Foundation
The International Review of Science Fiction
135

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Cover image: Map of the Hunt-Lenox Globe (1510), bearing the inscription '*Hic sunt dracones*' on the south-east coast of Asia

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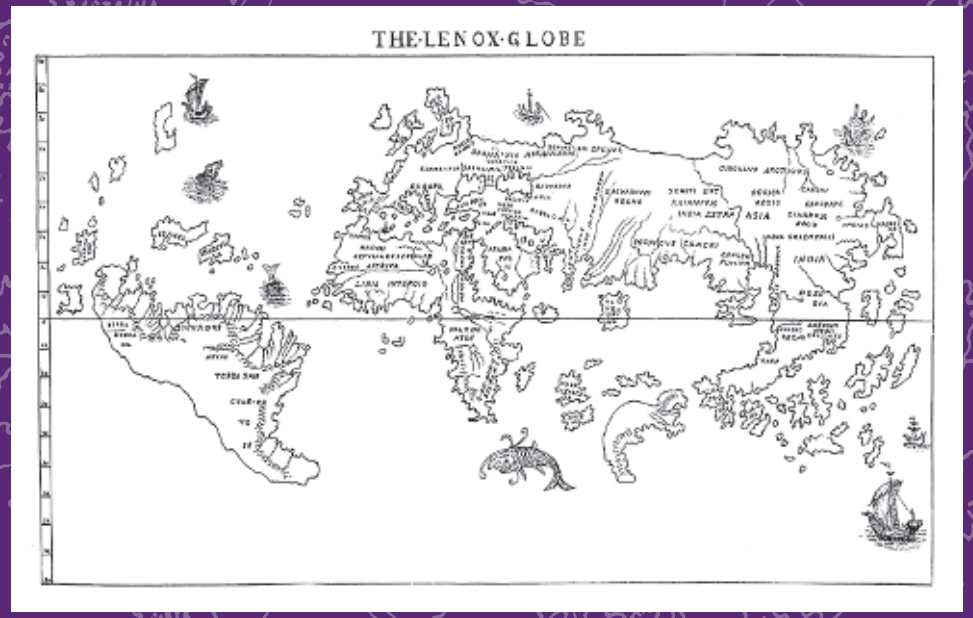

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The International Review of Science Fiction

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Reviews

Editorial

Paul March-Russell

I am writing this editorial twelve days before the stroke of the midnight hour, when the world sleeps, and Britain either wakes up to life and freedom or a *Mad Max*-styled industrial wasteland. Jawaharlal Nehru, in his 'Tryst with Destiny' speech (1947), famously argued that 'A moment comes, which comes but rarely in history, when we step out from the old to the new, when an age ends, and when the soul of a nation, long suppressed, finds utterance.' But, when modern historical studies have, at the very least, qualified the notion of the turning-point or discredited it altogether, why do we continue to believe in its potent imagery?

Perhaps because the myth of the turning-point is quite so potent. From the various apocalypses in world religions to Robert Frost's road 'less travelled' and films such as *Sliding Doors* (1996), let alone the entire subgenre of alternate history, we are drawn to thinking of our own lives as narratives built around pathways either taken or not taken. We speculate upon what might have been, and what might still be. Science fiction is almost instinctively drawn to such narratives. and the 'Jonbar Point' – derived from Jack Williamson's *The Legion of Time* (1938) – is perhaps the best-known instance of such a story.

And yet, the turning-point is a myth. History, as Leo Tolstoy suggests in *War and Peace* (1865–69), is built from innumerable incidents and accidents, the causes and effects of which are incalculable to discern, let alone deciding upon any one as a definitive turning-point. Will Brexit Day result in either Paradise or Hell? Almost certainly not; much more likely is the mess, chaos and noise that is the raw material of lived history.

And then again – as Caroline Lucas has averred – the long-term effects of Brexit are minuscule compared with the slow-moving hyperobject that is the Anthropocene. Do the Australian bushfires represent a game-changing event in how governments and corporations respond to the climate emergency? Only time will tell (which is worrying, since time is what we are short of). Can the myth of the turning-point be turned to the advantage of climate change protestors?

Myth is illusory, but no less political for all that, since myth – rather than hard facts – tends to be what motivates large movements of people. In a recent article for *Sci Phi* (December 2019), Jim Clarke conflated the hauntological reclamation of lost futures with misty-eyed nostalgia for what might have been. While this elision downplays the power of nostalgia in people's lives, it also diminishes the political significance of Jacques Derrida's original formulation – the spectre that returns at the 'end of history' interrogates the progressive version of history as proposed by neo-Hegelians such as Francis Fukuyama. From the collapse of Yugoslavia and the Rwandan massacres to the current

Syrian refugee crisis, revenants have returned to haunt the neo-liberal future. Hauntology is inherently a political enquiry whereas ghost-hunting for its own sake, as Clarke suggests, is an abdication of the political.

Such thoughts came together at a viewing of Tai Shani's exhibit as part of the Turner Prize 2019. Taking Christine de Pizan's *Book of the City of Ladies* (1405) as her starting/turning-point, Shani imagines an alternate feminist history of what might have been, and what might yet be. This is not nostalgia but a hauntological recovery of a lost future that chimes perfectly with the more utopian aims of the MeToo and Time's Up campaigns. Plainly, Shani's own Jonbar Point is a myth – there never was a 'City of Ladies' – but, as a myth, it reveals the radical possibilities within contemporary political movements. What if time really was 'up'? What if women's 'tryst with destiny' was fully realized? These are questions potentially upon which history turns, and to which sf has and can continue to contribute.

This is a general issue of *Foundation* in which several of the items speculate upon the nature of the genre. I am delighted that Adam Roberts (at short notice) was able to contribute a Fourfold Library selection; his choice is typically idiosyncratic and insightful. Rose Michael explores the borders between fantasy, sf and lit-fic in Kazuo Ishiguro's *The Buried Giant* (2015). Another kind of mapping is offered in Sarah Waters' examination of C.S. Lewis's 'Cosmic Trilogy' alongside Prospero's island in *The Tempest* (1611). Multiple layers of (non) reality surface in Victor Grech's reading of *Star Trek: The Next Generation*, whilst Joshua Bulleid and Val Nolan offer contrasting visions of space exploration in the works of Arthur C. Clarke and *Stargate: SG-1*. Appropriately enough, our next issue will be a special edition on Canadian sf, guest-edited by our resident team member Heather Osborne. It will also feature Katie Stone's article on James Tiptree Jr., the recipient of this year's Peter Nicholls Essay Prize. Please see the advert for the 2021 competition in these pages.

Lastly, with reference to futures postponed, no successor has yet been appointed to the role of journal editor. Consequently, I will be staying in post until the end of this year (at least). Myself and the Chair of the SFF, Graham Sleight, would very much like to hear from any UK-based applicants who are willing to come forward. We are very happy to address any questions you might have about the role.

‘We’re all vegetarians up here’: Arthur C. Clarke, Synthetic Meat and Space Exploration

Joshua Bulleid (Monash University)

Few if any science fiction authors have had greater impact on the development of real-world space exploration than Arthur C. Clarke. Although, he considered science fiction’s predictive powers to be largely incidental, he also acknowledged that ‘the pioneers of astronautics used fiction in a deliberate attempt to spread their ideas to the general public’, and admitted to having had ‘similar propagandistic ideas in mind’ (Clarke 1977: 4). Indeed, many of the concepts Clarke proposed in his science fiction have continued to inform real-world propositions regarding space travel and extraterrestrial colonization. Along with his pioneering work in telecommunications, Clarke is often credited with providing some of the earliest designs for a functioning lunar base (see for example NASA ‘Base Designs’).

Clarke, in fact, published detailed plans for a lunar outpost as early as 1951, taking a particular interest in the matter of its food supply, which remained a prevalent theme throughout his work, until his death in 2008. From his earliest plans, Clarke consistently advocated hydroponic plant-farming and the invention of matter synthesis as the most practical means of sustaining space colonies. The exclusive implementation of these practices would mean that such colonies would be necessarily vegetarian (even vegan), while Clarke also emphasized the economic, environmental and ethical benefits of terrestrial vegetarianism.

Short of a space elevator, as Clarke envisioned in *The Fountains of Paradise* (1979), the sheer quantity of resources required for space flight would render continued shipments of food from Earth, to off-world colonies, entirely impractical. Such shipments become even more unfeasible the further colonization extended away from Earth – to say nothing of extended, deep-space voyages. Extraterrestrial colonies, therefore, need to be primarily self-sustaining; meaning that food must be produced from available materials far scarcer than those of Earth. The amount of resources required for animal farming would not only be unavailable off-planet but would also be better spent sustaining its human colonists – especially when considering longer voyages. As Clarke acknowledged in his epilogue to the official memoir of the Apollo 11 mission: ‘The chief problem in manned interplanetary travel is not propulsion, but life-support’. He further contended that ‘One of the most important functions of manned space stations will be to test and develop methods of […] food regeneration which can be relied on for periods of years’ (Clarke 1970a: 402), with many of the solutions he offered throughout his lifetime involving a move away from traditional meat consumption.

Clarke recognized the necessity of vegetarianism for an extraterrestrial

future from his earliest practical proposals. In *The Exploration of Space* (1951), Clarke envisions 'pure chemical synthesis, or hydroponic farming' as the primary methods of food provision for a prospective lunar colony (Clarke 1951: 118). His later plans in *Exploration of the Moon*(1954) similarly include hydroponic greenhouses and an algae-based waste management and oxygenation system, which also contributes 'fats and proteins' to the colony (Clarke 1954: 78). Clarke claimed hydroponic farming – by which plants are grown in nutrient-rich solutions, without the need for soil – would provide the 'the most economical – and perhaps the only' method of food production available on the moon. He also suggests that cacti-like vegetation might be planted on the lunar surface, and that nitrates and other necessities for vegetable farming could be 'synthesised from their basic elements' (94). Although Clarke considers that similar 'miracles of food synthesis' might also 'compensate the colonists for the lack of genuine steak and chops' (96), no consideration is given in either text to transporting any other animals than humans to the moon, for food purposes or otherwise.

Clarke frequently revisited the concepts of lunar vegetable farming and synthetic food production. In *The Promise of Space* (1968), he claims chemists would be able to 'synthesize any desired food, from such basics as lime, phosphates, carbon dioxide, ammonia, [and] water' by the turn of the twenty-first century (Clarke 1968: 204), while continuing to advocate for algae, hydroponic farming and the development of cacti-like vegetation to support any prospective lunar colony. He later declared that plans for growing hydroponic crops looked 'particularly promising' (Clarke 1984: 92), following the discovery that the lunar surface consisted of soil rather than dust. Although in 1970 Clarke envisioned animals 'eventually' being introduced on the moon (Clarke 1970a: 399), the remark is made only parenthetically and appears to be a lone anomaly among his writing regarding extraterrestrial life-support systems.

The necessity of hydroponic vegetable farming and matter synthesis for space colonization is reflected in Clarke's earliest science fiction. His first novel, *Prelude to Space* (1951), mentions plans for a self-contained moon base, which 'would grow its own food supplies under glass' (Clarke 1977: 141), while hydroponic farming sustains the lunar colony in the short story 'Holiday to the Moon' (1951). Synthetic beef also appears in Clarke's earlier short story 'The Lion of Comarre' (1949) and as a feature of extraterrestrial colonies in 'The Road to The Sea' (1951). Synthetic tissues are likewise cultivated by Martian colonists in Clarke's second novel *The Sands of Mars* (1951) and, although they initially intend to start a small farm with 'a few sheep and cows' when possible (Clarke 1964: 98), they ultimately decide the introduction of natural meat production would be an inefficient use of space. *The Sands of Mars* also concerns the discovery of a vegetarian Martian species whose diet is

exploited to nurture the planet's vegetation and oxygenate its atmosphere. Clarke's later novel, *Earthlight* (1955), is set in a lunar colony based on the one envisioned in *Exploration of the Moon*, which utilizes hydroponic vegetables grown in greenhouses that span the moon's equator, and synthetic meats, while a lone cow 'live[s] in luxury' in a lunar zoo (Clarke 1978: 11). As with his contemporaneous non-fiction, Clarke contended that if extraterrestrial outposts were ever to be established, they would need to be vegetarian (at least initially).

Nevertheless, not all of Clarke's fictional space explorers are vegetarian. Passengers on a lunar cruise in *A Fall of Moondust* (1961) partake of 'compressed meat' (Clarke 1974a: 53), and solar yacht racers snack on liverwurst ('Spacetasties') in 'The Wind from the Sun' (1964). Astronauts also consume bars of meat concentrate in *Rendezvous with Rama* (1973). The series of *Rama* sequels Clarke co-authored with Gentry Lee, the current chief engineer of the Jet Propulsion Laboratory's Solar System Exploration Directorate, sees the introduction of synthetic food via contact with extraterrestrial species. Clarke returns to a more practical endorsement of hydroponic farming in one of his final novels, *Sunstorm* (2005), co-authored with Stephen Baxter. The novel takes place in a parallel universe, between the years 2037 and 2042, in which humans have begun lunar colonization. Yet, as one of the novel's lunar farmers declares: 'we're all vegetarians up here. It will be a long time before you find a pig or cow or chicken on the Moon' (Clarke and Baxter 2005: 44). For all Clarke's visionary prowess, the practicalities of maintaining a carnivorous diet in space eluded him.

Despite Clarke's frequent pragmatic and ethical endorsements of vegetarianism, he nevertheless presents carnivorousness as an essential step in human evolution and the development of spacefaring technology in his most famous and influential text. The opening 'Dawn of Man' sequence of Stanley Kubrick's 1968 film *2001: A Space Odyssey* – co-written with Clarke – is one of the most famous scenes in science fiction. The apes' discovery of tools, which they then use to hunt other animals and attack their rivals, inextricably links carnivorousness with human progress. The connection is made even clearer in Clarke's novelization, in which Moon-Watcher's recognition of other animals as 'thousands of tons of succulent meat' is presented as the first step toward reaching the moon (Clarke 1983: 14-16). Both Clarke and Kubrick were heavily influenced by the 'hunting hypothesis', which gained popularity during the mid-twentieth century and emphasized the role of carnivorousness in human evolution (Clarke 1972: 34; Richter 2002: 10, 18, 21). The film's famous jump-cut, from the bone used by Moon-Watcher to slaughter other animals for meat to an orbiting weapons satellite far in the future, reinforces the technological continuum between the two objects. As Sherryl Vint argues, *2001* 'suggests

that the technological-evolutionary path from hominid to Homo sapiens is a dead end, producing a violent separation of human from all other life' (Vint 2009: 235).

There is, though, some suggestion of humanity's vegetarian development in the film version of *2001*. Characters are seen consuming liquified foods on the space station, including fish and other animal products like cheese. The film's astronauts are also seen eating sandwiches supposedly containing meat. However, when one of them asks after a chicken sandwich, they are told it only contains 'something like that', which 'tastes the same anyway'. After inspecting the sandwiches, the astronauts remark that 'they're getting better at it all the time', suggesting the meat is synthetic. On the film's DVD commentary, Gary Lockwood, who played Frank Poole, describes them as 'fake cheese mushroom sandwiches'. Moreover, when Dave Bowman (Keir Dullea) is later shown watching himself eat, before being transformed into the Star-Child, his meal does not contain any meat. The scene's vegetarianism is supported by Clarke's novel, in which Bowman remarks upon the 'notable absence' of meat and other animal products, with all of the food further revealed to be comprised of an unidentified 'blue substance' (Clarke 1983: 214). Although *2001* begins with a celebration of carnivorousness, it concludes with a subtle implication of vegetarianism.

Humanity's progression from terrestrial carnivorousness to extraterrestrial vegetarianism is reinforced in Clarke's final sequel novel to *2001*. The spacefaring humanity of *3001: The Final Odyssey* (1997) enjoy ready access to synthetic food, with the characters revealing that animal farming had become 'economically impossible' around the beginning of the twenty-first century, and that public enthusiasm for 'Corpse-food' was dealt a final, fatal blow thanks to a stigmatizing virus (Clarke 1997: 96). The disappearance of meat from the novel's post-terrestrial diet is in line with Clarke's earlier predictions about synthetic food and warnings against agricultural inefficiency, as is its endorsement of 'Hydroponic techniques' as a more efficient method of food production than animal farming (90). An ethical endorsement of vegetarianism is also implied in *3001*, via the characters' hesitation and gastronomic reactions when broaching the issue of carnivorousness (96), which is bolstered by its association with other violent, outmoded practices, such as female circumcision and the use of landmines (87–8). By the close of Clarke's *Space Odyssey* series, the humanity that once required predation upon other animals for its evolutionary and technological development has come to despise meat-eating as morally and economically irresponsible. While Clarke might retain the advent of carnivorousness as an essential step in human development, his expanded *Space Odyssey* series further contends that it is a fleeting one, which later, more advanced human civilizations will ultimately forego.

In contrast with Clarke's continued depiction of vegetarian space exploration,

science fiction stories involving deep-space voyages and colonization commonly involve technological and (perceived) societal regressions that result in a return to eating animals. The trope is particularly prevalent within stories involving generation starships, which are often depicted containing animal farms, with the intention to continue meat production at their destination. The protagonist of Brian Aldiss's formative generation ship novel *Non-Stop* (1958), for example, is a hunter who stalks his prey across entire decks, while the world-like ship in Gene Wolfe's *Book of the Long Sun* cycle (1993–96) includes enough resources for animal sacrifice. Robert Heinlein's early generation ship novel *Orphans of the Sky* (1941) includes meat farms alongside hydroponics, while Heinlein's other tales of space colonization emphasize the continued carnivorousness of off-world colonies. The protagonist of *Farmer in the Sky* (1950), for example, leaves behind the dystopian 'Syntho-Steaks' (Heinlein 1978: 9) of Earth for a colony on Ganymede, where 'real' animal products are plentiful despite all other resources remaining impossibly scarce. Meanwhile, the lunar colony in *The Moon is a Harsh Mistress* (1966) even exports meat to Earth. The most carnivorous generation ship story, however, is perhaps Kim Stanley Robinson's more recent *Aurora* (2015). Almost half of the ship's provisions come from algae and lab-grown meat which is recognized as a 'clearly more efficient' process of food production than natural farming (Robinson 2016: 309). Yet, the ship also houses bio-engineered farm animals, 90% of whom are immediately killed and eaten, when resource limitations result in the loss of a harvest. Although technological advances in *Aurora* allow for the inclusion of non-human animals on its voyage, they are ultimately treated as an expendable luxury. Robinson's earlier space colonization novel *Red Mars* (1992) similarly includes farm animals as part of its initial colonization effort, although the lunar colony of his most recent novel, *Red Moon* (2018), appears to adhere to Clarke's vegetarian vision. Vegetarian examples of generation ship stories include Poul Anderson's *Tau Zero* (1970), which uses algae as its primary food source; Neal Stephenson's *Seveneves* (2015), in which the inhabitants of an orbital space ark expect to survive on the kind of 'low-calorie vegetarian diet' depicted in science fiction stories (Stephenson 2015: 74); and Mary Doria Russell's *The Sparrow* (1996), which calls the entire concept of meat-eating into question, via its colonists' contact with extraterrestrial species. Nevertheless, vegetarian examples appear to be in the minority, when it comes to fictional depictions of space exploration. Clarke's own early generation ship story, 'Rescue Party' (1946), makes no mention of its food supply. Elsewhere however, his recognition that long-term space travel requires the greatest levels of efficiency invariably led him to vegetarian solutions.

