

Change alone is eternal, perpetual, immortal- pharmacological immortality in science fiction

¹Victor Grech MD, PhD(Lond), PhD(Melit), FRCPCH, MRCP(UK), DCH

²Clare Vassallo BA(Hons), PhD (Bologna)

³Ivan Callus BEd(Hons), BA(Hons)(Lond), MA, PhD(Cardiff)

¹ Consultant Pediatrician (Cardiology) and Associate Professor of Paediatrics, Humanities and Medical Science Programme, University of Malta

Email: victor.e.grech@gov.mt

² Senior Lecturer, Translation and Interpreting Studies, Humanities and Medical Science Programme, University of Malta

Email: clare.vassallo@um.edu.mt

³ Associate Professor and Head, English Language Dept, Humanities and Medical Science Programme, University of Malta

Email: ivan.callus@um.edu.mt

Key words

Longevity, pharmaceutical preparations, interdisciplinary studies, medicine in literature, infertility

Immortality is a common feature in science-fiction (SF). This paper lists the ways in which the pharmacological induction of immortality has been depicted in SF, and the resultant outcomes. Immortality or extreme longevity are often melded with infertility in order to eliminate the overpopulation issues that would inevitably arise. This is only one way in which theoretical utopias which afford life extension become dystopias, cautionary tales that admonish against hubris. In this fashion, SF attempts to divine the paths that scientific discoveries or future events reveal to us, and the possible consequences that our decisions may have, whether taken advisedly and with due deliberation, or carelessly with no attempt to discern the consequences of our actions.

Introduction

Medicine's fundamental role may be simply defined as the establishment of a disease-free utopian milieu since arguably, the ultimate utopia would be a healthy and immortal society. Immortality is a common feature in mythology and explores not only our desire to avoid the undiscovered country, but also the individual and social

sequences of longevity. For example, the mythical Tithonus was granted immortality without accompanying youth, destined to an existence of increasing decrepitude,¹ prefiguring the Struldbrugs in Swift's *Gulliver's Travels* (1726).²

Immortality in SF has been extensively reviewed in critical literary works, and specifically, Miller (a neurobiologist) has

very practically addressed 'what little is known of the biology of aging and death' as well as known biological methods for life prolongation such as hibernation and extreme diets.³

Science fiction (SF) frequently deals with *outré* concepts in 'what if?' *gedankenexperiments*. This paper arises from a Ph.D. dissertation dealing with the wider topic of infertility in SF,⁴ and will list the ways in which the pharmacological induction of immortality has been depicted in SF, and the resultant outcomes.

Narratives

In *They Shall Not Die* (1939), a drug is available that prevents all disease and leads to extreme longevity but as an unavoidable side-effect, sterilises all those who take it.⁵ A similar situation is depicted in *Life Everlasting* (1934), when a maverick scientist develops a serum that confers extreme longevity and corrects physical defects, but is afraid to try it on his son, who has an incurable disease. He therefore tries it out on four fellow roomers who also live in his rooming house, and when it works, he makes the serum public. Unfortunately, this also causes sterility in all who take it, and the scientist shrugs this off as, after all, the serum would otherwise lead to massive overpopulation.⁶ Yet another similar situation is portrayed in *The Mordant* (1930) where an elixir provides immortality at the price of sterility and a stifling of the soul.⁷

This trope is explored in more detail in *Welcome, Chaos* (1985), wherein a small group of scientists develop a drug that kills half of the individuals that ingest it and confers immortality and sterility on the remainder through an immunological method that renders the individual immortal, freezing the individual's age at the time when the drug is taken.⁸ In a rather anticlimactic ending, the group discovers out that women can overcome their immunological response to sperm via yoga techniques. The professions are hardly mentioned in this novel and one questions whether such a small group of true scientists would not have realised that they did not have a large enough sample of humanity to test this drug adequately, and in the circumstances, ethically.⁹

In *One Million Tomorrows* (1970), immortality is available in drug form, but males that take the drug lose their sex drive.¹⁰ For this reason, most men take the drug when their innate sex drive wanes due to advancing age.

Key points

- Immortality and extreme longevity feature commonly in science fiction (SF).
- This paper lists the ways in which the pharmacological induction of immortality has been depicted in this genre.
- Infertility and other unpleasant outcomes are often portrayed as resulting from this therapeutic overreaching.
- SF thus offers thought experiments that might help to guide our decisions with regard to extraordinary events or possibilities, including fantastic pharmacological interventions.
- Hence, SF provides cautionary tales that rebuke potential scientific hubris.

Earthchild (1982) complicates matters further by the initially covert introduction of a drug to food and water supplies. This drug confers immortality only if administered to prepubertal children, who are also rendered sterile as an inevitable side-effect.¹¹ This leads to some adults violently turning against children in envy, and governments are forced to protect these children in special camps. However, yet another side-effect is discovered: the loss of individual creativity. Thus, before the onset of puberty, children must decide whether to retain their creativity and fertility or lose both in order to attain immortality.

