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Heaven on Earth: Virtual Retirement

The UK's population is ageing. As fertility rates fall and life expectancy increases, the proportion of society which is aged over 65 (pensioners) is growing: rising from 14.2% in 1976 to 18% in 2016 to a predicted 24.7% in 2046[1]. This creates pressing economic and social challenges.

The main economic challenges are that pensioners require more hospital time, medicine and professional care than younger people. These challenges arise because they are more likely to injure themselves, due to the physical limitations of their ageing bodies; and more likely to fall ill, due to their weaker immune systems. Even those who are healthy and independent draw a pension taxed from the working population, an obvious economic challenge as the proportion of pensioners rises.

A knock on social challenge is that these costs can reduce family sizes. The working population cannot support as many children if they are devoting more time and money to care for their elderly parents. This issue is self-perpetuating because fewer children means a smaller future workforce to support those same parents into old age and the cycle repeats.

Another large social challenge is that pensioners often get lonely and depressed. Particularly in care homes, removed from their home and neighbours, they can become isolated as they lose contact with friends and family. Poor eyesight, impaired hearing and reduced mobility also inhibits them from doing many hobbies, leading to boredom. Isolation and boredom cause loneliness and depression.

Conventional options to solve the economic challenges include increasing the retirement age or reducing the state pension payments. Both ideas reduce people's taxes. Conversely, increasing taxes is a core idea for addressing social challenges: Investing in care homes and providing better care requires tax money.

But what if there existed a more radical solution? A solution that uses new technologies to improve pensioners' health, lifestyle and lifespan whilst simultaneously reducing the costs to the rest of society. A solution inspired by the Matrix's 'Pods' and Futurama's 'Near-Death Star': complete Virtual Reality (VR).

Commercially available VR headsets can already immerse people in convincing, computer generated worlds. High resolution displays, focused directly onto the retina by intricate optics, could allow pensioners to enter such simulations. Free from their physical bodies they would regain their full mobility and senses to go anywhere and do anything they want in VR, mitigating boredom. Connecting online, they could meet and do activities with their family and friends, wherever they are, mitigating loneliness.

However, current VR set ups use mouse, keyboard or motion controls, all of which require user movement. This might be unsuitable for pensioners who are unfamiliar with such input devices or have lost fine motor control. These devices are also limiting by nature: control schemes can only map so many movements to a limited set of buttons; virtual movement would not be fully natural.

One possible, futuristic solution to this control problem would be to map their entire nervous system directly to the VR input. Incomplete nerve mapping already exists in cutting edge prosthetic limb technology today. Extrapolating the current ability to control a single robotic

[1] According to the Office for National Statistics

hand with the mind to an entire virtual body would allow pensioners to assume full control of their virtual self, perhaps to the extent that it would be indistinguishable from their own body.

Going further still, this same mapping could be used by VR for feedback. If scientific research comes to understand the human body well enough, the VR could pass by the ageing sensory organs and directly send the brain electrical impulses to simulate sound, smell, touch, taste and even pain. Every aspect of real life could potentially be replicated, given a detailed simulation and high-resolution nerve mapping. And, being completely artificial, this virtual life would be fully under the pensioners control. It would be like Heaven on Earth.

Crucially, all that is required of the pensioner to experience this VR is their brain and nervous system. The rest of their body would be redundant to their conscious existence, only required for life support, and could therefore be maintained in a capsule. This is the aspect that benefits the rest society.

Suspended in fluid and immobile, pensioners could be supplied liquified food, medicine and air and removed of waste by an array of tubes. Medical sensors, free to be placed/inserted wherever due to the irrelevancy of mobility, can then monitor vitals to automatically provide the right medicines in the correct dosages or, if required, to alert medics for surgeries. This type of healthcare would catch any issues early, improving the chance of treatment being effective and reducing associated costs. Environmental sensors could likewise regulate capsule fluid temperature, viscosity and salinity.

This personalised, efficient and automated allocation of resources would cost orders of magnitude less than the costs of food, medicine, fuel and human carers in a sprawling care home. The lack of bodily movement would eliminate joint wear and the chance of accidental injury, and the pathogen free nature of the capsule could eliminate most illnesses. Both features would increase lifespan.

Further, homing pensioners in such capsules would be space efficient. They could be stacked in warehouses so that medical resources could be concentrated. The care would be of better quality, cover more people and cost less. Such warehouses would also benefit from the economies of scale as the networks of tubes, wires and computing power could similarly share distribution centres.

The engineering skill applied in this essay is balancing creative and logical thought. Creativity is required to generate an idea radical enough to solve problems of this scope. Logic is required to identify the suitable technologies and apply them in the appropriate ways to make the idea feasible. That is why this essay references existing technologies such as VR headsets and prosthetic limbs to make VR capsules a plausible solution.

Fully realised, VR capsules would provide better, cheaper care than current care homes. Ethics and current technological limitations are the idea's main drawbacks.