Clarke also appears to have had a direct influence on the vegetarianism

of what is perhaps the most popular and longest-running example of space colonization fiction: *Star Trek*. The franchise's Federation starships rely on synthetic meat to sustain their many interplanetary exploration and peace-keeping missions. Although synthetic food is primarily employed to comedic effect in the original *Star Trek* series (1966–69) series, it is declared, in an early episode of *Star Trek: The Next Generation* (1987–94), that the members of the Federation 'no longer enslave animals for food purposes' and that any food product that resembles flesh is instead 'inorganically materialized, out of patterns used by their transporters' (Bole 1987). Although *Star Trek*'s engagement with vegetarianism is perhaps inconsistent across its many incarnations, the reference to humanity's 'livestock of old' (Semel 2017) in *Discovery* (2017–) suggests the continued depiction of a vegetarian future. *Star Trek* creator Gene Roddenberry often credited Clarke as an important influence and stated that a 'great deal' of the series was 'guided' by his scientific speculations in *Profiles of the Future* (1962), which also inspired the franchise's famous matter transporters (McAleer 1992: 168). Clarke also describes a matter 'Replicator', in *Profiles of the Future*, which is capable of producing 'any food that men have ever desired or imagined' (Clarke 1999: 148–49). That *Star Trek*'s food synthesisers are specifically referred to as 'replicators' suggests a direct lineage to Clarke's speculations regarding future food production. Clarke himself praised *Star Trek*'s promotion of 'respect for life in all forms' (McAleer 1992: 221), and its suggestion that humanity should 'boldly go' as a vegetarian species is likely due to his influence.

Clarke also considered the development of synthetic food essential to environmental sustainability. In a 1967 address to the American Institute of Architects, he described agriculture as 'a ridiculous process' (Clarke 1985: 143), due to the extreme inefficiency of plants and especially animals in converting sunlight into useable energy. Clarke's concerns about the efficiency of meat production are supported by contemporary understandings of food production, with beef taking approximately eight pounds (3.63 kg) of feed to produce one pound (0.45 kg) of flesh and even more efficient forms of meat – such as pork, chicken and fish – still requiring two to three times the amount of feed to the meat they produce (Dillard-Wright 2014: 1705). In the same address, Clarke predicts the rise of synthetic food by the beginning of the twenty-first century, citing Russia's export of synthetic caviar, and 'promising' (albeit 'most unappetizing') advances in the production of protein from petroleum as evidence of a global move toward synthesized foods (Clarke 1985: 144). It is unclear how sincere Clarke is being in the address, and matters are further confused by Clarke's embedding of a seemingly genuine rally against meat production within the comically toned article 'The Future Isn't What It Used to Be' (1970). Here,

he again predicts the abundance of synthetic food by the twentieth century's close, with self-sustaining communities, or even singular households, becoming capable of producing all of their food using 'home automat[s]' (Clarke 1970c: 5), before reiterating that raising animals for meat is too costly to 'continue to waste good agricultural land on' (6). Clarke proceeds to argue that the development of synthetic foods would result from space research, since 'a closed-cycle ecology in which all wastes are reprocessed and converted back to food' is essential for 'long-duration space journeys', and the establishment of extraterrestrial colonies (6). He therefore stresses the need to move away from animal agriculture both on Earth and in space. Although Clarke identifies himself in the article as a 'carnivore who hates vegetables' (6), he consistently argued against the continuation of animal farming when discussing sustainability as well as the prospect of future food-producing technologies.

Since a permanent lunar or deep-space outpost is yet to be established, astronauts and other space travelers remain reliant for their meals on resources brought from Earth. NASA's current space food fact sheet offers 'familiar, appetizing, well-accepted food items', including beef, chicken, frankfurters, ham and ham salad spread, spicy meatballs, salmon, tuna, turkey and pork sausages (NASA 'Food for Space'). Previously, astronauts ate cubes of freeze-dried powders and semi-liquids, often coated in gelatin (collagens obtained from animals) to reduce crumbling, although more familiar animal-based foods, such as chicken, vegetables and even shrimp cocktails were available by the mid-1960s (NASA, 'Human Needs'), and modern astronauts are able create menus inclined to their individual tastes ('Food for Space'). For as long as space flights remain short term and colonies (relatively) accessible by Earth, it appears space adventurers will not be forced to forego a carnivorous diet.

Nevertheless, Clarke's vegetarian proposals are in line with propositions for longer space voyages and more permanent off-world settlements. Designs for a lunar base published in the December 1962 issue of *Aerospace Engineering* include algae-based oxygenation systems, which could potentially serve as a food supply, although the authors cautioned that the systems 'require considerably more development' before they could be included as a primary system (DeNike and Zahn 1962: 13). Later, a 1968 NASA-sponsored study into the feasibility of establishing a lunar observatory proposed to move away from reliance upon an Earth-supply of freeze-dried meats toward a grain-intensive, vegetarian diet as agriculture improved (LaPatra and Wilson 1968: 106). However, it also speculated about the possibility of expanding the diet to include poultry, with chickens shipped from Earth as fertile eggs (34). More recently, a 1992 study by United States corporation McDonnel Douglas Aerospace and Japan's Shimizu Corporation proposed moon and Mars outposts, which would

rely entirely on food produced in greenhouses (NASA 'Base Designs'). Recent years have also seen considerable advances in extraterrestrial vegetable farming, including the addition of a vegetable growth system to the International Space Station (ISS) (Herridge 2014). In 2017, an 'Advanced Plant Habitat' was introduced to the station as part of a research project that will 'help NASA prepare crew to grow their own food in space during deep-space exploration missions' (Herridge 2018) and, in January 2019, an attempt was made to grow plants on the moon's surface within a self-contained biosphere, established by China's Chang'e 4 lunar lander. The enclosure also included an animal component, in the form of silkworms, to help create carbon dioxide, and provisions to grow potatoes, tomatoes and a variety of cresses. Although the experiment ended in failure, the chief director expects potatoes to become a major source of food for future space travelers (Letzer 2019). NASA has also invested in research into the production of synthetic meat. Projects led by Morris Benjaminson in 2001 managed to induce growth in segments of muscle tissue cut from goldfish and immersed in vats of fetal bovine serum (Sample 2002). In its rudimentary stages, such processes remain 'animal-intensive undertaking[s]' (Dillard-Wright 2014: 1706), requiring flesh cut from living goldfish and with bovine serum being 'a by-product of the meat processing industry', collected from 'those animals deemed fit for human consumption' (Siegal and Foster 2013: 28). Later iterations of the experiment, however, were able to achieve 'higher rates of growth' using a mushroom extract (Edelman et al. 2005: 661). Nevertheless, as Benjaminson maintains, the culturing process remains more efficient than the resource- and waste-intensive process of animal farming, while also arguably being more ethical (Sample 2002). Although some vegetarian and vegan theorists argue that a desire for cultured or synthetic meat simply reinforces 'the hegemonic power of meat' (Fudge 2010: 161), the development of meat alternatives has received considerable support from organizations such as PETA and philosophers like Peter Singer, who argue that 'being a vegetarian or vegan is not an end in itself, but a means towards reducing both human and [non-human] animal suffering, and leaving a habitable planet to future generations' (Singer 2013). Moreover, while NASA considered Benjaminson's project too expensive to keep funding in the short term, research into the development of cultured meat has continued, with research backed by Google co-founder and 'very famous animal lover' Sergey Brin producing the first publicly consumed cultured meat hamburger in 2013 (Mensvoort and Grievink 2014: 47–8). Other notable backers, such as Bill Gates and Richard Branson, have also invested in the development of lab-grown meat for primarily environmental reasons (Morgan 2018). Similarly, in 2016, Eric Schmidt, the executive chairman of Google's parent company, Alphabet, listed the development of plant-based meat alternatives as the first of six 'moonshot'

technologies needed to combat climate change (Fehrenbacher 2016). Research is also currently being conducted into the use of three-dimensional organ printing to produce synthetic meat (Ben-Arye and Levenberg 2019). While the in vitro production of meat remains in its infancy and the production of synthetic food is yet to be realized, the continued (high-profile) investment in alternative meat technologies proves the idea is being taken seriously by those concerned with environmental efficiency and further space exploration.

Yet, despite the emphasis on efficiency in Clarke's real-world speculations, it is perhaps the ethical arguments regarding the replacement of animal meat that are emphasized most heavily in his fiction. Not only is synthetic food available in *Imperial Earth* (1975), but meat is virtually outlawed and considered a 'perversion', with prohibitionists arguing its toleration 'would do irreparable harm to countless innocent animals, and revive the revolting trade of the butcher' (Clarke 2001b: 142). Clarke depicts a similar future in *Hammer of God* (1993), wherein families accustomed to 'food recycling system[s]' find 'the very idea of eating natural meat hacked from dead animals […] utterly revolting' (Clarke 1994: 6–7). The novel also features a pro-gun senator who, nevertheless, opposes hunting since he considers the 'shoot[ing] of defenseless animals for sport' to be truly 'sick!' (28–9). A formal resistance against meat-eating is featured in *The Songs of Distant Earth* (1986), in which the inventor of an electrified fish trap is hindered by both environmental 'Conservors' and 'people who believe *all* food should be synthetic because it's wicked to eat living creatures, like animals – or even plants' (Clarke 1987: 78). The claims of the latter party are dismissed as 'crazy' but the Conservors are considered to 'have a point' (78), since overfishing might lead to ecological imbalance.

Synthetic meat is given an extended ethical treatment in Clarke's earlier story 'The Food of the Gods' (1964). The story is presented as a transcript from a committee hearing during which a synthetic food chemist provides a shocking history of twentieth-century eating habits. The progression to a purely synthetic diet has rendered the concept of carnivorousness unthinkable to the future population. The development of synthetic food is, again, presented as a 'byproduct of space research' which was primarily developed to address issues of efficiency and population. The shift to a synthetic diet is also considered responsible for an additional 'moral gain' with 'such revolting institutions as the slaughterhouse and the butcher's shop […] vanished from the face of the Earth' (Clarke 2001a: 844). The development of synthetic food is therefore considered singlehandedly responsible for vast improvements in areas of environmental and resource efficiency, population management and human ethics. Moreover, the committee are appalled to learn that, 'until a few centuries ago, the favourite food of almost all men was *meat* – the *flesh* of once living animals' (843).

However, the food chemist reveals that, although his company's foods are constructed entirely from non-organic materials, they replicate meat so exactly as to be chemically undetectable, and – in a final shocking twist – accuses his competitors of even replicating human flesh. The story concludes, therefore, not with an endorsement of synthetic vegetarianism but with its shockingly cannibalistic subversion.

Nevertheless, as Tom Shippey notes in the *Encyclopedia of Science Fiction*, Clarke 'surprised many sf readers by ultimately arguing for vegetarianism' (Shippey 2017) in his earlier novel *The Deep Range* (1957). The novel's vegetarian argument is made even more surprising by being adapted from Clarke's 1954 short story of the same name, in which whale farming is celebrated for putting an end to world hunger. In the novel, however, the farming of whales is challenged by a rising Buddhist faction, who seek to enforce their religion's fundamental 'respect for all living creatures' (Clarke 1970b: 158), and it ends with human society working toward a more efficient and humane plankton-based diet, which is seen as the first step toward eradicating animal suffering along with world hunger. The Buddhist leader Alexander Boyce, who leads the novel's vegetarian revolution, is presented as a pragmatic man who 'realizes that everybody can't be a vegetarian' (160). He also acknowledges that even the Buddha did not abstain entirely from meat when accepting food offered to him. Nevertheless, Boyce maintains that 'as soon as such killing is no longer essential, it should cease' and welcomes the move toward synthetic and plankton-based proteins as an opportunity to 'shift the burden of guilt' he believes has 'haunted all thinking men as they look at the world of life that shares their planet' (184–85). In 1956, Clarke moved to Sri Lanka, home to the world's oldest surviving Buddhist tradition. That the move occurred immediately prior to the revised *Deep Range*'s publication suggests Sri Lanka's Buddhist culture directly informed the novel's final vegetarian arguments. As Clarke noted, during a Sri Lankan Symposium on Marine Mammals in 1983, Buddhist attitudes toward the slaughter of animals remains 'regularly featured' within Sri Lankan discourse, and he further argued that *The Deep Range* was 'perhaps even more topical' (Clarke 1984: 240) than when it had been written.

Similar references to Buddhism and ethical vegetarianism appear among Clarke's later novels. *Hammer of God* echoes *The Deep Range* with its establishment of 'Chrislam' (1994: 103–04) – a hybrid of Christianity, Islam and 'more than a touch of […] Buddhism' – that leads to the repurposing of fossil fuels for food production. *The Fountains of Paradise*, set in Sri Lanka, also features an influential Buddhist order, which does not serve meat in its monasteries, since its members find the taking of all life 'very low' on their 'nicely calibrated scale of toleration' (Clarke 2000: 89). Although Clarke more regularly

emphasized the pragmatic and environmental advantages of vegetarianism in his non-fiction, his exposure to Buddhism inspired the continued promotion of vegetarianism's ethical advantages within his fiction.

It is not practical or religious arguments, however, but the idea that humanity might encounter other intelligent life forms who 'might judge [them] by [their] conduct towards the rest of the animal kingdom' (Clarke 1970b: 184–85) that ultimately convinces the protagonist of *The Deep Range* to cease his slaughterhouse operations and embrace a vegetarian future. In fact, humanity is judged by extraterrestrials for its treatment of other species in Clarke's earlier novel, *Childhood's End* (1953). One of the first acts undertaken by the novel's alien Overlords, upon arriving on Earth, is the implementation of a 'cruelty-to-animals order' that, although it allows for the slaughter of animals for 'food or in self-defence', punishes all other acts of animal cruelty by telepathically reflecting back upon the perpetrators any pain inflicted (Clarke 1956: 36). However, when considering the possibility of real-life extraterrestrial encounters, Clarke questioned whether aliens would even be able to recognize terrestrial life-forms, let alone distinguish between humans and other species. He also dismissed the idea that humans might be treated as food by any invading species, for the same reasons (Clarke 1985: 101–02).

There appears, however, to be no evidence that Clarke ever subscribed to vegetarianism himself. Although he once referred to himself as a 'crypt[o]-buddhist' (Cherry 1999: 37), Neil McAleer claims he 'never strayed from the British diet, which emphasizes meat and potatoes' (McAleer 1992: 118). Clarke even admits to tasting whale meat in an introduction to the original version of 'The Deep Range' (Clarke 1990: 96), and clarifies in *Indian Ocean Adventure* (1961) that, although he is 'too fond of fish to shoot them', he has 'no objection to eating them' (Clarke 1961: 28). Clarke also invokes *The Deep Range*'s novelization in support of whale ranching in both his American Institute of Architects address (Clarke 1985: 145) and 'The Future Isn't What it Used to Be' (Clarke 1970c: 6), seemingly forgetting the vegetarian and animal liberation angle the text ultimately takes. For all his textual endorsements of vegetarianism, Clarke never lent the diet his practical support.

Nevertheless, Clarke's insistence that the vegetarian methods of hydroponic plant farming and chemical food synthesis were necessary for further space exploration was unwavering. Although later authors of science fiction largely continued to include means for natural meat production in their depictions of deep-space exploration and colonization, Clarke recognized that the resource limitations inherent in further space exploration were too extreme to allow for the continuation of animal farming. He further recognized the economic and environmental benefits of vegetarianism within a terrestrial setting, and

continued to endorse both the practicalities and ethics of vegetarian expansion until his death in 2008. Although the invention of truly synthetic food remains elusive, the experiments into extraterrestrial plant-rearing conducted upon the ISS and the Lunar Ecosystem established by China's Chang'e 4, along with significant investments into the developments of cultured and other alternative meats, suggest humankind is at least one small step closer to the kind of spacefaring existence Clarke envisioned.

Works Cited

Ben-Arye, Tom and Shulamit Levenberg. 2019. 'Tissue Engineering for Clean Meat Production'. *Frontiers in Sustainable Food Systems*, 18 June. https://www.frontiersin.org/articles/10.3389/fsufs.2019.00046/full (accessed 23 January 2020).

Bole, Cliff, dir. 1987. 'Lonely Among Us'. *Star Trek: The Next Generation* 1:6. USA: Paramount.

Cherry, Matt. 1999. 'God, Science and Delusion: A Chat with Arthur C. Clarke'. *Free Inquiry* 19.2: 36–7.

Clarke, Arthur C. 1951. *The Exploration of Space*. New York: Harper & Brothers.

----- 1954. *Exploration of the Moon*. London: Frederick Muller.

----- 1956 (1953). *Childhood's End.* London: Pan.

----- 1961. *Indian Ocean Adventure*. New York: Harper.

----- 1964 (1951). *The Sands of Mars*. London: Pan.

----- 1968. *The Promise of Space*. London: Hodder and Stoughton.

----- 1970a. 'Beyond Apollo'. In Neil Armstrong et al, *First on the Moon*. Boston: Little Brown, 371–419.

----- 1970b (1957). *The Deep Range*. London: Pan.

----- 1970c. 'The Future Isn't What It Used to Be'. *Engineering and Science* 33.7: 4–9.