More prosaically, *The Sweeper of Loray* (1959) depicts an alien village where an endemic vegetable lengthens lifespans significantly but reduces the village's birth rate, a herbal remedy.¹²

Aliens confer immortality through a substance that is imbibed in water while slowly causing human sterility in *The Waters - Book One - The Valley* (2008).¹³ Fortunately, in the sequel *The Waters - Book Two - Contact* (2009), the aliens return to rectify this unforeseen side-effect.¹⁴

Discussion

Infertility and immortality (or extreme longevity) are frequently melded in SF narratives, for the simple reason that any process that simultaneously induces immortality and infertility neatly eliminates the otherwise inevitable resultant overpopulation, allowing the narrative to concentrate on the ramifications of immortality only.

Thus, theoretical utopia leads to dystopia in these narratives, stories that ultimately constitute cautionary tales with regard to overreaching. In this case, immortality would constitute a form of transhuman metamorphosis,¹⁵ which is depicted as a Faustian type of bargain, as influentially discussed in *The Overreacher: A Study of*

Christopher Marlowe (1952). This book discusses Marlowe's *Faustus* (Latin for 'auspicious'), a highly successful scholar who is dissatisfied with life and enters into a pact with the devil, pledging his soul for a fixed number of years of unlimited knowledge and worldly pleasures. Levin compares Faustus with Icarus, Simon Magnus and Cornelius Agrippa, other overreachers representative of the scientific community who succumb to temptations that they provide for themselves.¹⁶

Thus, these narratives pose the question: 'long can we defer death and still remain 'human'?'¹⁷ with sterility and other undesirable effects as chastisements for overreaching or instantiating an 'unnatural' state.

However, this scenario is the exception in SF where the inherent optimism of the genre only infrequently imposes infertility or sterility as the price of longevity or immortality, in a switch from the mammalian 'disposable soma' theory which states that ageing is neither useful individually nor racially, and summarises a species' options as one of these two: to expend what is effectively a finite amount of energy in maintaining stable individual organisms with multiply redundant systems, and such individuals would be virtually immortal. Or to expend energy in a process of accelerated development and sexual reproductive potential, engendering offspring at the price of cumulative metabolic errors in the individual that will result in ageing and eventually death of the disposable soma (body), with a high level of accuracy maintained only in the germ line cells.¹⁸

The possibility of extreme longevity or immortality has also been discussed in the scientific literature, and state or societal imposition of measures that would limit population have been raised. An interesting possibility is to limit the right to reproduce only after eventual death, or to forfeit this

right to subsequent antiagathic therapies should individuals decide to reproduce.¹⁹

In conclusion, SF attempts to fathom the paths that scientific discoveries or future events may open to us, and possible consequences that our decisions may have, whether taken advisedly and with due deliberation, or carelessly, 'to neutralise the future, to remove the natural fear that humanity feels for the unknown.'²⁰

References

1. Hard R. *The Routledge Handbook of Greek Mythology*. London: Routledge; 2004.
2. Swift J. *Gulliver's Travels*. London: Middle Temple Gate; 1726.
3. Miller JD. Living Forever or Dying in the Attempt: Mortality and Immortality in Science and Science Fiction. In: Slusser George et al editors. *Immortal Engines: Life Extension and Immortality in Science Fiction and Fantasy*. Athens: University of Georgia Press; 1996.
4. Grech V. *Infertility in Science Fiction*. University of Malta. 2011 (Unpublished Doctoral Thesis).
5. Parkinson HF. *They Shall Not Die*. London: Constable and Company Ltd.; 1939.
6. Keller DH. *Life Everlasting*. *Amazing Stories*. July-August 1934.
7. Eberle M. *The Mordant*. *Amazing Stories*. March 1930.
8. Wilhelm K. *Welcome, Chaos*. New York: Berkley Publishing Group; 1985.
9. Bodenheimer T. *Uneasy Alliance - Clinical Investigators and the Pharmaceutical Industry*. *New England J Med* 2000;18: 1539-44.
10. Shaw B. *One Million Tomorrows*. New York: Ace Books; 1970.
11. Webb S. *Earthchild*. New York: Atheneum Publishing; 1982.
12. Sheckley R. *The Sweeper of Loray*. *Galaxy*. April 1959.
13. Voris J. *The Waters - Book One - The Valley*. Morrisville: Lulu; 2008.
14. Voris J. *The Waters - Book Two - Contact*. Morrisville: Lulu; 2009.
15. Thacker E. *Data Made Flesh: Biotechnology and the Discourse of the Posthuman*. *Cultural Critique* 2003;53:72-97.
16. Levin H. *Science Without Conscience*. In: *The Overreacher: A Study of Marlowe Christopher*. Cambridge: Harvard University Press; 1952.
17. Lee J. 'We Are All Kin': Relatedness, Mortality and the Paradox of Human Immortality. In: Slusser G. et al editors. *Immortal Engines: Life Extension and Immortality in Science Fiction and Fantasy*. Athens: University of Georgia Press; 1996
18. Kirkwood TB, Holliday R. *The Evolution of Ageing and Longevity*. *Proc. Royal Soc. London B Biological Sciences* 1979; 205: 531-46.
19. Harris J. *Essays on Science and Society: Intimations of Immortality*. *Science* 2000; 59: 288.
20. Gunn J. *Inside Science Fiction: Essays on Fantastic Literature*. San Bernardino: The Borgo Press; 1992.