



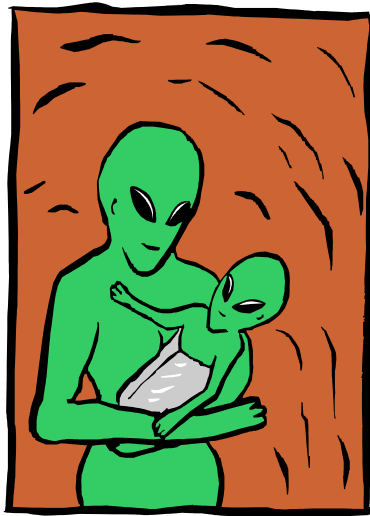
The WSFA Journal

Summer 2011

Alien Infertility in Science Fiction

Part I

By Victor Grech, Consultant Pediatrician (Cardiology) and Associate Professor of Pediatrics, University of Malta; Clare Thake-Vassallo, Senior Lecturer, Translation and Interpreting Studies, University of Malta; and Ivan Callus, Associate Professor and Head, English Language Dept., University of Malta.



Introduction

Alien infertility has been a frequent theme in science fiction (SF), as a novum with which authors challenge us with fresh concepts, or as an allegory for the human condition. Humanity is often implicated in these stories, either as a helper, or as an antagonist or simply as an observer.

Virtually every significant scientific advance, medical progress included, gives rise to a new challenge for moral philosophy. Thus, while modern medical techniques have greatly enlarged and refined humanity's choices, decision-making by individuals becomes progressively more problematic, and these apparent paradoxes are all potential grist to the SF author's mill, particularly with the tension of further complicating factors that appear to be logical prefigurations stemming from current medical techniques. This is particularly evident in the field of infertility, a branch in medicine that is traditionally dealt with by specialists in obstetrics and gynecology.

Some definitional considerations would be appropriate at this stage, and the International Council on Infertility Information Dissemination (INCIID) considers a couple to be infertile (or subfertile) if they have not conceived after a year of unprotected intercourse in women under 35 years of age, or after six months in women over 35 years of age, and in women who are incapable of carrying a pregnancy to term.¹ Medically, infertility is subdivided into two broad types: secondary infertility is the inability to have a child after having conceived at least once, while primary infertility is the inability to ever conceive.²

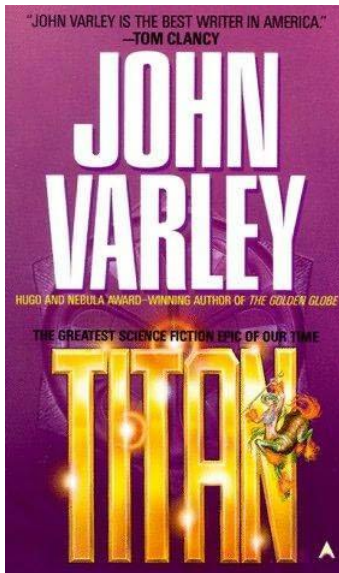
The difference between infertility and sterility is that a sterile individual is unable to contribute to the conception of a child at all, whereas an infertile individual can potentially contribute toward a successful pregnancy but is prevented from doing so by one or more physical or psychological factors. For the purposes of this paper, the terms will be used loosely and occasionally interchangeably since the intersection will invoke any aspect that leads to reduced fertility and not just to outright sterility.

Infertility may arise from a multitude of causes and is not an uncommon problem. It is estimated that about 10% of couples in the developed world experience infertility, and that this number rises up to 30% in developing countries where sexually transmitted diseases are more rampant due to lack of prevention (contraception and education) and treatment. In the 1960s, syphilis and gonorrhea were the only significant sexually transmitted diseases and were easily treated with penicillin. Today there are over twenty known diseases with an estimated twelve million newly infected individuals each year, and over half of these infections occur in persons under the age of twenty-five, with increasing rates of antibiotic resistance. These diseases damage the reproductive organs of both sexes, sometimes irreparably, with a resulting loss of fertility that may be permanent.³ Moreover, both sexes in developing countries are exposed to higher levels of dietary and environmental toxins, including cigarette smoke, than populations in developed countries, and such toxins are known to depress fertility due to their deleterious effects on gametes.⁴

The paper will attempt to review all aspects of alien infertility in SF, and will relate these sub-tropes to real-life parallels, where available. An interdisciplinary flavour is inevitable as the author is a medical doctor.

Narratives

Varley's *Gaea* trilogy 'constructs a supreme cyborg in his arch-feminist exploration of Gaea, a mad goddess-planet-trickster-old woman-technological device on whose surface an extraordinary array of post-cyborg symbioses are spawned'.⁵ Gaea is a sentient, massive (1300 km in diameter) hollow satellite whose internal surface is inhabited, and contains dozens of separate and different ecologies in her various sections.⁶ Virtually all of her internal machinery is organic, slowly wearing out and malfunctioning. Gaea is half-demented and has gold-like powers to design, engineer and create animals and intelligent beings in her interior and toward the end of the trilogy, Gaea's



¹ The International Council on Infertility Information Dissemination, *General Infertility FAQs* (INCIID: 2010) <<http://www.inciid.org/faq.php?cat=mindbody&id=1>> [Accessed 09/11/2010].