----- 1972. *The Lost Worlds of 2001.* London: Sidgwick and Jackson.

----- 1974a (1961). *A Fall of Moondust*. London: Pan.

----- 1974b (1973). *Rendezvous with Rama*. London: Pan.

----- 1977 (1951). *Prelude to Space*. London: Sigwick & Jackson.

----- 1978 (1955). *Earthlight*. London: Pan.

----- 1983 (1968). *2001: A Space Odyssey*. London: Arrow.

----- 1984. *1984: Spring, a Choice of Futures*. New York: Ballentine.

----- 1985. *Report on Planet Three and Other Speculations*. New York: Berkley.

----- 1987 (1986). *The Songs of Distant Earth*. New York: Ballantine.

----- 1990. *Tales from Planet Earth*. London: Arrow.

----- 1994 (1993). *The Hammer of God*. London: Orbit.

----- 1997. *3001: The Final Odyssey*. London: Voyager.

----- 1999 (1962). *Profiles of the Future: An Inquiry into the Limits of the Possible*. London: Indigo.
----- 2000 (1979). *The Fountains of Paradise*. London: Millennium.
----- 2001a. *The Collected Stories*. London: Gollancz.
----- 2001b (1975). *Imperial Earth*. London: Gollancz.
----- and Stephen Baxter. 2005. *Sunstorm*. London: Gollancz.
----- and Gentry Lee. 1991. *The Garden of Rama*. London: Orbit.
----- and Gentry Lee.1995 (1993). *Rama Revealed*. London: Orbit.
DeNike, John and Stanley Zahn. 1962. 'Lunar Basing'. *Aerospace Engineering* 21.10: 8–14.
Dillard-Wright, David B. 2014. 'Synthetic Meat'. In *Encyclopedia of Food and Agricultural Ethics*. Eds. Paul B. Thompson and David M. Kaplan. New York: Springer, 1703–8.
Edelman, P.D. et al. 2005. '*In Vitro*-Cultured Meat Production'. *Tissue Engineering* 11.5–6: 659–62.
Fehrenbacher, Katie. 2016. 'The 6 Most Important Tech Trends, According to Eric Schmidt'. *Fortune*, 2 May. https://fortune.com/2016/05/02/eric-schmidts-6-tech-trends/(accessed 13 January 2020).
Fudge, Erica. 2010. 'Why it's Easy Being a Vegetarian'. *Textual Practice* 24.1: 149–66.
Heinlein, Robert A. 1978 (1950). *Farmer in the Sky*. New York: Ballantine.
Herridge, Linda. 2014. 'Veggie Plant Growth System Activated on International Space Station'. *NASA* 16 May. https://www.nasa.gov/content/veggie-plant-growth-system-activated-on-international-space-station (accessed 29 December 2018).
----- 2018. 'New Plant Habitat Will Increase Harvest on International Space Station'. *NASA* 3 March. https://www.nasa.gov/feature/new-plant-habitat-will-increase-harvest-on-international-space-station (accessed 29 December 2018).
Kubrick, Stanley, dir. 2007 (1968). *2001: A Space Odyssey*. USA: Turner Entertainment/Warner Home Video.
LaPatra, Jack W. and Robert E. Wilson, eds. 1968. *Moonlab: A Study by the Stanford-Ames Summer Faculty Workshop in Engineering Systems Design*. USA: NASA.
Letzter, Rafi. 2019. 'There Are Plants and Animals on the Moon Now (Because of China)'. *Live Science*. 3 January. https://www.livescience.com/64413-china-space-moon-plants-animals.html (accessed 13 January 2019).
McAleer, Neil. 1992. *Arthur C. Clarke: The Authorized Biography.* Chicago: Contemporary Books.
Morgan, Rick. 2018. 'Bill Gates and Richard Branson are betting lab-grown

meat might be the food of the future'. *CNBC*, 23 March. https://www.cnbc.com/2018/03/23/bill-gates-and-richard-branson-bet-on-lab-grown-meat-startup.html (accessed 23 January 2020).

NASA. 'Food For Space Flight'. Last updated 7 April 2002. https://spaceflight.nasa.gov/shuttle/reference/factsheets/food.html (accessed 18 January 2020).

----- 'Human Needs: Sustaining Life During Exploration'. Last updated 16 April 2007. https://www.nasa.gov/vision/earth/everydaylife/jamestown-needs-fs.html (accessed 29 December 2018).

----- Lunar Base Designs' (archived). Last updated March 2008. https://web.archive.org/web/20080611072207/http://aerospaceschol ars.jsc.nasa.gov/HAS/cirr/em/6/8.cfm (accessed 29 December 2018).

Richter, Dan. 2002. *Moonwatcher's Memoir: A Diary of 2001: A Space Odyssey*. New York: Carroll and Graf.

Robinson, Kim Stanley. 2016 (2015). *Aurora*. New York: Orbit.

Sample, Ian. 2002. 'Fish fillets grow in tank'. *New Scientist*, 20 March. https://www.newscientist.com/article/dn2066-fish-fillets-grow-in-tank/ (accessed 26 January 2020).

Semel, David, dir. 2017. 'The Vulcan Hello'. *Star Trek: Discovery* 1:1. USA: CBS.

Shippey, Tom. 2017. 'Iconoclasm'. In *The Encyclopedia of Science Fiction*. Eds. John Clute and David Langford. http://www.sf-encyclopedia.com/entry/iconoclasm (accessed 31 December 2018).

Siegel, William and Leland Foster. 2013. 'Fetal Bovine Serum: The Impact of Geography'. *BioProcessing Journal* 12.3: 28–30.

Singer, Peter. 2013. 'The World's First Cruelty-Free Hamburger', *The Guardian*, 5 August. https://www.theguardian.com/commentisfree/2013/aug/05/worlds-first-cruelty-free-hamburger (accessed 23 January 2020).

Stephenson, Neal. 2015. *Seveneves*. London: Borough Press.

Vint, Sherryl. 2009. 'Simians, Subjectivity and Sociality: *2001: A Space Odyssey* and Two Versions of *Planet of the Apes*'. *Science Fiction Film and Television* 2.2: 225–50.

Mirror, Mirror: Metalepsis in *Star Trek*

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As a branch of literary theory, narratology examines the myriad ways in which the narrative arrangement (or *sujet*) of a fictional text orders its content: the *fabula* or raw story. According to Gérard Genette, narratology posits that this fictional ordering of story contains several levels. These are:

1. The *extra-diegetic* level, at which the author (or external narrator) recounts the story to the reader (or external narratte).
2. The *diegetic* level, at which the story's actual narrator tells the tale. Such a narrator always exists, even if this narrator constitutes the impartial and completely silent viewpoint of the camera in film.
3. The *intra-diegetic* level of the story itself – the action of the plot and the interaction of the characters.

According to Genette, it is unusual for these levels to be transgressed as, conventionally, the boundaries are hermetically sealed, as expected by the narratee. Moreover, higher levels control and frame lower levels, such that the characters in a narrative do not know that they are acting out a part within a story, and levels above them may manipulate them as required. Indeed, as Philip Auter and Donald Davis observe, the televisual audience 'is eavesdropping on characters who function within a "three-walled" environment. The "fourth wall" is a transparent one through which the audience voyeuristically looks' (Auter and Davis 1991: 165).

The transgression of these levels is called *metalepsis* and results in the breaching of the 'sacred frontier between two worlds, the world in which one tells, the world of which one tells' (Genette 1980: 236). This breach can result in a 'disruptive effect on the fabric of narrative' (Malina 2002: 1), such that the audience's 'willing suspension of disbelief – so necessary in dramatic programming to allow us to accept plot and action – would most certainly be shattered by characters making asides to the viewer' (Auter and Davis 1991: 170). For this reason, Genettian levels are hardly ever contravened within more mimetic forms of fiction. By contrast, such breakages have become a standard avant-garde technique whilst, at the same time, borrowing from a 'low' comic tradition of vaudeville, music hall and *commedia del'arte*. Here, such devices are designed to either eject the viewer from the realism of the piece, and to question its design (as in the plays of Bertolt Brecht), or to ingratiate the audience, for example, the pained, wan stare of Oliver Hardy addressed to his invisible viewers.

Science fiction has been subject to many definitions, and one which is widely accepted is that of Darko Suvin wherein he posits that sf is 'the literature of cognitive estrangement' (Suvin 1972: 372), a literature with a wide 'spectrum or spread of literary subject-matter, running from the ideal extreme of exact recreation of the author's empirical environment to exclusive interest in a strange newness, a novum' (373). If Suvin's definition of sf holds good, then it has an innate affinity with what Genette sees as the estranging effects of metalepsis. Although *Star Trek* has often been praised for the detail of its worldbuilding, its intimate pact with the narratees (or fans) of the franchise, in this article I want to explore how *Star Trek* on occasion breaches that pact and creates opportunities for metalepsis to occur. My central focus will be on the use of the 'holodeck' as a narrative device.

In the *Star Trek* universe, a holodeck is a simulated reality facility which deceives all of the senses. It is portrayed as an enclosed room in which actors and objects are temporarily created by a combination of matter transportation, matter replication, tractor beams and shaped force fields. Images are then projected onto these surfaces, simulating matter. By all accounts, the virtual realities generated by holodecks are deeply immersive and very believable as noted by one of the protagonists: 'I didn't believe these simulations could be this real' (Allen 1987).

The setting within the simulation, which is controlled by a computer program, is summoned at the behest of characters who operate at the intra-diegetic level: the narrative itself at the plane of the actual action. The activity within the holodeck can therefore be described as a sub- or fourth level within the diegesis, which is subordinate to and dominated by the characters functioning at the intra-diegetic level. As Sebastian Stoppe observes:

> Whenever we walk through the holodeck door, we enter another world. […] Once inside, the door to the outer world closes and disappears. […] But like in a video game, one is always able to let the doorway […] re-appear. [...] In the same way we escape a video game: by summoning the game menu. (Stoppe 2008: 106; my translation)

Consequently, characters from the intra-diegetic level may enter the holodeck and interact with anything or anyone within. Alternatively, the program can run in a third-person mode whereby anyone who enters the simulation is ignored by the inhabitants of the holodeck. A holodeck thus represents the ultimate role-playing game, one that offers 'the player the chance to assume or play a role' (Carr et al 2014: 19) from outside the *Star Trek* universe.

Holographically created characters are not usually self-aware or aware of environs beyond and above the Genettian level of the holodeck. They are thus

confined to the holodeck not only by the fact that they cannot exist outside the holodeck and its holoemitters that create scenery and characters at will, but also by the diegetic confines of the part which they play in the holodeck. This is humorously alluded to by Jean-Luc Picard (Patrick Stewart) when he is interrogated by holographic police officers in the episode 'The Big Goodbye' (1988). Asked for his whereabouts the previous evening, Picard wryly replies, 'that would be a bit hard to explain' (Scanlan 1988).

Gaining awareness of the world outside the holodeck constitutes a metalepsis, and this is seen in 'The Big Goodbye', when the holodeck runs a crime novel featuring the police detective Dixon Hill. Due to a holodeck malfunction, one of the crew is physically shot by a holographic gangster derived from the novel. The *Enterprise* participants trapped within the virtual story are unable to escape the program. Picard tries to explain to the simulated hoodlums that the *Enterprise* team is 'not from this world. None of us are. We are from a world […] of fabulous riches. A world where there are objects far greater than the one you seek [...]. I am not Dixon Hill. I just look like Dixon Hill' (Scanlan 1988). In this way, Picard exposes the intra-diegetic world to the holographic creations, referring to the 'real world' that is composed of the fictional *Star Trek* universe. Picard does this in the hope that this will introduce an element of surprise that will allow the *Enterprise* team to escape the holodeck. The holographic hoods are naturally sceptical: 'What wonderful fiction. Quite entertaining. I admire your skill at trying to obfuscate our sense of reality' (Scanlan 1988).

Meanwhile, on the other side of the holodeck doors, in the intra-diegetic world of the *Enterprise*, the crew manage to reactivate the exit or 'arch'. As Picard explains this is 'the way into our world', the criminal boss responds: 'Can one enter your world and return to this one simply by stepping through? [...] Do you actually think I'd stay here?' (Scanlan 1988). Despite Picard's warning, the gangsters exit their virtual world only to vanish the moment they step into the intra-diegetic world of the *Enterprise*.

As Brian McHale has argued, the ontological games that 'The Big Goodbye' plays with are characteristic of science fiction in contrast to classic detective fiction where questions of epistemology – of knowing – are to the fore (McHale 1987: 9–10, 59–60). The contrast, for McHale, is as much aesthetic as it is philosophic: science fiction, like other forms of postmodernism, delights in the surface appearance of things; detective fiction, like more canonical forms of modernism, is concerned with depth, the order that lies beneath superficial randomness. It is no coincidence then, that in order to explore the narrative tensions between being and knowing that occur with metalepsis, *Star Trek* plays science fiction off against its generic counterpart.

In 'Elementary, Dear Data' (1988), the holodeck computer is asked to

create a character who would be a worthy 'opponent capable of defeating Data' (Bowman 1988) and so it summons up Sherlock Holmes's nemesis, Professor Moriarty (Daniel Davis). Moriarty informs the astounded crew that 'the time for games is over':

> Welcome, my dear Holmes. But not Holmes. And Doctor Watson. But not Watson [...]. But my mind is crowded with images. Thoughts I do not understand yet cannot purge. They plague me. You and your associate look and act so oddly, yet though I have never met nor seen the like of either of you I am familiar with you both. It's very confusing. I have felt new realities at the edge of my consciousness, readying to break through. [...]. I know there is a great power called Computer, wiser than the oracle at Delphi. A power which controls all of this, and to which we can speak. Arch. It has described a great monstrous shape on which I am like a fly stuck on a turtle's back adrift in a great emptiness. (Bowman 1988)

Astonished that Moriarty can know anything about the intra-diegetic elements of their world, the crew conclude that 'he is still a fictional character […] programmed with nineteenth century knowledge', but that to compete with Data, the computer had to program him with the ability 'to acquire something which [Data] possesses [...] Consciousness' (Bowman 1988).

Despite Morarity's uplift, embodied by his claim that 'whatever I was when this began, I have grown. I am understanding more and more', he is also aware of a new-found moral dilemma, 'I can affect this vessel, and I can inflict bodily harm' (Bowman 1988), which implies a loss of innocence in association with the acquisition of knowledge. Like the hoodlums in 'The Big Goodbye', though, he is unable to leave the holodeck – his deepest desire – but instead he movingly argues that he is sentient and, in that sense, alive:

> Is the definition of life *cogito ergo sum*? I think, therefore I am [...] You or someone asked your computer to program a nefarious fictional character from nineteenth century London and that is how I arrived [...] I want my existence. I want it out there, just as you have yours [...] What I have seen, what I have learned, fascinates me. I do not want to die. (Bowman 1988)

Moved by his argument, Picard compromises: 'You will not be extinguished. We will save this program and hopefully, in time, when we know enough, we will bring you back in a form which could leave the holodeck' (Bowman 1988). However, when in the episode 'Ship in a Bottle' (1993) Moriarty is accidentally reactivated, it becomes apparent that whilst his identity was suspended in time, his awareness of his condition was not: 'Brief, terrifying periods of consciousness.

Disembodied. Without substance' (Singer 1993). It is almost as if Moriarty has been revived from a coma or semi-permanent vegetative state rather than the peaceful sleep evoked by Picard in the previous episode.

Once again Picard meets with Moriarty, and once again informs him that he cannot leave the holodeck, but this time Moriarty refuses to be mollified:

> Are you certain of that? [...] An object has no life. I do. [...] I have consciousness. Conscious beings have will. The mind endows them with powers that are not necessarily understood, even by you. If my will is strong enough, perhaps I can exist outside this room. Perhaps I can walk into your world right now [...] If I am nothing more than a computer simulation, then very little will have been lost. But if I am right? Mind over matter. Cogito ergo sum. I think therefore I am. (Singer 1993)

Moriarty strides out of the holodeck into the corridor, and to everyone's amazement, continues to exist. The doctor determines that he is human and Picard concedes he has 'accomplished a miracle. The question is, now that you're here, what do we do with you?'

If, however, Moriarty's escape from the holodeck was a triumph of 'mind over matter', his new-found awareness of his physical embodiment introduces a tension between mind and body symbolized by his desire for the Countess Regina Bartholomew, 'a holodeck character [created] for one of Commander Data's programs' and 'designed to be the love of my life' (Singer 1993). When Picard refuses to bring the Countess off the holodeck, due to the moral and ethical implications of what are effectively new forms of life, Moriarty takes control of the *Enterprise*'s computer, jeopardizing the ship, while simultaneously creating the Countess and imbuing her with sentience. Data (Brent Spiner) though, living up to the Holmesian ethos of deductive reasoning, finally discovers the true nature of their perceived reality, which turns out to be a form of *mise en abyme*:

> None of this is real. It is a simulation. We are still on the holodeck [...]. We entered the holodeck together when we first went to see Moriarty [...] And from that point we have been existing in a holodeck simulation created by Professor Moriarty. (Singer 1993)

The crew trick Moriarty by using 'the same ruse that Moriarty used on us' to program 'the holodeck inside the holodeck'. Picard then neatly works himself up one Genettian level by telling the ship's computer to 'discontinue' Moriarty's simulation (Singer 1993). This works and they find themselves in the real *Enterprise* holodeck. In the meantime, however, Moriarty and the Countess continue to exist as software within his own simulated universe:

> He never knew he hadn't left the holodeck [...] The program is continuing even now inside that cube [...] A miniature holodeck [...] However, there is no physicality. The programme is continuous but only within the computer's circuitry. This [...] module contains enough active memory to provide them experiences for a lifetime [...] They will live their lives and never know any difference. (Singer 1993)

Picard muses, 'our reality may be very much like theirs. All this might be just be an elaborate simulation running inside a little device sitting on someone's table' (Singer 1993), only for this metafictional moment – the *exposé* of their intra-diegetic world within the diegetic – to be curtailed by the episode's conclusion.

This more radical transgression of the diegetic boundaries, in which the crew's own existence is called into question, is gestured at in the episodes 'Future Imperfect' (1990) and 'Frame of Mind' (1993). In the former, Riker (Jonathan Frakes) falls unconscious during an away mission and awakes to find that sixteen years have apparently passed, and that he has a son. Riker refuses to accept this apparent reality whereupon he finds himself on an enemy Romulan holodeck. The Romulans have been attempting to trick Riker into revealing vital information, effectively by using the simulated world of the holodeck as a form of brainwashing. Riker escapes with the boy, who has been impersonating his son, but realizes that this too is a fabrication. It transpires that the boy is actually the lonely survivor of an alien race, who had been given facilities akin to the holodeck.

