and other age-related diseases



Created by Emily Akins from Noun Project

Plausible Future

"When Will I Finally Die?"

Chronic Psychological Ailments Plague 1 in 3 Americans Over 130 Years

"There's no end in sight, and I'm afraid I will never die." Stephanie Smith, age 140, is on her third full body cycle and wonders when it will be physically possible to die. Stephanie, like her fellow Millennials and Gen Zs, suffers from an advanced-age psychological disorder called Foreverism - the fear of living forever. The study was conducted by GoogleHealth AI, which combed through data from 1.5 million Oura Ring users and found that 1 in 3 suffered from chronic overexertion in the amygdala and visual cortex, the areas of the brain associated with anxiety and visualizing the future.



Source: iStockphoto.com

Other headlines from 2110:

Fox News: Family Accused of Keeping 144 Year Old Great Great Great Great Grandma Alive for "Crazy Stories From the 1990s"

Aging Slows and Reverses; Humans Commonly Live into Mid-100s

- Replacement organs and tissues are common
- AI /CRISPR technology has combined to proactively address ailments
- New medical practices and education emerge to cater to supercentenarians
- Human life expectancy increases in the US thanks to universal healthcare; so, too, does retirement age
- Older adults continue to hold skilled jobs, while automation has replaced many low-wage careers
- New high school and college graduates find themselves increasingly squeezed out of the job market
- Women can reproduce later in life, shattering glass ceiling and eliminating pay gap
- Private companies like Google will facilitate research using AI
- Dogs, cats and other pets will also live longer; forever puppies and kittens will be mainstream
- New "ageless society" with Millenials and Gen Z pioneering the beginning of the end of death

Possible Future

Peter, 10, Sues Parents for Right to Grow Up

Case of Boy Born 60 Years Ago Expected to Reach Supreme Court

On July 16, 2120, Peter Doe will be celebrating his 10th birthday... for the 51st time. To celebrate, he will be taking his parents to court, suing for his right to be freed from the regimen of growth-suppressing drugs that have been used to arrest his mental and physical development since 2070. Constitutional scholars expect the case, brought in part by aging rights organization Neverland No More, to reach the Supreme Court. Neverland No More argues that the 1st and 14th amendments protect the right of children to grow old.



Source: https://www.supremecourt.gov/

Aging is Stopped, Leaving Humans Suspended in Time

- The first "ageless" humans choose to halt their growth process in their 20s and 30s
- Population distribution disparities arise from parents arresting their children's development
- Ethical questions arise around a child's right to choose
- Age-arresting drugs become controlled substances, and use on minors becomes punishable with harsh fines and jail time
- Social benefits programs collapse as elders choose to cease aging immediately upon reaching retirement age



Source: dailysignal.com

Implications for the Present

Safety Net

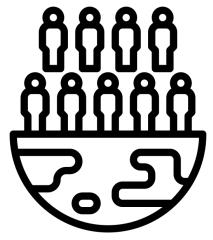
- 44% of Americans 65+ live paycheck to paycheck via government programs and retirement vehicles
- Average life expectancy of 78.25 years and rising, giving way to "super-elders" and larger population
- Will retirement age increase, or will elders dedicate their later years to leisure?
- Plan for benefits programs to grow or collapse as elders choose to pay into or draw from programs as they age



Source: youtube.com

Population Growth Implications

- Beyond healthcare, growing population has implications for industries including:
 - Energy and climate
 - Food and agriculture
 - Housing
- The choices we make today will influence the health, happiness, and human experience of our future super-elders.



Created by Nithinan Tatah from Noun Project