² Ibid.

³ The Alan Guttmacher Institute, *Why is Teenage Pregnancy Declining? The Roles of Abstinence, Sexual Activity and Contraceptive Use* (New York: The Alan Guttmacher Institute, 1999).

⁴ M. F. Vine and others, 'Cigarette Smoking and Sperm Density: a Meta-Analysis' *Fertility and Sterility*, 61 (1994), 35-43 and Z. Kmietowicz, 'Smoking is Causing Impotence, Miscarriages, and Infertility', *British Medical Journal*, 328, (2004), 364, and J. R. Di Franza and R.A. Lew, 'Effect of Maternal Cigarette Smoking on Pregnancy Complications and Sudden Infant Death Syndrome', *The Journal of Family Practice*, 40 (1995), 385-94.

⁵ Donna J. Haraway, *Simians, Cyborgs, and Women* (New York: Routledge, 1991), p. 179.

⁶ John Varley, *Titan* (London: Futura, 1979).

dementia progresses to the point where her physical manifestation (a giant woman) frequently gives birth to chaotically formed creatures that are usually sterile.⁷ In one of her more lucid states, Gaea creates two intelligent species, a centauroid race and a flying species resembling biblical angels. These two species are imbued with an irrational hatred toward each other for the sole purpose of studying war, a concept Gaea discovered from human television broadcasts. Two female astronauts who find themselves involuntarily impregnated by Gaea in *Titan* (1979) persuade the centauroids to perform abortions.⁸

The protagonist also finds that Gaea has imposed fertility control on the centauroids through her, in that her salivary glands secrete a chemical that the centauroid eggs need prior to fertilisation.⁹ Incidentally, the centauroids have genitalia between both anterior and posterior limbs and are able to have sex with humans using the anterior set of genitalia, a deliberate Gaean design. However, such unions are logically infertile.

As in *Invaders from the Rings*, the invasion of Earth is provoked by infertility in the Gerry Anderson 1970s series *UFO*, except that, on this occasion, it is alien infertility that prompts this aggression.¹⁰ The reasons for the alien abduction of humans is uncertain but we are told that the aliens are a dying race because of hereditary sterility due to extremely low sperm counts, an oxymoron at face value but potentially true in that an advantageous recessive gene that causes sterility if inherited homozygously would accumulate very quickly in a small population pool.¹¹ In the case of the aliens in *UFO*, having such a recessive gene would not render any of the two parents sterile but a quarter of their offspring would be, and half of their offspring would be carriers. Being a carrier may imbue the aliens with some unknown survival advantage.

Sickle cell anemia is one such example where the inheritance of one copy of the gene from one parent confers increased resistance to malaria while the inheritance of both genes from the parents, resulting in the homozygous form, is devastating.

Infertility has also been depicted as a warfare stratagem used by aliens against humanity. For example, in *The Hollow Men* (1998), men become sterile if they leave the area around an English town, and this is found to be an undesired side effect of an alien mutation intended to liberate the alleged untapped psychic potential of the human mind, enabling aliens to make slaves of humanity.¹² And in Roddenberry's TV series *Earth: Final Conflict* (1997),¹³ aliens deposit implants into human brains in order to enslave humanity and to help produce human-alien hybrids that will solve the problem of their own infertility.

Alien infertility leading to warfare is also seen in *Hunter's Moon* (1985) on the extra-solar planet Medea. There are two intelligent species native to Medea: fuxes and balloons. Fuxes are six to eight legged creatures that resemble a cross between a fox and a centaur while the balloons are literally balloons filled with hydrogen for buoyancy. The two species coexist peacefully and when balloons die, they drift to the ground and decompose or are eaten by fuxes. However, in a circumscribed area of Medea, the balloons change this behaviour pattern, allowing themselves to drift off and die elsewhere. Shortly afterwards, the fuxes experience an increased incidence of miscarriages and infertility and blame this on the balloons' new and unnatural behaviour. The fuxes therefore launch a war of extermination against the balloons and feel vindicated when they discover that fuxes that eat balloons subsequently give birth successfully. The human colonists discover that balloons concentrate manganese, a trace element that is vital for the fuxes' fertility, and the humans therefore abort the war by providing the fuxes with manganese themselves.¹⁴

⁷ John Varley, *Demon* (New York: Berkley, 1984).

⁸ Varley, *Titan*.

⁹ John Varley, *Wizard* (New York: Berkley, 1980).