In the latter, Riker performs a play for his crewmates, a narrative in which he is 'surrounded by insanity, but I am not insane' (Conway 1993). As in 'Future Imperfect', the fabrication is explained away by Riker bring held prisoner in a lunatic asylum. His captors, who impersonate doctors, attempt to wean him 'away from [his] starship fantasy' (Conway 1993) and to persuade him that he has been incarcerated due to committing a violent murder. Riker's mental state switches back and forth between the ship and the asylum, but his protestations of innocence prove futile. Finally, Riker manages to escape and it turns out that – in a rather conventional plot twist – he had been 'injected [...] with some sort of drug' in order 'to extract strategic information from [his] memory' (Conway 1993). As in 'Future Imperfect', the intra-diegetic frame of reference is unsettled – Riker's sense of his own identity may not be what he assumes to be – but, ultimately, the frame is restored and the diegetic boundaries are consolidated. The very conventionality of these stories, though, may be attributed to the fact that the central plot device is not the holodeck, and its near-perfect creation of virtual realities, but over-familiar devices derived from other kinds of genre fiction (the supernatural, spy stories) such as a telepath and a truth serum.

By contrast, in the *Deep Space Nine* story 'His Way' (1998), we are introduced

to a lounge singer called Vic Fontaine (James Darren) who is fully aware of his holographic status: 'I know what you're thinking. He has pretty sweet pipes for a light bulb [...] That's what I am, right? A collection of photons and forcefields. You know, your basic heuristic, fully interactive hologram' (Kroeker 1998). Vic has been deliberately designed to be sentient and, although the trajectory of the stories involving Vic are preoccupied with normalizing his otherness, so that he becomes more of a friend and less of a hologram to the *DS9* crew, there nevertheless remains something uncanny about his interaction with the other characters. A gnawing realization, if not for them then for the viewer, that they too are no more real than Vic but that he, at least, is aware of his own unreality.

As in more conventionally realistic series, *Star Trek* progresses in a linear order, such that increasing familiarity with the show leads to the viewer becoming 'immersed […] in the fictional world' (Rigby and Ryan 2011: 81). For Stoppe, 'it seems as if we are really in this world':

> While we are watching Star Trek, something miraculous does happen. We are being drawn into the story and onto the ship. We follow the narrative and at one point we feel like a crewman of the Enterprise, walking with the others through the corridors, onto the bridge and living with them in their quarters. […] The simulation of reality that is presented to us through television becomes reality because we are completing it. (Stoppe 2016: 5)

However, the border between the imagined reality of the *Enterprise* and the extrernal reality of the audience is always manifest – it lies in front of the viewer, at the edge of the screen, and as soon as the episode ends and the credits roll, the viewer is abruptly ejected into their reality. Nevertheless, due to the power of mimesis, 'we become immersed and present in their worlds, emotionally experiencing them as if they were really happening to us' (Rigby and Ryan 2011: 82), just as we readily respond to events in the outside world.

The holodeck, however, creates an additional reality within the imagined spaces of *Star Trek*. The intrusion of this supplementary reality, and its relationship to the external world of the *Enterprise*, poses questions of the authenticity of the intra-diegetic environment in which the crew operates. As Stoppe asks, what would happen if the viewer could change sides with the virtuality of the holodeck?:

> Being the real one in a world made up of holograms that can be touched anyway? The holodeck is able not only to produce a simulated reality. […] It is able to materialise all things the 'viewer' is interacting with. […] I am not the hologram anymore, I am a real person in a simulacrum. (Stoppe 2016: 5)

By its very nature, the holodeck incites metalepsis since it allows characters in the *Star Trek* universe to interact directly with figments of their own creation. Each holodeck program allows the creation of what Mieke Bal has referred to as a 'hyponarrative' (Bal 1981), a story within a story. However, tables are reversed when holograms transgress their holodeck boundaries and climb up a Genettian level to irrupt into the third level of narrative that constitutes *Star Trek* itself, challenging planes of intra- and extratextuality. This usually occurs due to some kind of holodeck malfunction, in which the characters are shown to be as powerless and as subservient to the technology as their creations. While this anxiety worries away at the technological optimism that lies at the heart of the franchise, it also generates an ontological playfulness that is quite unlike other genres such as the classic detective story.

Such playful inversion is perhaps best seen in the *Deep Space Nine* story, 'Far Beyond the Stars' (1998). Here, Commander Sisko (Avery Brooks) experiences visions that return him to Earth in the 1950s as Benny Russell, an African-American sf writer in New York City working for a pulp magazine called *Incredible Tales*. Benny writes a story about a space station called Deep Space 9, which is rejected, resulting in a mental breakdown. When Sisko awakens on the station, he muses:

> What if all this is the illusion? […] Maybe, just maybe, Benny isn't the dream, we are. Maybe we're nothing more than figments of his imagination. For all we know, at this very moment, somewhere far beyond all those distant stars, Benny Russell is dreaming of us. (Brooks 1998)

While this transgressive thought is contained by being framed as one character's speculation, James Darren's CD, *This One's from the Heart* (1999), which ironically features songs that he sang while performing as Vic Fontaine in the series, emerges into the extra-diegetic level; an instance where fan merchandise is potentially more subversive than the franchise for which it was originally created and marketed.

This postmodern dreamworld of simulacra, however, has lengthier historical roots and can be traced back to such philosophers as Aristotle, Plato, René Descartes and Bishop Berkeley. In eastern philosophy, it is referred to as the Zhuàngzi paradox, in which the philosopher Zhuàngzi dreamt that he was a butterfly. Upon waking, he wondered whether he was Zhuàngzi who had just finished dreaming that he was a butterfly, or a butterfly who had just started dreaming that he was Zhuàngzi. More recently, the imaginative possibilities of simulation have been classified into six scenarios: physical presence, intercept, avatar, android, infinite regression and monism (Jones et al 2011). Following

this taxonomy, the holodeck can be said to be a physical presence, insofar as it immerses its participants in a virtuality indistinguishable from the real, but as has been demonstrated, it also has the capacity to create figments (avatars) that move beyond this initial scenario and into others. Since, as in the case of Moriarty's fitful suspended animation, it is impossible to say that the simulation ends when the holodeck is switched off, it is equally possible to say that the various diegetic boundaries are porous and bleed into one another. Like a video game, the holodeck appears 'to have the ability to not just tell us a story, but to let us actively *live* it' (Rigby and Ryan 2011: 2). As Stoppe concludes: 'holodecks do not pretend to be another place, they are' (Stoppe 2008: 105; my translation).

Consequently, despite the technological rationalism to which *Star Trek* aspires, the invention of new technologies such as the holodeck, which blurs the boundaries between reality and falsehood, introduce metaleptic effects that unsettle the overarching narrative order of the stories. Nevertheless, as Suvin argues, such devices take 'off from a fictional ("literary") hypothesis and develops it with extrapolating and totalizing ("scientific") rigor' (Suvin 1972: 374), so that the rationalist principle of extrapolation remains in force. An intriguing tension therefore emerges between the series' rational ethos and the more disruptive effects derived from literary and scientific imagination. Arguably, this tension is exemplary of the sf genre since it permits the negotiation of both diegetic and extra-diegetic levels – two usually separate ontological spheres – in order to explore and expand the boundaries of narrative. As Suvin argues, sf is a genre 'whose necessary and sufficient conditions are the presence and interaction of estrangement and cognition, and whose main formal device is an imaginative framework alternative to the author's empirical environment' (375). The episodes discussed above clearly adhere to this precept by utilizing a scientific novum, usually a new technology, to permit metalepsis and ontological uncertainty, with sophisticated narrative techniques that develop the genre beyond its (already wide) limits. All this is achieved within a popular narrative franchise that, arguably as part of its frisson for producers and consumers alike, temporarily threatens the destabilization of the distinction between reality and fiction.

Works Cited

Allen, Corey, dir. 1987. 'Encounter at Farpoint'. *Star Trek: The Next Generation*. USA: Paramount.

Auter Philip J. and Donald M. Davis. 1991. 'When Characters Speak Directly to Viewers: Breaking the Fourth Wall in Television'. *Journalism Quarterly* 68.1/2: 165–71.

Bal, Mieke. 1981. ‘Mise en Abyme et Iconicité’. *Littérature* 29: 116–28.
Bowman, Rob, dir. 1988. ‘Elementary, Dear Data’. *Star Trek: The Next Generation*. USA: Paramount.
Brooks, Avery, dir. 1998. ‘Far Beyond the Stars’. *Star Trek: Deep Space Nine*. USA: Paramount.
Carr, Diane et al. 2014. *Computer Games: Text, Narrative and Play*. Hoboken: Wiley.
Conway, James L., dir. 1993. ‘Frame of Mind’. *Star Trek: The Next Generation*. USA: Paramount.
Darren, James. 1999. *This One’s from the Heart.* USA: Concord Jazz. [CD].
Genette, Gérard. 1980. *Narrative Discourse: An Essay in Method*. Trans. Richard Howard. Ithaca: Cornell University Press.
Jones Matthew T. et al. 2011. ‘(Tele)Presence and Simulation: Questions of Epistemology, Religion, Morality, and Mortality’. *PsychNology Journal* 9.3: 193–222.
Kroeker, Allan, dir. 1998. ‘His Way’. *Star Trek: Deep Space Nine*. USA: Paramount.
Landau, Les, dir. 1990. ‘Future Imperfect’. *Star Trek: The Next Generation*. USA: Paramount.
McHale, Brian. 1987. *Postmodernist Fiction*. London: Methuen.
Malina, Debra. 2002. *Breaking the Frame: Metalepsis and the Construction of the Subject*. Columbus: Ohio State University Press.
Rigby, Scott, and Richard M. Ryan. 2011. *Glued to Games: How Video Games Draw Us in and Hold Us Spellbound*. Santa Barbara: ABC-CLIO.
Stoppe, Sebastian. 2008. ‘“Tee, Earl Grey, Heiß”: *Star Trek* und die Technisierte Gesellschaft’. In *Technik und Gesellschaft in der Science-Fiction*. Ed. Jan A. Fuhse. Berlin: LIT, 94–111.
----- 2016. ‘Getting Immersed in *Star Trek*: Storytelling Between “True” and “False” on the Holodeck’. *SFRA Review* 316: 4–15.
Scanlan, Joseph L., dir. 1988. ‘The Big Goodbye’. *Star Trek: The Next Generation*. USA: Paramount.
Singer, Alexander, dir. 1993. ‘Ship in a Bottle’. *Star Trek: The Next Generation*. USA: Paramount.
Suvin, Darko. 1972. ‘On the Poetics of the Science Fiction Genre’. *College English* 34: 372–82.
Zhuàngzi. 1996. *Zhuàngzi*. Trans. Burton Watson. New York: Columbia University Press.

Here Be Dragons: *The Buried Giant* in the Hierarchy of Genres

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Genre is widely acknowledged to be a flexible rather than a fixed concept, and responsive to the changing circumstances of historical context. A current interest in the overlap between literary and speculative fiction, as exemplified by Kazuo Ishiguro's *The Buried Giant* (2015), indicates a movement away from literary realism into less conventional territory. As with all matters to do with genre, the boundaries are indistinct. James Wood argues that 'everything flows from the real, including the beautiful deformations of the real; it is realism that *allows* surrealism, magic realism, fantasy, dream and so on' (Wood 2004: ix), but others, such as Doris Lessing, argue that everything flows from the fantastic: 'The current mode of "realistic" fiction of the last 200 years is the aberration and that fantastic literature is the mainstream which has never run dry and still flows freely' (qtd Wolk 1990: 26). As far back as 1948, John W. Campbell phrased this view even more succinctly when he wrote: "'mainstream literature' is actually a special subgroup of the field of science fiction – for science fiction deals with all places in the Universe, and all times in Eternity, so the literature of the here-and-now is, truly, a subset of science fiction' (qtd Roberts 2006: 56). For later writers and critics, there was a need to distinguish sf from, what Samuel R. Delany termed, 'mundane realism'.

In his most recent work, Ishiguro controversially deploys speculative fiction as a way of understanding time, history and human interconnection. Ishiguro insists on a continuity of English history and habitation, at one point writing that 'the view before them [Axl and Beatrice] that morning may not have differed so greatly from one to be had from the high windows of an English country house today' (Ishiguro 2016: 91). However, Ishiguro's England in *The Buried Giant* is remote from both the present day and mundane reality, inhabited as it is by ogres, pixies, decrepit chivalry and a dragon called Querig.

Axl and Beatrice, the elderly Briton couple at the centre of *The Buried Giant*, are living in a hollowed hill not long after the time of King Arthur. Their cave-like room is hidden within the warren, far from the light, and they are separated from their small community. Something great is at stake here, but readers do not know what it is for a long time, since the characters themselves suffer from amnesia – a literal enactment of Wood's description of the novel as 'a redundant remembering and a struggle against forgetting' (Wood 2005). When Beatrice persuades Axl that they should go and see their son, whom they think lives in a nearby village, although sometimes they are not sure whether they actually have a son or whether he is alive, their quest begins.

Like Ishiguro's existential novel, *The Unconsoled* (1995), *The Buried Giant*

is frequently unclear and even contradictory. The reader is drawn deeper and deeper into a fantasy world until we are not surprised to find a sleeping dragon at its centre. We are never quite sure where Ishiguro will take this tale that seems to be a fable, little more than a fairy-tale. It is an extremely unusual book and a radical shift even for Ishiguro, master of so many styles that have complex generic affiliation. More than ever, his writing here is muted, discursive, full of explicit telling as the third-person narrator clearly (at least in the beginning) addresses a contemporary reader directly. It is as if Modernism, with its urban settings and complex characters with depth and interiority, had never happened.

The response to *The Buried Giant* has, in many ways, been more interesting than the book itself. There is a demonstrable concern with how to categorize it: Michiko Kakutani refers, in her review, to its 'fuzzy, dreamlike narrative' and 'stilted, formalistic language' (Kakutani 2015). In a *New York Times* interview a month before the novel's release, Ishiguro betrayed an obvious anxiety about it being read as genre: 'I don't know what's going to happen. Will readers follow me into this? […] Are they going to say this is fantasy?' (qtd Alter 2015). Ishiguro's decision, however, to say this to *The New York Times*, whose readership is most likely to prefer a different kind of fiction, indicated not only Ishiguro's anxiety about losing face as a literary writer but also his desire to address the very audience that he felt he needed to win over. What he did not anticipate was the 'bigger debate' about genre and its transgression (Gaiman and Ishiguro 2015).

The timing of Ishiguro's comment is worth noting, too: the author was considering his book as a product; holding, in his mind at least, the published artefact that no longer had the infinite potential of the manuscript. Just as every choice made in writing – every sentence, scene, paragraph and plot twist – makes the resultant work one thing and not something else, so the publisher's peritextual contribution had, by this stage, also been brought to bear, further locking down the final, finished form. The cover of the initial edition makes no visual or textual reference to dragons or fantasy; it is marketed as both historical – 'The Romans have long since departed, and Britain is steadily declining into ruin' – and a romance, as Axl and Beatrice discover 'forgotten corners of their love for one another'. The aspects of romance and historical fiction would seem to be more palatable, from a marketing point of view, than fantasy. However, it is the fantastic elements that enable Ishiguro to become imaginatively expansive about the complexity inherent in the (dis)connections between his characters, their environment, and the trauma of induced memory loss. It may be that the very capacity of cross-genre works, so attractive to a writer like Ishiguro, also evidences our general uneasiness about the transgression of genre boundaries.

Ursula Le Guin, in her review of the novel, leapt to the defence of fantasy, arguing that 'it appears the author takes the word for an insult'. She writes

that *The Buried Giant* fails as fantasy, since 'no writer can successfully use the "surface elements" [as Ishiguro called them in the *New York Times* article] of a literary genre – far less its profound capacities – for a serious purpose, while despising it to the point of fearing identification with it' (Le Guin 2015a). Though we might beg to differ about how important authorial intention or identification is in the creation of genre works, the point is made again that literary fiction is likely to be received as high art while genre fiction is, in Le Guin's terms, a 'low' cultural ghetto. More than this, her review seems to suggest, perhaps unintentionally, that fantasy is even more disregarded than science fiction – which is consistent with the shameful memory Ishiguro shares with *The New York Times*: his wife had said 'none of this [*The Buried Giant* draft manuscript] can be seen by anybody' (qtd Alter 2015). Taken in conjunction with the publisher's careful packaging of the novel, and Ishiguro's own concerns about whether readers would 'follow him' into a fantasy world, Le Guin's implied claim that there exists a hierarchy of speculative genres has justification. Ishiguro himself felt that the controversy surrounding *The Buried Giant* was far stronger than when he had turned to science fiction in *Never Let Me Go* (2005) (Gaiman and Ishiguro 2015).

Fantasy and science fiction are often closely – and potentially negatively – associated with Young Adult readers. Thomas Disch, in his confessional article 'The Embarrassments of Science Fiction' (1973), claims that science fiction is 'a branch of children's literature' (Disch 2005: 4), appealing first and foremost to teenage boys. It is then easy – even if false – for him to then argue that those who keep reading sf, and become lifelong fans, are readers who fail to mature. This claim has been substantially challenged, perhaps most obviously by feminist writers such as Octavia Butler, Ursula Le Guin and Joanna Russ. Instead popular genres, including those associated with Young Adult readers, may be enabling rather than restrictive for writers working outside of the genre: 'fantasy opens up things enormously' (Gaiman and Ishiguro 2015). Fantasy appears to Ishiguro (a university-educated man) to be more flexible and expansive than the literary traditions in which he was trained. In the reception of *The Buried Giant*, we see Ishiguro's perception of a stigma against speculative genres, especially fantasy fiction. Arguably, though, speculative fiction makes possible what would be deemed impossible in a more realistic novel, not just at the level of plot or story, but in terms of reader engagement *and* writerly exploration. As Ishiguro himself suggests, 'with the advent of blue-sky thinking, the new tech industries that have led the way seem to require' the kind of imagination that would, under industrial capitalism, have been considered 'too dreamy' (Gaiman and Ishiguro 2015). Such free thinking, which Ishiguro associates with fantasy, is juxtaposed with the amnesia that inflicts his characters.

In Ishiguro's novel, the dragon Querig has been made to cast a spell of forgetting because it is the only way the Britons and Saxons can peacefully co-exist. The aging knights and old women Axl and Beatrice represent cannot forgive the violence and invasion of Arthurian Britain, so they must be made to forget it in order for them all to live together. It is clearly a compromised and uncomfortable life. The conceit is consistent with (Young Adult) fantasy motifs, such as those used by J.R.R. Tolkien, whose Middle Earth is not so far removed from the Arthurian Britain of Rosemary Sutcliff and T.H. White. Ishiguro uses this fantastical idea to capture and communicate a powerful insight into our own current state of political denial. The degraded landscape Axl and Beatrice journey through is an allegory of the world around us: an ecologically ravaged country, damaged by battles we no longer remember; populated by the walking wounded and near-dead knights, as well as mythical and mutant creatures such as ogres and pixies. The slumbering female dragon, bound by King Arthur's knights, may represent Mother Earth: towards the end of the story she even adopts the voice of a Saxon boy's mother. When our loving couple start out on their journey we long for the mist to lift. By the end of the book we dread it, aware of the horror that will transpire when Querig is killed. As with all good quest narratives, the grail itself – the quest to kill the dragon, which has overtaken the journey to see the old couple's son – is compromised. How then will the story end?

Comparing and contrasting the dragon created by Ishiguro (a knighted, Nobel Prize-winning author who dis-identifies as a fantasy writer) with one crafted by Le Guin (a self-identified fantasy author described by Margaret Atwood as a 'wellspring' of the genre [qtd Russell 2014]) may offer some insight into whether his tale *works* as an example of genre or literary fiction. These two authors are also writers of different genders, and the examples of Querig and Yevaud are from different decades. The reception of the texts in question is determined by the presence of dragons, how (well) these creatures are employed *and* the reasons why their authors introduce them. The opposite is also true: the reception of these works may determine the success of such generic elements.

While Ishiguro's Querig performs a spell of forgetting to ensure peace (albeit an involuntary one, which results in the characters' inability to come to terms with their trauma), Le Guin's Yevaud uses 'truenames' to bring reality into existence: 'To speak the name is to control the thing' (Le Guin 2015b: 76). Where Ishiguro's characters exist in a state of amnesia, at odds with history and unsure what is true, the villagers in Le Guin's 'The Rule of Names' (1964) know exactly what it is they don't know about their local wizard: his name, where he comes from, who or what he really is. Which is, of course, everything. What is important is that the reader knows where Le Guin's story is going – we are

confident we are heading towards a satisfactory ending (though the delightful humour may be unexpected, unless we are Le Guin readers). It is this aspect of genre fiction that Ishiguro ignores or fails to deliver on: the importance of narrative traction and tension. Martin Amis says 'even the best kind of popular novel just comes straight at you' (Amis 2000: 224), meaning it as a criticism, but genre fans might read it as praise of pacing and direct engagement: story over metaphor, answers over questions. Readers seek resolution in fantasy quests (heroic failure can still result in a story's successful conclusion), not unresolved archetypes lost in an obscure land.

In some ways these dragons, how they appear and why their authors chose to write them, are not so very different: they both represent the power of memory, of knowledge. Querig teaches us that to forget the past is to lose the present; Yevaud illustrates that to know history is to hold power. Perhaps then the difference comes from – or reveals – the value these authors give to the reading as opposed to the writing experience. Le Guin's words ring with optimism, while Ishiguro seems lost in his own liminality, only thinking about the public response after he has told his story. In this respect, the two writers also reveal their different genre affiliations.

If Ishiguro's objective was to explore the 'corners' of love, as the publisher's back-cover blurb suggests, why did he not write a conventional romance? Arguably, because speculative genres offer revelatory possibilities that realist forms struggle to realize. In the surreal dreaming of *The Buried Giant*, Ishiguro is working 'to find out something which *you* don't know […] what *you* don't want to know, what *you* don't want to find out' (Baldwin 1984; my emphases). While it is hard if not impossible for readers to predict specific events in a fantastic journey, the predictability of such quest narratives is part of their pleasure. Literary writers such as Ishiguro take up generic forms because they offer the possibility of writing in different registers and styles, of making different tactical choices, and of making unforeseen discoveries (both for the writer and the reader).

Readers are not the only ones to ask how inseparable this foolish but clearly fond couple is: it is a question that preoccupies Axl and Beatrice themselves. 'Are you still there, Axl? Still here, princess', they ask and answer each other in a ritualistic exchange. *The Buried Giant* is concerned not only with generational and cultural forgetfulness; it explores this idea on a smaller, more intimate scale, as is also seen in other books by Ishiguro, such as the closed worlds of *The Remains of the Day* (1989) and *Never Let Me Go*. Axl continually reassures his 'princess' that 'the feeling in my heart for you will be there just the same, no matter what I remember or forget' (Ishiguro 2016: 51). At the end of the book, he tells the boatman (who, it has become clear, is there to ferry them to the island

of the dead) that 'black shadows' form 'part of' an old couple's love (358). Their personal memories include betrayal and tragedy – 'black shadows' that mirror the nation's dark history – and his reassurance encompasses more than an obliteration of impending death. Ishiguro's speculative engagement affords an original exploration of love and its possible limits.

Many readers ultimately found *The Buried Giant* unsatisfactory – whether because Ishiguro resists giving clear analogies, so the significance of characters such as the boatman only gradually becomes evident, or because we are sure there is an 'allegory waiting like an ogre in the mist' (Gaiman 2015), but feel it fails to fully emerge: 'Can one write a successful novel about people who can't recall anything?' (Wood 2015). Whether this tension is a source of pleasure or frustration may depend on reader expectations, which are determined in part by the genre they are expecting when they read a book that has not, in terms of the cover, signified that its content will be fantasy. 'Fantasy is a tool of the storyteller' (Gaiman 2015), and in *The Buried Giant* Ishiguro uses fantasy tropes to carve a path towards what cannot be said and what is unable to be understood in realistic terms. He produces a work that is 'impurely' literary and, in so doing, risks alienating both literary and fantasy readers.

Ishiguro may be experimenting with genre fiction not only because of the specific advantages a speculative exploration may present for writers, but because when readers do recognize a familiar, non-realist storytelling form, they might be more likely to suspend disbelief. In his review, Andrew Riemer says 'there may be no point [to *The Buried Giant*] besides the pleasures of storytelling' (Riemer 2015). Some might say that whether these pleasures are ultimately writerly, or readerly ones, may depend on the genre. If Riemer is correct, the pleasures here lie in the quest narrative and the accompanying variation on Arthurian romance, one of the building-blocks of English literature. Ishiguro's interest in all things British is evident in his investigation of the class system in *The Remains of the Day* and in the imperial legacy in *When We Were Orphans* (2000). Riemer argues that Ishiguro's immigrant perspective is why he renders the Arthurian legend 'fundamentally strange', though Riemer doesn't suggest that this is an intentional rendering (Riemer 2015). For an 'outsider' such as Ishiguro – to adopt Reimer's description – speculative fiction is the perfect means to capture and convey that very sense of estrangement. Arguably, it is as deliberate a decision as Ishiguro's under-developed English mythology. The spell of forgetting is not only a metaphor for our blindness to war and environmental catastrophe, but a description of the displaced people we might (have) become: adrift from our heritage, alienated from those we love.

Responding to correspondence regarding his interview in *The New York Times*, Ishiguro claims that he is on the side 'of the pixies and dragons', and

that ‘genre walls should be porous if not non-existent’ (qtd Cain 2015). Yet, such boundaries are clearly important to publishers and reviewers. The debate surrounding *The Buried Giant* illustrates the perceived misuse, or abuse, of genre and its apparent transgression. As Kim Wilkins concludes in her account of popular genres and the Australian literary community, ‘genres are not inherent in texts but are partly formed in […] public discourse’ (Wilkins 2008: 275), a process that also includes literary fiction since it is defined against what it is not. Ken Gelder writes that popular fiction is ‘literature’s Other, the thing literature despises even though it needs it to be, well, literary’ (Gelder 2000: 37). But the literary may also be genre’s ‘Other’, differentiated through a practical process of dis-identification, by being excluded from booksellers’ science fiction shelves and speculative award shortlists, and has no place on fan-fiction communities’ recommendations and review sites. (To that end, the eclectic and often controversial history of the Arthur C. Clarke Award, for which Ishiguro was shortlisted in 2006, is a salutary point in case.)

For Ishiguro, genre is clearly not what his stories are about, even if it may be how he goes about telling them. *The Unconsoled* could be called magic realism; *When We Were Orphans* is classified as crime; *Never Let Me Go* is science fiction; *The Remains of the Day* is historical romance; *A Pale View of the Hills* (1982) is Gothic. The same could also be said of Le Guin, whose membership of the genre community she aligned herself with is not uncomplicated. She too spoke of fantasy as a tool, useful ‘for embodying and examining the real difference between good and evil’ (Le Guin 2004). Like Ishiguro, she too fashioned genre for political and aesthetic purposes. The way Ishiguro uses elements of fantasy to great effect in *The Buried Giant* is comparable to Le Guin’s own writing practices, not only in her science fiction, such as *The Dispossessed* (1974), but also in the Earthsea sequence. ‘Chief among its concerns are morality, identity and power’, writes Ishiguro’s fellow Booker Prize-shortlisted author David Mitchell. ‘Le Guin’s thumbnail sketches contain the psychological depth of oil paintings’ (Mitchell 2015a), contradicting the idea that fantasy – or, indeed, any popular genre – must necessarily produce shallow writing.

‘Fantasy plus literary fiction can achieve things that frank blank realism can’t’, Mitchell told *The New York Times* when he was contacted for background to Ishiguro’s interview, adding that he hoped *The Buried Giant* would ‘de-stigmatise’ fantasy (qtd Alter 2015). Critical responses to *The Buried Giant* suggest that, while the conventions of fantasy may be of great assistance in forcefully imagining a world in the aftermath of war and environmental disaster, there appears even greater resistance to this particular popular genre than others that Ishiguro has previously used. To appreciate what Ishiguro is doing, and to recognize how a force is being applied to the current literary mode, is

to recognize that all genres – including the literary – are permeable and only ever 'stabilised enough' or 'stabilised-for-now' (Frow 2005: 28). Perhaps literary fiction is being fantastically destabilized, which seems appropriate in the context of our current climate emergency.

Whether genre is a tool wielded well in *The Buried Giant* may be unresolvable. Different writers doing the same work may see themselves differently, and/or – as in the case with Atwood – their self-perception may change over time. Publishers, too, have a vested interest in positioning authors or books in particular categories, and their positions too are subject to changing literary contexts. It may not be the most interesting question even if we were to answer it by weighing sales or critical acclaim. Instead, we should be asking whether the genres, in conflict or collaboration here, are challenged or changed by such not-always-successful acts of cross-genre experimentation?

Le Guin argued that literary realism 'is not a defining characteristic of fiction' per se (Le Guin 2005). China Miéville, conversely, sees the Booker Prize as an award for predominantly realist 'litfic' titles (qtd Crown 2011). In part his comments are a response to the current trend for realist, semi-autobiographical novels such as the Neapolitan Quartet by Elena Ferrante. Miéville pits this 'literature of recognition' against his preferred 'literature of estrangement', referencing Le Guin's own description of science fiction to establish his version of 'spec-fic' (qtd Crown 2011). In this way, he reconceives the high-art versus low-brow, literary-versus-genre debate productively for my own investigation into how authors, such as Ishiguro, might try (consciously or not) to use genre to strengthen and extend, rather than threaten or diminish, their literary works. Literary fiction has always had a history of hauntings and hallucinations, ghost stories and pseudo-science fictions – from *Wuthering Heights* to *Utopia*; *Frankenstein* and *Ulysses* to *Tristram Shandy*. Miéville is well aware that 'all fiction contains elements of both drives (to different degrees, and variably skilfully)' and 'great stuff can doubtless be written from both perspectives' (qtd Crown 2011), but here he is addressing a very specific contemporary and political context.

As the connections to Le Guin make clear, this discussion is not new. Nearly fifty years ago, Joanna Russ divided writing into that which was 'about things as they characteristically are or were […] and [that which was about things] as they may be or might have been' (Russ 1971: 54). Miéville, however, is trying to define the category of literary fiction itself, which is inherently unstable, even if it does operate – in practical terms – as a recognizable genre through such paratextual aspects as format and layout, and such epitextual discussions as reviews and interviews. By contrast, literary fiction disappears from the radar if only sales are taken into account, since it is not a category tracked by BookScan, while to analyze sales of literary fiction you would have to take other

kinds of commercial fiction away from the total fiction sales, which would not help publishers to market individual titles to potential readers.

For writers such as Ishiguro genre experimentation does not threaten their literariness, though it may challenge the perceived quality of the work in question; it negates their middlebrow market. The way genre is performed and reformed in such literary fiction does not mitigate the literariness of the books: their speculative aspects are part of what makes these titles 'simultaneously (and intentionally) aesthetic and technical' (Genette 1999: 51). To use Gelder's expression, 'Big L Literature' has always assimilated ideas and forms from wherever writers find inspiration (Gelder 2014: 11).

Literary fiction aspires to the canonical, defined by Harold Bloom as 'authoritative in our culture' (Bloom 1994: 1), but his sense of who 'we' might be is open to question. Bloom also writes of a distinctive 'strangeness' in canonical literature, 'a mode of originality that either cannot be assimilated, or that so assimilates us that we cease to see it as strange' (3). As Jim Clarke has recently noted, Bloom's list of canonical works taken from the western literary tradition includes such titles as David Lindsay's *Voyage to Arcturus* (1920), Aldous Huxley's *Brave New World* (1932), Le Guin's *The Left Hand of Darkness* (1969) and Russell Hoban's *Riddley Walker* (1980) (Clarke 2019). Although Bloom's stated aim was to write in defence of the canon, his acceptance of – at the very least – science-fictional texts according to his own criteria of canonicity, allied to his comments about strangeness as an essential quality, are pertinent to the current mobility of established generic forms and the increasing significance of speculative genres for literary fiction.

I am by no means the first to identify examples of literary fiction with speculative conceits. Bruce Sterling coined the word 'slipstream' to describe 'a contemporary kind of writing which has set its face against consensus reality' (Sterling 1989). He was reacting against a much-quoted interview in which speculative fiction author Carter Scholz pointed out that 'there are other people doing our job' (qtd Sterling 1989). Scholz's description of writing science fiction echoes Frow's 'doing' of genre in terms of 'performing and transforming it' (Frow 2005: 144). The same case was made more recently by Kim Stanley Robinson, although still with that echo of shoring-up genre boundaries against potential invaders: 'the models modern literary fiction has are so depleted, what they're turning to now is our guys in disguise' (Robinson 2017). The books Sterling lists as belonging to this slipstream group are 'fantastic, surreal sometimes, speculative on occasion, but not rigorously so' (Sterling 1989) – like those by Ishiguro. Sterling is not interested in hierarchies of genre. He makes the case that literary works which exhibit weird and wonderful aspects are something else again, typically of that strain in late twentieth-century thought: 'Novels of

Postmodern Sensibility' (Sterling 1989). Slipstream it seems, as Jenny Green says succinctly, is 'the cover required for literary fiction to venture into a world of aliens, or monsters, without losing its credibility' (Green 2015).

Sterling self-consciously mocks the term, as well as the idea of inventing a new genre, but his slipstream manifesto ends with a long list of literary examples where, contrary to Disch's New Wave critique of genre sf, 'the largest themes and most powerful emotional materials' are dealt with in ways that are not 'irresponsible and trivialising' (Disch 2005: 14). Contrary also to Miéville's critique of the Booker Prize, in his *History of Science Fiction* (2006) Adam Roberts lists a number of Booker contenders whose novels are based upon science-fictional premises even if, as Kingsley Amis is said to have suggested, once shortlisted 'they're not called science fiction anymore' (qtd Crown 2011). The quantity and quality of the books Sterling cites support his case, suggesting that science fiction's 'job' has actually been saved at the very moment when Scholz gives up on it. To return to Russ, 'the motif or scene or thrilling action for whose sake whole stories were once written' (Russ 1972: 50) has been taken up by or in 'something else': speculative literary fiction.

Miéville goes on to point out that while science fiction novels *can* appear on the Booker shortlist, they are generally not called genre fiction in that context, although the examples he cites (Atwood's *Oryx and Crake* [2003] and Ishiguro's *Never Let Me Go*) are fraught; both authors have worked hard not to be identified as genre writers. 'The book doesn't care if it's science fiction', says David Mitchell, conjuring an act of anthropomorphism that could belong to speculative fiction, imagining a sensate if not sensitive book that 'doesn't give a damn about genre' (Mitchell 2015b). His choice of words nicely articulates what we already know: literary fiction has always had generic aspects, and it is that tension which has provoked much of the open-endedness that we associate with the best of literature.

Tim Parks argues that great novels analyze the world in a way in which it isn't used to being analyzed (Walton 2014), which sounds very much like Le Guin's emphasis upon estrangement as an inherent quality of sf/f. Taking up genre tropes may enable literary fiction to do just that, analyze the world anew, without making the work itself generic. While the permeability of genre is not new, or a new observation, literary fiction's penchant for experimenting with popular form seems more evident now than ever before. The reasons for this may not be purely literary, but rooted in real-world political and ecological concerns. What we do know is that Ishiguro's foray failed for many literary readers by being too fantastic, and likely fell short for fantasy fans who found it.

'Here Be Dragons', *hic sunt dracones*, was famously written on early maps of the east coast of Asia not necessarily because there were (Komodo) dragons,

but to sign that these were dangerous waters. Ishiguro's experiment suggests that this advice remains true: where there are dragons, there are dangers. Merging literary and fantasy genres is still uncharted territory.

Works Cited

Alter, Alexandra. 2015. 'For Kazuo Ishiguro, *The Buried Giant* is a Departure'. *The New York Times*, 19 February.

Amis, Martin. 2000. *Experience*. London: Jonathan Cape.

Baldwin, James. 1984. 'The Art of Fiction No. 78'. *The Paris Review* 91. https://www.theparisreview.org/interviews/2994/james-baldwin-the-art-of-fiction-no-78-james-baldwin (accessed 25 December 2019).