¹⁰ For a review of the series, see Chris Bentley, *The Complete Book of Gerry Anderson's UFO* (Surrey: Reynolds & Hearn, 2003).

¹¹ See D. S. Pouniotis and others, 'Malaria Parasite Interactions with the Human Host', *Journal of Postgraduate Medicine*, 50 (2004), 30-4.

¹² Keith Topping and Martin Day, *Doctor Who: The Hollow* (London: BBC Books, 1998).

¹³ Gene Roddenberry and others, *Earth: Final Conflict*, CTV, October 1997-May 2002.

¹⁴ Poul Anderson, 'Hunter's Moon', in *Medea - Harlan's World*, ed. by Ellison.

There is a human parallel here in that deficiency in vitamins or trace elements may well result in morbidity and mortality in the developing human fetus. Probably the most well-known and preventable cause of foetal malformation in humans is folic acid deficiency which predisposes to neural tube defects such as spina bifida.¹⁵

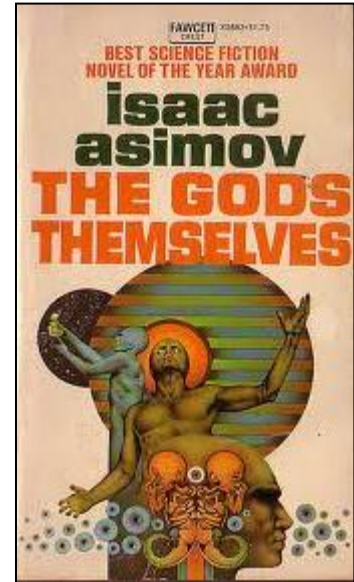
Alien infertility that prompts a stealthy attack on Earth and humanity is seen in Asimov's *The Gods Themselves* (1984). The alien inhabitants of a planet in a parallel universe are trisexual and the sexual act requires the absorption of energy from sunlight. However, the aliens' sun is waning, and the aliens therefore manipulate the transfer of energy from this, our universe, to theirs, a process that will eventually lead to the explosion of our sun.¹⁶ An interesting twist on trisexuality is depicted in *Cluster* (1977) when the protagonist accidentally crosses a boundary zone that is meant to be a buffer between the three genders of an alien species since the simultaneous physical presence of all three sexes causes an overpowering mating urge, an act that automatically results in reproduction.¹⁷

Aliens disastrously attempt to heal another alien species' infertility in White's *The Genocidal Healer* (1992),¹⁸ a *Sector General* story¹⁹ that deals with a species that is struck by an epidemic, sexually transmitted disease that causes general debilitation of the host and is also passed on to the offspring at conception or at birth. The series concerns a gigantic, 384-level hospital located in deep space, specifically designed to treat a wide variety of alien life forms and to house its equally diverse staff, with the ability to duplicate the living conditions for any species, and to reproduce suitable environments for previously unknown alien species. The series spans twelve books over four decades and stories revolve around exotic alien diseases: their aetiology, diagnosis and cure.

Diseases that are sexually transmitted, and are also transmitted vertically, are well known and documented. A classic example is HIV – the virus responsible for AIDS – which is spread by sexual contact or sharing needles or syringes with someone who is infected, or by the transfusion of unscreened blood or blood products. Babies born to HIV-infected mothers may become infected before or during birth, or through breast-feeding after birth.²⁰

The disease depicted in this story also weakens the endocrinological system which is vital for reproduction in almost all animal species, and also causes delayed puberty, postponing the age at which individuals become fertile. The aliens therefore fight each other in hand-to-hand pitched battles in order to arouse passion, emotions and energy to a sufficient degree so as to allow mating to take place, implying gamete preparation stimulated by the sexual act, a feature that is also common to certain Earth fauna and perhaps the most well described species is the common rabbit.²¹ Because of their declining population levels, the aliens all move to large cities in the tropics so as to conserve resources.

To Be Continued. Next Issue – Trek!



¹⁵ K. M. Laurence and others, 'Double-Blind Randomised Controlled Trial of Folate Treatment Before Conception to Prevent Recurrence of Neural-Tube Defects', *British Medical Journal*, 282 (1981), 1509-11.

¹⁶ Isaac Asimov, *The Gods Themselves* (New York: Del Rey Books, 1984).

¹⁷ Piers Anthony *Cluster* (New York: Avon, 1977).

¹⁸ James White, *The Genocidal Healer* (New York: Ballantine Books, 1992).

¹⁹ James White, *Hospital Station* (New York: Ballantine, 1962) was the first in the series.

²⁰ C. Thorne and M. L. Newell, 'Prevention of Mother-to-Child Transmission of HIV Infection', *Current Opinion in Infectious Diseases*, 17 (2004), 247-52.

²¹ See M. L. Centeno and others, 'Expression of Alpha4 and Alpha7 Nicotinic Receptors in the Brainstem of Female Rabbits After Coitus', *Brain Research*, 101 (2004), 1-12.