Bloom, Harold. 1994. *The Western Canon*. New York: Riverhead Books.

Cain, Sian. 2015. 'Writer's Indignation: Kazuo Ishiguro Rejects Claims of Genre Snobbery'. *The Guardian*, 9 March. https://www.theguardian.com/books/2015/mar/08/kazuo-ishiguro-rebuffs-genre-snobbery (accessed 25 December 2019).

Clarke, Jim. 2019. 'Can Science Fiction be Conservative?' *Sci Phi*, 20 December. https://www.sciphijournal.org/index.php/2019/12/20/can-science-fiction-be-conservative/ (accessed 26 December 2019).

Crown, Sarah. 2011. 'What the Booker Prize Really Excludes'. *The Guardian*, 17 October. https://www.theguardian.com/books/booksblog/2011/oct/17/science-fiction-china-mieville (accessed 26 December 2019).

Disch, Thomas M. 2005 (1973). *On SF*. Michigan: University of Michigan Press.

Frow, John. 2005. *Genre*. London: Routledge.

Gaiman, Neil. 2015. 'Kazuo Ishiguro's *The Buried Giant*'. *The New York Times*, 25 February.

----- and Kazuo Ishiguro. 2015. 'Let's Talk About Genre'. *The New Statesman*, 4 June. https://www.newstatesman.com/2015/05/neil-gaiman-kazuo-ishiguro-interview-literature-genre-machines-can-toil-they-can-t-imagine (accessed 26 December 2019).

Gelder, Ken. 2001. 'Recovering Australian Popular Fiction: Towards the End of Australian Literature'. In *Australian Literary Studies in the 21st Century*. Ed. Philip Mead. Hobart: Association for the Study of Australian Literature, 112-20.

----- 2014. *Popular Fiction: The Logics and Practices of a Literary Field*. London: Routledge.

Genette, Gérard. 1999. *The Aesthetic Relation*. Trans. G.M. Goshgarian. New York: Cornell University Press.

Green, Jenny. 2015. 'In the Slipstream'. *Overland*, 2 November. https://overland.org.au/2015/11/in-the-slipstream/ (accessed 26 December 2019).

Ishiguro, Kazuo. 2016 (2015). *The Buried Giant*. London: Faber.
Kakutani, Michiko. 2015. 'In a Fable of Forgetting, Jousting with Myth'. *The New York Times*, 24 February.
Le Guin, Ursula. 2004. 'Some Assumptions about Fantasy: BookExpo America Breakfast'. The Official Website of Ursula K. Le Guin. http://www.ursulakleguin.com/ (accessed 25 December 2019).
----- 2005. 'Plausibility Revisited'. The Official Website of Ursula K. Le Guin. http://www.ursulakleguin.com/ (accessed 26 December 2019).
----- 2015a. 'Are They Going to Say This is Fantasy?' *Book View Café*, 2 March. https://bookviewcafe.com/blog/2015/03/02/are-they-going-to-say-this-is-fantasy/ (accessed 26 December 2019).
----- 2015b (1975). *The Wind's Twelve Quarters and The Compass Rose*. London: Gollancz.
Mitchell, David. 2015a. 'David Mitchell on Earthsea – A Rival to Tolkien and George R.R. Martin'. *The Guardian*, 23 October. https://www.theguardian.com/books/2015/oct/23/david-mitchell-wizard-of-earthsea-tolkien-george-rr-martin (accessed 26 December 2019).
----- 2015b. 'Genre Snobbery Is a "Bizarre Act of Self-mutilation."' *Geek's Guide to the Galaxy*, episode 175, 11 July. https://geeksguideshow.com/2015/11/02/ggg175-david-mitchell/ (accessed 26 December 2019).
Riemer, Andrew. 2015. 'Kazuo Ishiguro's *The Buried Giant* Depicts Strange Anglo-Saxon Britain'. *The Sydney Morning Herald*, 28 February.
Roberts, Adam. 2006. *The History of Science Fiction*. Basingstoke: Palgrave Macmillan.
Robinson, Kim Stanley. 2017. 'Kim Stanley Robinson and the Drowning of New Yo *The Coode Street Podcast* 305. http://www.jonathanstrahan.com.au/wp/the-coode-street-podcast/ (accessed 13 February 2018).
Russ, Joanna. 1971. 'The Wearing out of Genre Materials'. *College English* 33.1: 46-54.
Russell, Anna. 2014. 'Margaret Atwood Chooses *A Wizard of Earthsea*'. *The Wall Street Journal*, 16 October. https://www.wsj.com/articles/wsj-book-club-margaret-atwood-chooses-a-wizard-of-earthsea-1413493430 (accessed 25 December 2019).
Sterling, Bruce. 1989. 'Slipstream'. Electronic Frontier Foundation. w2.eff.org/Misc/Publications/Bruce_Sterling/Catscan_columns/catscan.05 (accessed 26 December 2019).
Walton, James. 2014. 'Sex Is Forbidden'. *The New York Review of Books*, 9 January. 63-4.
Wilkins, Kim. 2008. 'Popular Genres and the Australian Literary Community:

The Case of Fantasy Fiction'. *Journal of Australian Studies* 32.2: 265-78.
Wolk, Anthony. 1990. 'Challenge the Boundaries: An Overview of Science Fiction and Fantasy'. *English* 79.3: 26–31.
Wood, James. 2004. *The Irresponsible Self: On Laughter and the Novel*. New York: Farrar, Straus and Giroux.
----- 2015. 'The Uses of Oblivion'. *The New Yorker*, 23 March.

Gates, Galaxies and Globalization: *Stargate SG-1* and Science Fiction in the Digital Age

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One of the more obvious advantages of science fiction as a genre is its capacity to offer a version of the present in allegorical form, a vision of the world which 'sends back more reliable information about the contemporary world than an exhausted realism' (Jameson 2003: 105). Read in this fashion, the *Stargate* franchise has profound things to say not about distant planets or alien overlords, but about the highly globalized digital age in which we live. The franchise's central conceit, the existence of a fictional Stargate network which, through the transformation of physical matter into data, provides instantaneous travel across interstellar distances, reduces the galaxy itself to an analogy of the global village. Indeed, the prevalence of actual villages depicted on the majority of planets visited by the protagonists of *Stargate SG-1* (1997–2007) and *Stargate Atlantis* (2004–09) pleasingly conflates Marshall McLuhan's twin metaphors of the 'Global Village' and the 'Gutenberg Galaxy' (McLuhan 1962: 31) into something new: the Galactic Village, a constant reminder of exactly how Stargate travel collapses distance, and, on occasion, time. This collision of globalization and digitality is, moreover, a dramatization of the kinds of time-space compression, cultural flattening and associated US-centrism brought about by the increasing pervasiveness of the internet in people's lives. Indeed, one of the more surprising elements of *Stargate SG-1* is how literally it manifests the concerns of the millennial moment, how it predicts and engages with technological change as well as the accompanying economic unease, and how it suggests the manner by which these upheavals were received and processed by its original audience.

Stargate SG-1's longevity and cultural impact has earned it comparisons with series such as the original *X-Files* (1993–2002), *Buffy the Vampire Slayer* (1997–2003), *Babylon 5* (1993–98) and *Farscape* (1999–2003): 'Only the UK's apparently immortal *Doctor Who* and Gene Roddenberry's constantly reincarnated *Star Trek* franchise have exceeded the staying power of *Stargate SG-1* and its offspring' (Beeler and Dickson 2006: 2). Extant critical work on the *Stargate* franchise has critiqued how it utilizes the 'alien as ancient god' imagery (Hiscock 2012: 169) and how it draws upon the 'pseudoarchaeological theories of Erich von Daniken' (170). Some, like Jan-Johnson Smith, have examined the show's 'clear militaristic leanings' (Smith 2005: 9) while others have engaged with episodes in intriguing if niche fashions, such as reading them as objects of mathematical curiosity (Evans and Huang 2014: 252–62). Yet only rarely does the development of late 1990s digitality appear in criticism of the franchise

and, when it does, it is primarily in connection with real-world production issues or online fan communities. Smith's discussion of digitality is concerned solely with matters of special effects and commuter-generated imagery, while Rachel McGrath-Kerr dwells upon the interaction of female viewers with the character of Samantha Carter 'through fan fiction and online discussion' (McGrath-Kerr 2006: 200). Jo Storm acknowledges the show's production during a time of increasing 'inclusion (some might say intrusion) of the internet in our lives', and how online culture was important to the development of *Stargate* fandom, leading to a way 'of looking at television series that has never before been possible' (Storm 2005: 100). That said, while *SG-1* is framed as 'not only an escapist adventure series, but also a kind of mirror' (100), Storm's discussion of the show's engagement with digitality limits itself to how episodes such as 'Ascension' (2001) were written in response to 'fans on the internet […] asking to see more about the characters' personal lives' (301).

Nonetheless, the origins and development of the *Stargate* franchise's core themes, and those of *SG-1* in particular, are impossible to separate from the collision of digitality, the internet, and online culture with the forces of globalized capitalism in the late 1990s and early 2000s. In that respect, the franchise is proof of the widely held maxim that science fiction is always about the time in which it is written, for 'what is perhaps most interesting about the series is that it is set in the present' (Holloway 2008: 186). Its protagonists are 'ordinary humans, not emotionally advanced, future humans with better education and technologies' (186–87). The creators behind the show have stated that this was a deliberate decision. As executive producer Brad Wright says:

> As wonderful as the *Enterprise* is as a means of transporting the characters and the audience from adventure to adventure, [the] Stargate is capable of doing that for the audience in *the here and now* [my emphasis]. It's people from our world in the 20th-21st century, simply stepping into the gate and embarking on an adventure to another world. (Wright 2009: 310)

Much like the user of the early internet sitting in front of their computer screen, Stargate technology allows the show's characters to 'encounter a wide variety of civilizations, both primitive and technologically far advanced – situations that also challenge them to respond humanly even as the franchise heavily employs the genre's emphasis on wonder to reflect on our cultural attitudes toward the other' (Telotte 2008: 25). *Stargate*'s creators thus draw not only 'upon the audience's underlying cultural knowledge' (Beeler 2008: 279) but on their day-to-day experience of digitally transformative technological change, as well as the accompanying economic ramifications which were only becoming apparent

at the time.

The overarching narrative which *SG-1* ultimately presents is one of global capitalism in conflict with a philosophy firmly rooted in digitality, that being the condition of living in a digital culture. Throughout the series, the residual elements of feudalism inherent in capitalism inform the actions of the parasitic Goa'uld System Lords (and, for that matter, several hostile elements of humanity). However, the ultimate hegemony of these aliens is repulsed by the influence of the Ancients, the benevolent race who originally constructed the Stargate network before learning how to 'ascend' to a state of pure energy where they share 'knowledge and information, understanding on a level' well beyond that of Humanity or the Goa'uld (DeLuise 2005a). That this is, in effect, the central conflict underpinning *SG-1* is evidenced not just by such notable episodes as 'Absolute Power' (2001), and flashpoints such as 'Full Circle' (2003) and 'Lost City' (2004), but by the climax of season eight's 'Threads' (2005) where, as the title implies, the writers and producers concluded 'almost every story thread that wasn't wrapped up' (Mikita 2005) with the semi-Ascended Goa'uld Anubis locked in eternal struggle with the Ascended Ancient Oma Desala. The effect of 'Threads' is to emphasize just how Goa'uld and Ancient ideologies are polar opposites: globalization, embodied by a cackling madman bent on galactic domination, is a form of evil; digitality, represented by an intelligent woman roused to the use of her astronomical potential, is an expression of wisdom and virtue.

Given its origins in the earliest stages of contemporary digitality, it should come as no surprise that the *Stargate* franchise offered viewers a commentary on and a means of understanding the breakneck infiltration of the physical by the digital, which defines the contemporary information economy. With the *SG-1* pilot airing just eight weeks before the domain name for Google was registered, and a little over two years after Nicholas Negroponte coined the term 'digitality' in his study *Being Digital* (1995; only a few months after the release of the original *Stargate* film upon which the series was based), the *Stargate* franchise is enviably placed among recent popular cultural phenomena to reflect the ongoing changes digitality has wrought throughout society, technology and communications. Certainly, it is possible to discern the unique combination of factors responsible for digitality's success at the most basic level of *SG-1*'s construction. For instance, Manuel Castells describes the internet as having been born through the 'unlikely intersection' of science, military and libertarian cultures (Castells 2001: 17), with 'libertarian' used by Castells in its European tradition of 'a culture and ideology based on the uncompromising defence of individual freedom' and not, as 'in the US context' of 'a systematic distrust of government' (33). In the pilot episode of *SG-1*, this intersection occurs with the

first meeting of astrophysicist Samantha Carter (Amanda Tapping), decorated Air Force special ops officer Jack O'Neill (Richard Dean Anderson), and gifted archaeologist and linguist Daniel Jackson (Michael Shanks). It is only through the intersection of the scientific, the military and the libertarian – through the *cooperation* of Carter, O'Neill and Jackson – that they and the viewer encounter a paradigm-changing perspective, that of fourth season regular Teal'c (Christopher Judge), an augmented human with superhuman abilities and a knowledge based upon experiences from across the Globalized Galaxy. He is, in effect, the killer app (or to paraphrase the show's parlance, the *warrior* app) though which the other characters are able to fully utilize the seemingly limitless possibilities of the Stargate network.

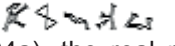
The success of the series has long been ascribed to how 'the different backgrounds and goals of the SG-1 team allow for significant innovation, as they react differently to the common dilemmas presented each week' (Beeler 2008: 272). However, such synergy is better read as a direct analogy of what Castells called the 'Network Society' (Castells 2000: 60): a digital economy with 'the capacity to work as a unit in real time, or chosen time, on a planetary scale' (101). The impact of Stargate travel further conforms to a condition whereby 'the flows of information, and the handling, assessments and decisions made on the basis of information, decisively alter previous ways of life' (Webster 2001: 5). Such a notion, even as *SG-1* premiered in the mid-1990s, was still unbelievable enough to many people that it could offer a means 'for exploring the novum' (Suvin 1979: ix) of the internet, and so provide the foundation of a successful science fiction series. Digitality's novum, experienced in early episodes of *SG-1* as a sense of bewilderment by travellers passing through the Stargate, further gestures towards the 'intense phase of time-space compression that has had a disorientating effect and disruptive impact upon political-economic practices' (Harvey 1990: 284) identified in postmodernity. Thus, throughout the first few years of *SG-1*, processes we take for granted nowadays such as conducting 'a timeline Boolean search' (a straightforward search engine query employing Boolean operators such as "AND/OR") are depicted as so unbelievable that they could be little else but sfnal in nature. Equally, the occasional instability of the Stargate wormhole speaks to the cultural insecurities of the era: can the new technology which networks the world together truly be relied upon? Do its operators have any idea what they are doing or are they just learning how to use it as they go along? In that way at least, the technobabble of *Stargate* – remarkably consistent throughout the development of the franchise (as compared to, say, that of *Star Trek*) – makes clear and consistent reference to the digital networks beginning to transform the globalized world.

Take, for example, the primary characteristic of digitality: a transition

from the delivery of atoms, meaning physical products, to the 'movement of weightless bits at the speed of light' (Negroponte 1995: 12). In practice, the Stargate provides almost exactly this kind of communications technology, albeit one which has overcome the disparity between atoms and bits for, in the case of the *Stargate* franchise, there is a conflation of matter and information. Stargates are 'dialled', following which a 'connection' must be made. Those travelling through a Gate's event horizon are then dematerialized, their physical form converted into information, even being held momentarily in a 'memory buffer' by the receiving Gate before their 'ones and zeros' are 'reconverted back into the matter's original form' (Woeste 2002). As Carter explains, 'the Stargate has massive amounts of memory inside,' it stores the pattern of anyone or anything entering 'to make sure it has all the information before it reassembles the object or, in our case, a person' (Woeste 2002). Atoms become bits which become atoms again and, in this manner, an individual can journey from one side of the Galaxy to the other in an average time of 3.2 seconds (Woeste 2006). Like the internet, the Stargate network is also an incredibly flexible system. Any Gate 'can act both as source and sink'; it can be 'where the signal comes from' and 'where the signal goes' and so the system eschews outdated distribution hierarchies in the same way digital culture does (Negroponte 1995: 180). With the journey from one world to another usually depicted as stepping through the wormhole's event horizon, the buffer aspect of Stargate technology is not often laboured ('48 Hours' [2001] being a notable exception).However it is implicit in every episode and is, as Jackson describes it, 'Gate travel 101' (Woeste 2002).

Seen in this light, the protagonists of *SG-1* are at the forefront of a digital revolution sweeping through a universe which runs on capitalist, globalized principles; the tension resulting from this provides the Stargate franchise with much of its distinctive flavour. For though it is clad in the generic guise of military sf, the conflict between the humans and the Goa'uld is an information war, a consequence of inequality between the initially information-poor humans – known galactically as the Tau'ri – and the information-rich Goa'uld System Lords, the latter with an understanding of the Stargate network, knowledge of hyperspace travel, and access to advanced technologies scavenged and plundered from around the galaxy. On an immediate level, this disparity mirrors that between the rich and poor nations in the early decades of the digital age, the 'global digital divide' which exists as a result of how 'the internet has developed unevenly throughout the world' (Guillen and Suárez 2005: 68). A surprisingly subversive interpretation of *SG-1* emerges when one reads the series protagonists – a U.S. military unit – as an information-poor party in 'so far over our heads that we can barely see daylight' (Azzopardi 1997). The most powerful nation on Earth represents a world which, throughout much of *SG-1*'s run, is numbered

amongst the undeveloped civilizations of the galaxy, an inferiority reinforced by the constant reference to the Tau'ri as 'young', 'primitive', or 'technologically infantile' by cultures such as the Nox, the Tollan and the Tok'ra. At its most basic level, much of the narrative of *SG-1* depicts an effort to bridge this 'gap of development' through the acquisition of 'scientific and technical information' (Sweeney 1983: 1). In the process, the series touches on a great many aspects of technological progress and the way modern communications systems seem to 'banish distance' (Connell and Marsh 2011: xiv), the most obvious of which is the wormhole network itself.

As explained in the original film, determining the address of a Stargate is analogous to finding 'a destination within any three dimensional space; you need six points to determine the exact location' with a seventh point, 'a point of origin', necessary to 'chart a course' (Emmerich 1994). In the highly interconnected narratives of the *Stargate* universe, galaxies themselves are information spaces and travelling through them via wormhole is essentially a hypermedia experience. It therefore comes as no surprise that early metaphors for Stargate operations are drawn squarely from the language of telecommunications: 'What happens when you dial your own phone number?', Daniel asks in the episode 'Solitudes' (1998) as a means of describing the difficulties of connecting to one's own Stargate address from one's home planet (Wood 1998a). Equally, adding another symbol to the six-symbol address will contribute 'a new distance calculation to the existing points, kind of like dialling a different area code' and thereby allowing intergalactic travel (Warry-Smith 1999). Paired with each Gate is a Dial Home Device (DHD), and though it may appear to be nothing more than an elaborate keyboard, various episodes of *SG-1* and *Atlantis* have demonstrated DHDs to be sophisticated routers capable of processing vast amounts of data and even of 'interstellar call forwarding' (DeLuise 2005b). Systematized Gate addresses used to travel the network are, essentially, a fictionalized form of IP addresses, and though Gates are dialled with pictorial representations of constellations rather than with recognizable alphanumeric symbols (a touch of exoticism suggesting the pictographic texts of the ancient Middle East), it is revealed in 'Lost City' that 'each symbol on the Stargate has a corresponding sound so that it can be spoken aloud' (Wood 2004a). In this way, a Gate address such as  can be shared more easily as 'Proclarush Taonas' (Wood 2004a), the real place and the virtual space collapsing in a way which prefigures the manner in which websites are now thought of as destinations in their own right, and a dot-decimal IP address – a string of numbers and periods – is more familiar to us as a human-readable, human-shareable address such as, for example, www.google.com or simply just Google.

Expanding from this, the *Stargate* franchise frequently draws plots and conflicts from exaggerated concerns of the Digital Age, offering an oblique comment on the frenzy with which identity theft and computer viruses are often dealt with by the media and the less tech-savvy members of society. Personnel assigned to Stargate Command have, for example, often found that identity theft is a quite literal problem (including the episodes 'Cold Lazarus' [1997], 'Tin Man' [1998], 'Foothold' [1999], 'Double Jeopardy' [2001] and 'Fragile Balance' [2003]). Meanwhile, the interconnectivity of the Stargate network, though generally portrayed as a strength, also hides vulnerabilities such as those which occur in the episode 'Avenger 2.0' (2003). Taking advantage of the 'correlative update' subroutine in the network's DHDs – a program which enables the Stargates to communicate with each other and share new coordinates to compensate for stellar drift – the System Lord Ba'al (Cliff Simon) introduces a computer virus into the system which scrambles the entire Milky Way Gate network, in much the same way as real-world malware has been used for cyber-sabotage against foreign nations (McElroy and Williams 2012). One of the few aspects of digital maliciousness which *Stargate* has not dealt with is the issue of spam, though the Goa'uld have occasionally conducted what we might term 'Denial of Service' attacks on Earth's Stargate (manipulating the protocols associated with communication requests as Apophis did when his ships brought a second Gate and DHD to Earth's coordinates in 'Within the Serpent's Grasp' [1998] or overloading the system, such as Anubis's attempt to detonate the gate through a destructive build-up of energy in 'Redemption' [2002]).

This metaphorical indebtedness to developments in real-world information processing and communications capabilities is continually hinted at throughout *SG-1*. For instance, although scientists have been working on the mysteries of the Gate for many decades (dramatized in episodes such as 'The Torment of Tantalus' [1997] and, more recently, in the webseries *Stargate: Origins* [2018]), it is only the advent of sophisticated computer technology in the mid-1990s that makes exploration of the Stargate network a viable endeavour. Additionally, the 'Iris' of Earth's Stargate, just like the shield protecting that of Atlantis, is the epitome of a firewall, a 'gatekeeper of sorts' (Negroponte 1995: 45), controlling the flow of information – in this case digitalized travellers – from one world to another. Crucially, *SG-1*'s search for 'technologies we can use to defend ourselves' also charts a societal change in Earth's attitude regarding the increasing presence of digitality in our lives, something which the contemporaneous setting of the series makes difficult to ignore. In early episodes, such as 'The Gamekeeper' (1998), digitality is portrayed as a kind of menace or trap, an 'advanced creation being pumped into our minds' with the characters' brains 'hooked up like computers to some kind of network' (Wood 1998c). By

the time of 'Avatar' (2004), however, the virtual world of 'The Gamekeeper' has been back-engineered for human use in an excellent example of how Stargate Command acquires alien technology and hybridizes it with that of Earth. In this case, the storyline focuses – as much mainstream media did at the time – on digitality's potential to empower and educate undeveloped areas in response to the threat presented by the show's agents of capitalist globalization, the Goa'uld. 'Avatar' presents a combat simulation developed by SGC scientists in order that personnel might better prepare for a Goa'uld incursion. Whereas 'The Gamekeeper' treated the consciousnesses of people themselves as 'software', 'Avatar' is, relatively speaking, a much more realistic depiction of immersive computer environments as 'a viable, virtual reality training tool' with a 'graphic representation' analogous to contemporary video games such as (to use Teal'c's example) *Def Jam Vendetta* (Wood 2004b). O'Neill's first words to Teal'c as he emerges from the latter's initial VR experience, repeatedly referred to as a 'just a game', are 'was it fun?' (Wood 2004b). Nevertheless, even mature digitality is not without its attendant risks, specifically Teal'c's refusal to give up and stop playing, something which serves as an oblique comment on the kind of extreme video game usage which can actively interfere with a gamer's daily life (Griffiths 2010: 35–40).

Yet while the 'Gamekeeper' device is a firmly digital experience, the clearest instances of *SG-1* attempting to bridge the information gap between humanity and the Goa'uld occur in the sphere of military hardware. The new and superior technologies which the team acquires in this field are intended to be effective against what might be thought of as the current 'capitalist hegemony over space' (Harvey 1990: 303) in the Globalized Galaxy. The effect of this is to problematize many of the protagonists' actions and goals, rendering their most conspicuous success stories at least notionally antithetical to the ideology of digitality which underpins the very existence of the Stargate network. Storylines such as Earth's quest to construct interstellar vessels are illustrative of a central tension throughout the middle period of the series in particular, an anxiety generated by residual globalist energies within the heart of emergent digitality during the time-frame of the show's production. Manifesting as a response to the malign influence of the Goa'uld, this tension ensures that not all technological progress on the series is necessarily forward, or one might say *as far* forward as understanding the Stargates.

Like the fax machine, a 'serious blemish on the information landscape' largely derived from 'image-oriented' Japanese 'culture, language, and business customs' (Negroponte 1995: 188), the hyperdrive technology portrayed in the series is a step backward from the ideological principles and simplicity of Gate travel. Many seasons of *SG-1* are spent in pursuit of hyperdrive engines, a

faster-than-light propulsion technology utilized by a number of the show's interstellar or intergalactic civilizations as an alternative to Stargates. The US Air Force eventually acquires such devices through the reverse-engineering of captured Goa'uld vessels and the hybridization of human and Asgard technology. The result is Earth's first true starship, the *Prometheus*, a vessel which is appropriately named, for what Earth seeks to steal from the (false) gods is firepower. Though popular with fans, craft such as the F-302 interceptor, the *Prometheus* and the later Dedalus class battle cruisers are emblematic of how, as the series progresses, humanity's position with regard to the philosophies of the Goa'uld and the Ancients becomes less and less clear cut (and, one might conclude, more beholden to pre-existing and conventional notions of space opera; this being made explicit in O'Neill's initial request to name the *Prometheus* the *Enterprise* [Mikita 2002]).

In many respects, hyperdrives are among the least digital aspects of the Stargate mythology. The technology is one prized by ruling elites – be they the Goa'uld or the US military – as manifestations of antiquated force projection doctrines. They are valued for reasons of national (or planetary) prestige and military might more than elegance or cooperation, the chief advantage of hyperdrive engines being that one can 'take the fight to the enemy' (Mikita 2004). Capital ships and battle cruisers such as *Prometheus* and *Dedalus*, along with Goa'uld motherships, can act as mobile launch platforms for fighter craft, deliver massive numbers of troops and even subjugate whole worlds from orbit. Moreover, on *Stargate* as on much genre television, starships serve as a 'symbol of science fiction's colonial expansion' (Parrent 2010: 39), and the existence of hard power assets such as these runs counter to the apparent intentions of the Ancients that the interstellar community come together in peace and digital cooperation. This attitude is apparent in, for instance, the shipbuilding practices of the Ancients themselves who, in peacetime at least, adopt an approach of starfaring *en masse*: 'city-ships' with distributed systems and living quarters throughout an internal volume equivalent to that of Manhattan, such as *Atlantis*, which is capable of transporting an entire community *as* a community.

Atlantis itself serves as an expression of the highly networked Ancient civilization, the very definition of Castells's 'network society', extensively composed of 'informational labour', a class of workers defined as 'the creators, designers and disseminators of information flows […] those who think, plan, and conceive in situations of great uncertainty' (Webster 2001: 6). A more apt description of the Ancients would be difficult to come by, as would a better example of their digital ideology. A living space as much as an intergalactic technological marvel, *Atlantis* utilizes transporter booths for instantaneous internal travel (so, again, the conversion of physical matter to information and back again), along

with wireless interface designs such as the 'control chair' which responds to the occupant's thoughts and is initiated by the so-called Ancient Technology Activation gene which comes to prominence in *SG-1* and *Atlantis* during the real-world popularization of Wi-Fi availability. A clear response to developments in the personal computing and communications arenas, the linkage of human minds with technology is a hallmark of the Ancients and cements their position as *Stargate*'s most powerful advocates for digitality even before their ascension. Throughout *SG-1* and *Atlantis*, much of their technology interfaces directly with the operator and, while outright cyborgization has never been characteristic of the *Stargate* franchise, the subject of mind/machine connectivity is one which recurs as a means of subverting hierarchical capitalist constraints on information. The downloading of the Ancients' database into O'Neill's brain in both 'The Fifth Race' (1998) and 'Lost City' is described in terms of a computer analogy: 'Your hard-drive has been filled with information […] in a language your computer doesn't understand' (Warry-Smith 1999). For the Ancients, a civilization and its information are – quite literally – virtually indistinguishable. It is after all no coincidence that the Asgard, allies of the Ancients, demonstrate a similar philosophy in 'Unending' (2007) when they decide to give Humanity 'everything we have […] and know' (Cooper 2007). What is more, the relationship between the Ancients and the Asgard, two of the most advanced species in *Stargate* mythology, is itself based on the most digital of all concepts: the free sharing of information, much of it of a technical or scientific nature. By contrast, the capitalist-inflected Goa'uld 'do not share technology' (Gereghty 2001); they hoard information and clash constantly over the control of physical space.

The Goa'uld practise a kind of capitalism which should be recognizable to anyone in the early twenty-first century, one which has 'overcome the limits of time and space'(Castells 2000: 101) through abuse of the Stargate network's communications infrastructure. O'Neill himself implies the capitalist analogy by comparing Earth's adversaries to Mr Burns, the unscrupulous businessman of his favourite television series, *The Simpsons* (Wood 2004a). Spurred on by the collapse of spatial barriers, the System Lords are able to transfer labour, raw materials and military power throughout their interstellar fiefdoms in mere instants. Stargate travel allows for a radically transformed relationship between space and time of a kind which permits the Goa'uld to profit in the former through a reduction in the latter. Nevertheless, the hegemonic aspirations of Goa'uld pseudo-capitalism are held in check by the open access philosophy of the Gate-builders, the Ancients. Anyone can use a Stargate as long as they possess a valid destination address and, although in some cases Gates have been relocated to secure military insulations (for example Earth's Gate, along with many of those on worlds controlled by Anubis), the majority remain exactly where the

Ancients deposited them: available to all and, especially in the Pegasus Galaxy, enabling exchange of goods and ideas in the truest possible sense; day-to-day economic activities unrestricted by the 'hundreds of protocols, declarations and articles that constitute free trade agreements' on Earth (Yúdice 2003: 214). It is therefore clear that, just as it draws on the language of telecommunications to reflect our increasingly networked society, *Stargate*'s technobabble also echoes the globalized world in which the emergent Information Age is embedded. Not that this should surprise the viewer for, 'as capitalism's primary "value system" becomes "dematerialized", so cultural texts seem to reflect "the dissolution of the material representations of value"' (Connell and Marsh 2011: 2). What could therefore be more appropriate than a cultural text such as *Stargate* wherein the protagonists, along with the physical objects of material value they carry and acquire, are literally dematerialized on a weekly basis?

For their part, the Goa'uld often behave like any large multinational corporation, able to operate with simultaneous decision-making in relation to the processes and conditions of material and labour galaxy-wide for, via the Stargate, a thousand light years is nothing more than a few steps. In the Globalized Galaxy, the Goa'uld are caricatures of the ultimate capitalists: 'posturing egomaniacs driven by an insatiable lust for power. Each one capable of unimaginable evil' (Mikita 2004). 'Their society is feudal' and they maintain the enslaved Jaffa as a labour class, chattel of the individual System Lords posing as 'false gods' (Wood 1998b). The rule of the System Lords therefore combines 'immense economic power' with factors officially beyond the reach of Earth's transnational corporations: 'factors of territoriality and control of the means of violence' (Giddens 1990: 70). When it comes, however, 'capital flight' (Harvey 1990: 294) is quite literally an act of flying away, the Jaffa seizing the Goa'uld fleet for themselves and transmuting labour power into political power. Yet, the Free Jaffa State does not come into being on account of military might alone. Instead, a Jaffa rebellion teeters on the brink of failure in the episode 'Reckoning' (2005), not because of Goa'uld strategic competence, but due to the unexpected invasion of the mechanical Replicators. Warships, *Stargate*'s allegorical indicator of capitalism, are of little use against digitally fluent robotic creatures able to commandeer space vessels at their ease. Consequently, the series – in what could easily have been one of its final episodes – tendered its grandest gesture in favour of Ancient philosophy. Defeating the Replicators requires teamwork; collaboration between the Tau'ri, the Jaffa and, unexpectedly, the System Lord Ba'al; and the activation of all the Stargates in the Galaxy at once, so as to defang both the Goa'uld and the Replicators in a process whereby the Milky Way is rendered less attractive to the 'highly mobile capital' (295) of the insect-like mechanical aliens.

For the Stargate network, like the internet it represents, is at its decentralised heart a 'collaborative medium' designed around the sharing of knowledge and, as Walter Wriston said only a few months before the *SG-1* première, in the Information Age 'intellectual capital is at least as important as money capital and probably more so' (Bass 1996). Digitality is the emergent system incubating within the decaying culture of capitalism and those who underestimate its power, and do not embrace the modes of thinking it makes possible, are doomed – as the Goa'uld are – to be left behind. In the *Stargate* universe, humanity realizes the value of cooperation soon after they unlock the Gate, with one of the earliest discoveries made being the 'meeting place' where the Ancients and the Asgard, along with the Nox and the Furlings, gather 'to share knowledge or discuss relations like a United Nations of the stars' (Glassner 1997). Crucially, the model utilized by the Four Races is the exact opposite of the 'consumerist logic' underpinning globalization (Lee 2007: 56); theirs is a Galactic Village which, unlike either our global one or the imperial version of the Goa'uld, is predicated on equality and cooperation (admittedly a straightforward achievement for a post-scarcity culture such as theirs). 'Friends share knowledge with one another,' Daniel says in 'The Nox' (1997) and, more than any military mission statement, it is this belief which informs the actions of SG-1. The team utilizes the Gate network not just as a means of retrieving alien technology but also to share Earth's story with other races and civilizations, to make contact with foreign allies, and to coordinate resistance against the established order.

That being said, the dangers of misusing information technologies are obviously manifold. On the one hand, there are the detrimental effects of overreliance on digitality apparent in the final fate of the Asgard in the *SG-1* finale, that of 'mass suicide' (Cooper 2007). For centuries, the Asgard transferred their minds from one body to another, yet this led to both an irreversible genetic decline and to a mental state incompatible with following the Ancients to a higher plane. They 'made the choice to extend their life through science generations ago. Took any natural physiological evolution necessary for Ascension out of the equation' (Cooper 2007). Equally, the immersive qualities of the digital age (and, one might hazard, science fiction television) presents social challenges to even the smartest human beings. Carter's ignorance of the Cheyenne Mountain Zoo (Waring 2004), for example, acts as a comment on the excessive amount of time she spends going through the Stargate at the expense of the real world. Although the internet – like the Stargate network – has the means of freeing its adherents from global capitalism by connecting and educating individuals and communities, just like Carter, we also have a tendency to spend too much time going through the Gate and tinkering with the new toys we discover there; we risk spending too much time in digital space to the detriment of our personal

lives and our relationships with those around us. *Stargate SG-1* is a true representation of digitality not simply because of how it incorporates analogous technologies into its narrative but because of how it subtly warns us of the dangers inherent in the digital condition.

Works Cited

Azzopardi, Mario, dir. 1997. 'Children of the Gods'. *Stargate SG-1.* USA: Showtime.

Bass, Thomas. 1996. 'The Future of Money'. *Wired* 4.10. www.wired.com/wired/archive/4.10/wriston.html (accessed 21 May 2012).

Beeler, Stan. 2008. '*Stargate SG-1* and the Quest for the Perfect Science Fiction Premise'. In *The Essential Science Fiction Television Reader*. Ed. J.P. Telotte. Lexington: University Press of Kentucky, 267–82.

----- and Lisa Dickson, eds. 2006. *Reading Stargate SG-1*. London: I.B. Tauris.

Castells, Manuel. 2000 (1996). *The Rise of the Network Society*. Oxford: Blackwell.

----- 2001. *The Internet Galaxy*. Oxford: Oxford University Press.

Connell, Liam and Nicky Marsh, eds. 2011. *Literature and Globalisation: A Reader*. New York: Routledge.

Cooper, Robert C., dir. 2007. 'Unending'. *Stargate SG-1*. USA: Sci-Fi Channel.

DeLuise, Peter, dir. 2005a. 'Reckoning'. *Stargate SG-1*. USA: Sci-Fi Channel.

----- dir. 2005b. 'Prototype'. *Stargate SG-1*. USA: Sci-Fi Channel.

Emmerich, Roland, dir. 1994. *Stargate*. USA: Metro-Goldwyn-Mayer.

Garcia, Frank and Mark Phillips. 2009. *Science Fiction Television Series 1990–2004*. Jefferson NC: McFarland.

Gereghty, William, dir. 2001. 'Between Two Fires'. *Stargate SG-1*. USA: Showtime.

Giddens, Anthony. 1990. *The Consequences of Modernity*. London: Polity.

Glassner, Jonathan, dir. 1997. 'The Torment of Tantalus'. *Stargate SG-1*. USA: Showtime.

Griffiths, Mark. 2010. 'Online video gaming: what should educational psychologists know?' *Educational Psychology in Practice* 26.1: 35–40.

Guillen, Mauro and Sandra Suárez. 2005. 'Explaining the Global Digital Divide: Economic, Political, and Sociological Drivers of Cross-National Internet Use'. *Social Forces* 84.2: 681–708.

Harvey, David. 1990. *The Condition of Postmodernity*. Oxford: Blackwell.

Hiscock, Peter. 2012. 'Cinema, Supernatural Archaeology, and the Hidden Human Past'. *Numen* 59.2/3: 156–77.

Holloway, Samantha. 2008. 'Space Vehicles and Traveling Companions: Rockets and Living Ships'. In *The Essential Science Fiction Television*

Reader. Ed. J.P. Telotte. Lexington: University Press of Kentucky. 177–91.

Jameson, Fredric. 2003. 'Fear and Loathing in Globalization'. *New Left Review* 23: 105–14.

Lee, Sue-Im. 2007. 'We are not the World: Global Village, Universalism, and Karen Tei Yamashita's *Tropic of Orange*'. *Modern Fiction Studies* 53.3: 501–27.

McElroy, Damien and Christopher Williams. 2012. 'Flame: World's Most Complex Computer Virus Exposed'. *The Daily Telegraph*, 28 May. https://www.telegraph.co.uk/news/worldnews/middleeast/iran/9295938/Flame-worlds-most-complex-computer-virus-exposed.html (accessed 10 May 2014).

McGrath-Kerr, Rachel. 2006. 'Female Fans' Interaction with Samantha Carter through Fan Fiction and Online Discussion'. In *Reading Stargate SG-1*. Eds. Stan Beeler and Lisa Dickson. London: I.B. Tauris, 200–17.

McLuhan, Marshall. 1962. *The Gutenberg Galaxy*. Toronto: University of Toronto Press.

Mikita, Andy, dir. 2002. 'Unnatural Selection'. *Stargate SG-1*. USA: Sci-Fi Channel.

----- dir. 2004. 'New Order' (Part 1). *Stargate SG-1*. USA: Sci-Fi Channel.

----- dir. 2005. 'Threads.' *Stargate SG-1*. USA: Sci-Fi Channel.

Negroponte, Nicholas. 1995. *Being Digital*. New York: Vintage.

Parrent, Kim Louise. 2010. 'Travelling Through the Iris: Re-producing Whiteness in *Stargate SG-1*.' Unpublished MA thesis, University of Canterbury.

Smith, Jan-Johnson. 2005. *American Science Fiction TV: Star Trek, Stargate, and Beyond*. London: I.B. Tauris.

Storm, Jo. 2005. *Approaching the Possible: The Worlds of Stargate SG-1*. Toronto: ECW Press.

Sweeney, Gerry. 1983. 'Information, Technology, and Development.' *Information Society Journal* 2.1: 1–3.

Telotte, J.P. 2008. 'Introduction: The Trajectory of Science Fiction Television.' *The Essential Science Fiction Television Reader*. Ed. J.P. Telotte. Lexington: University Press of Kentucky, 1–34.

Waring, William, dir. 2004. 'Chimera.' *Stargate SG-1*. USA: Sci-Fi channel.

Warry-Smith, David, dir. 1999. 'The Fifth Race.' *Stargate SG-1*. USA: Showtime.

Webster, Frank. 2001. 'A New Politics?' In *Culture and Politics in the Information Age*. Ed. Frank Webster. London: Routledge, 1–14.

Woeste, Peter F. dir. 2002. '48 Hours.' *Stargate SG-1*. USA: Showtime.

----- dir. 2006. 'Insiders.' *Stargate SG-1*. USA: Sci-Fi Channel.

Wood, Martin, dir. 1998a. 'Solitudes.' *Stargate SG-1*. USA: Showtime.

----- dir. 1998b. ‘Politics.’ *Stargate SG-1*. USA: Showtime.
----- dir. 1998c. ‘The Gamekeeper.’ *Stargate SG-1*. USA: Showtime.
----- dir. 2004a. ‘Lost City.’ *Stargate SG-1*. USA: Sci-Fi Channel.
----- dir. 2004b. ‘Avatar’. *Stargate SG-1*. USA: Sci-Fi Channel.
Yúdice, George. 2003. *The Expediency of Culture: Uses of Culture in the Global Era*. Durham NC: Duke University Press.

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C.S. Lewis and Shakespeare: A Romance Made in the Heavens

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By comparison to *The Chronicles of Narnia* (1950–56) and his well-known non-fiction, C.S. Lewis's science fiction sits oddly in its relative obscurity. This neglect can be attributed to the reputation his sf has gained as 'theological science fiction' (Honda 1997: 39) and the suspicion that the lack of hard science content betrays a thinly disguised moral didacticism. Yet, as Lewis himself remarked to Arthur Greeves in 1916, 'in proper romance the meaning is carefully hidden' (Lewis 2000a: 216). Consequently, without denying their Christian content, this article seeks to reassess the first two volumes of Lewis's *Cosmic Trilogy*, *Out of the Silent Planet* (1938) and, to a lesser extent, *Perelandra* (1943), in terms of their relationship to early modern romance, especially to William Shakespeare's *The Tempest* (1611).

Lewis wrote his sf in response to such writers as David Lindsay, Jules Verne and H.G. Wells, as well as from a deep interest in 'the idea of other planets', such that he could describe his writing of 'planetary romances' as 'not so much the gratification of that fierce curiosity as its exorcism': of the erotic and other unsavoury elements Lewis found in the sf he had previously devoured (Lewis 2012: 38–9). In 1956, writing to I.O. Evans, he commented that he had grown 'sick of modern science-fiction':

> Before leaving home I saw the film of *The Forbidden Planet*, a post-civilisation version of the *Tempest* with a Robot for Caliban, a bitch for Miranda, and all sympathy for Alonso against Prospero. The contrast between the magnificent technical power and the deplorable level of ethics and imagination in the story was what struck me most. (Lewis 2004: 783).

While we may rightly criticize the terms in which Lewis makes his critique, what is equally important is that Lewis not only perceives the Shakespearean origins of the story (something that Alan Brien had done in his 1956 *Evening Standard* review of the film), he also contrasts the loss of romantic values with the 'magnificent' but showy spectacle of 'technical power'. In *Perelandra* (1943), Lewis had already equated scientific technique with an imperialistic ambition that he found within 'works of "scientification", in little Interplanetary Societies and Rocketry Clubs, and between the covers of monstrous magazines, ignored or mocked by the intellectuals, but ready, if ever the power is put into its hands, to open a new chapter of misery for the universe' (Lewis 1989b: 216). By contrast, Lewis's own sf encourages his readers to marvel at the wonders of space travel via his application of a romantic ethos that he felt had been

rendered instrumental within the secular and technocratic visions of pulp sf.

By bridging sf with romance, Lewis shares a position similar to that of Kathryn Hume. In associating sf 'with the quest romance', Hume adopts a monomythic approach to sf narrative, arguing that the genre typically features an 'initial equilibrium'; a 'call to adventure' for the hero; entry 'into a special world'; conflict 'with various adversaries and problems'; and finally, a return 'to the normal world, more mature and more firmly integrated into his or her society' (Hume 2004: 488). Although Hume notes exceptions to this rule, she also points out similar exceptions within medieval quest romance so that, as she suggests, they 'have clear structural affinities' (488). She cites, however, Lewis's dismissal of space opera in his talk, 'On Science Fiction' (1955), only to emphasize that in his own sf Lewis fails to include the 'differences proffered by science': the religious beliefs he shares with Edmund Spenser keep 'him from getting beyond the medieval and Renaissance quest romance' (498). For Hume, despite the similarities between sf and romance, the emphasis upon intellect rather than soul results in a radical decentring of the concerns that preoccupied earlier romance narratives. Lewis, therefore, offers a very different conception of sf from the one popularized within the US pulps – but it is one that can be understood better through how he uses the inspiration of Renaissance writers such as Shakespeare.

Lewis's Shakespeare

Several critics have indicated the intertextual relations to the work of Shakespeare and Spenser in Lewis's sf. For example, Sanford Schwartz writes of *That Hideous Strength* (1945):

> Given the network of allusions that has been gathering force over the last few chapters, the finale is steeped in romance tradition, recalling […] the various kin and lovers of Spenserian and Shakespearean romance who have been separated by malevolence, chance, or their own folly. (Schwartz 2009: 137)

Such responses have, however, tended to underestimate the importance of Shakespeare for the *Cosmic Trilogy* as a whole. In *Out of the Silent Planet* for example, as Elwin Ransom looks at Earth through a Martian telescope, he pictures Shakespeare amidst a series of other global landmarks: 'it was Earth he was seeing […] It was all there in that little disc – London, Athens, Jerusalem, Shakespeare' (Lewis 1989a: 85). Not only is Shakespeare the only human figure in this list, by bracketing the classical and Judeo-Christian cultures of Athens and Jerusalem with London, Shakespeare also signifies the importance for Ransom of British imperial culture. This attitude is dramatized in *Perelandra*

when Ransom likens the political ambition and 'theatricality' of the Green Lady to 'Lady Macbeth' (Lewis 1989b: 263). For Ransom, Shakespeare is not only a standard-bearer of Terran culture, his plays also offer a means by which to anthropomorphize the actions of the aliens he encounters. Almost like a colonial missionary, he attempts to use Shakespeare's characters as a moral allegory to instruct the Green Lady in right and wrong:

> He tried to tell her that he'd seen this kind of 'unselfishness' in action: to tell her of women making themselves sick with hunger rather than begin the meal before the man of the house returned, though they knew perfectly well that there was nothing that he disliked more […] of Agrippina and Lady Macbeth. (263)

Ransom's failure, however, to dissuade the Green Lady from her actions points to the limits of both his comprehension and Shakespeare's iconic status. For the inhabitants of Malacandra (Mars) and Perelandra (Venus), Shakespeare means little or nothing at all. Consequently, whilst in one sense Lewis shares with Ransom a veneration for Shakespeare and the Elizabethan culture that his work embodies, in another sense, Lewis is only too aware of the alienness of the cultures that Ransom encounters, for whom Shakespeare signifies nothing. Although Ransom's solitary life as an academic, and his increasingly prophetic status, contrast with the vulgar materialism of the antagonists, the astrophysicist Weston and the businessman Devine, Lewis nevertheless satirizes through him the extent to which British colonialism has idealized Shakespeare as a universal symbol of culture. Instead, to understand Lewis's Shakespeare (and, thereby, the philosophy that lies behind the *Cosmic Trilogy*), we need to dig deeper than mere allusion to Shakespeare's work in Lewis's sf.

Romancing the Heavens

In 'On Science Fiction', Lewis proposes that the 'subspecies' his sf belongs to is driven by 'an imaginative impulse as old as the human race working under the special conditions of our time' (Lewis 1982: 63). In his earlier essay, 'Dogma and the Universe' (1943), Lewis elaborates that this 'impulse' is one of myth, and that it is myth which enthuses science, moving it from the theoretical to the world of imagined reality: 'light years and billions of centuries are mere arithmetic until the shadow of man, the poet, the maker of myth, falls on them' (Lewis 2000b: 121). We see this vividly enacted in the gradual scepticism Ransom shows towards the term 'space' as he casts his shadow further into the cosmos on the journey to Malacandra:

> He had read of 'Space': at the back of his thinking for years had lurked

> the dismal fancy of the black, cold vacuity, the utter deadness, which was supposed to separate the worlds. He had not known how much it affected him till now – now that the very name 'Space' seemed a blasphemous libel […] No: Space was the wrong name. Older thinkers had been wiser when they named it simply the heavens. (Lewis 1989a: 26)

Space, stripped of its imaginative potential for romance, is what Lewis takes particular issue with here. Lewis was less concerned with scientific accuracy than he was with his contemporaries' preoccupation with discovering, defining and even conquering space. This is evident in his response to J.B.S. Haldane's critique of his trilogy: 'My science is usually wrong. Why, yes. […] There is a great deal of scientific falsehood in my stories: some of it known to be false even by me' (Lewis 1982: 70). Lewis's writing is situated in a cosmos where beyond Earth lie the heavens (with all their mythic and religious connotations) and space: 'the pathless, the waste infinity' (Lewis 1990: 255). His sf is both nostalgic for a medieval conception of the universe and redemptive of the power of myth within the secular present. Instead, Lewis seeks to rewrite what he calls 'the nightmare' caused by 'the mythology that follows in the wake of science' (Lewis 1989a: 26) by filling the void with wondrous worlds and an emphasis upon the local as opposed to the infinite.

In this respect, Lewis accords with James Blish's assessment of the opportunities sf gave to its writers and readers: 'that sense that interplanetary space was not only there to be looked at, it was to be travelled in', the very thing 'which the scientists themselves were busily denying that we would ever be able to do' (Atheling, Jr. 1964: 128). Furthermore, in conversation with Brian Aldiss and Kingsley Amis in 1962, Lewis proposed that it is 'only the first journey to a new planet that is of any interest to imaginative people' (Lewis 1982: 145). When Mars grows familiar then we need to strike out further into the heavens, 'as the area of knowledge spreads, you need to go further afield' (63), in order to find the romance yet to be colonized by science.

As Virginia and Alden Vaughan have argued, the 'uncharted and largely unexplored' island which forms the central location of *The Tempest* 'is akin to a trip to a distant planet, where we find a world dramatically unlike our own' (Vaughan and Vaughan 2011: 5). Following the release of *Forbidden Planet*, Robert Morsberger proposed that 'a moment's thought brings the idea that *The Tempest* was science-fiction or at least fantasy-fiction for its seventeenth-century audience, to whom the far Bermoothes were the outer realms of space' (Morsberger 1960: 161). In both *The Tempest* and Lewis's sf we have the physical and spiritual 'trope of the fantastic voyage' (Caroti 2004: 3) that takes both characters and audiences 'to otherworldly realms of the imagination' (6–7).

Ransom can therefore postulate on whether mythology describes the reality of another planet we have yet to experience: the romance that lies within and beyond the bounds of our world.

Head and Heart Knowledge

In Lewis's sf, despite the presence of old and new, the knowledge of 'the heavens' is privileged over the destructive, scientific, 'earthly' knowledge represented by the characters Weston and Devine. The moral virtue and spiritual value of knowledge is determined by how it is employed, and the impact it has on Malacandra and Perelandra and their inhabitants, as well as the producers of knowledge. In *Out of the Silent Planet*, knowledge is depicted in two ways: linguistic and cultural history on the part of Ransom, and technological and material acquisition on the parts of Weston and Devine. In anticipation of the 'two cultures' debate between F.R. Leavis and C.P. Snow, Lewis critiques the supposed hierarchy between these two types of knowledge: while Weston has the technical prowess to travel to other worlds, and Devine has the material resources to exploit what they find there, their knowledge is presented as inert for it lacks the spiritual vitality of Ransom's classical education. Instead, on Malacandra no such hierarchy of knowledge appears to exist. Ransom struggles to conceive of how the intellectual hierarchy, which governs the pursuit of knowledge on Earth, would map onto the culture of Malacandra:

> It would be a strange but not inconceivable world; heroism and poetry at the bottom, cold scientific intellect above it, and overtopping all, some dark superstition which scientific intellect, helpless against the revenge of the emotional depths it had ignored, had neither will nor power to remove. (Lewis 1989a: 75)

Ransom, though, dismisses this attempt to turn Malacandran culture into a Terran-like hierarchy as 'mumbo-jumbo' (75–6) since he also knows that 'hrossa' (poets), 'seroni' (scholars or scientists) and 'pfifltriggi' (sculptors) share equal status on Malacandra but with different types of expertise. The respective tribes are each craftsman in their own right; and their creations carry equal, objective weight. It is only through engagement with the Hrossa in particular, and the inhabitants of Malacandra more broadly, that Ransom learns of the theological hierarchies that govern the planet: the angelic Eldril, such as the radiant Oyarsa, and the omnipotent Maledil who rules the whole universe.

Ransom's spirituality and Weston's secularism therefore embody what George Slusser has termed the 'unstable compound' of art and science that underwrites sf (Slusser 2005: 28). However, in tracing this unstable relationship back to the religious and intellectual divides of the Renaissance, Slusser also

lends credence to regarding *The Tempest* as the literary template for Lewis's sf. For Shakespearean romances also pivot on the use and abuse of knowledge: the political powerplay of Antonio and Sebastian is mirrored by the putative coup against Prospero by Caliban, Stephano and Trinculo, which is in turn mirrored by Prospero's use of magic to wreak revenge upon Antonio, Sebastian and Alonso. These murderous uses of knowledge are offset by the spiritual love of Ferdinand and Miranda. Their pure desire for one another, equivalent to Ransom's metaphysical vision versus Weston's dead scientism, redeems Prospero: he relinquishes magic through his promise to 'break [his] staff' and 'drown [his] book' (*The Tempest* 5.1.54 and 57).

Just as Prospero ultimately acknowledges Caliban as his own, so Ransom actively embraces all that is Malacandrian. This reversal, where the Otherness of the alien is accommodated by Ransom's growing sense of humility, counterpoints the real threat in the novel: that of Weston and Devine. Their abuse, first of Harry, a young man with learning difficulties, and then of Ransom, suggests the ruthlessness not only of Antonio and Sebastian but also of Prospero in terms of how he enslaves both Ariel and Caliban as part of his ultimate goal to regain the dukedom of Milan. By contrast, Ransom's realization that he is nothing but a pawn in the plans of Weston and Devine is the impetus to abandon his reclusive self and to immerse himself in the alien Otherness of Malacandra.

When he first encounters the inhabitants of Malacandra, though, Ransom's initial thought is that they appear to be 'a very presentable animal, an animal which man could probably tame' (Lewis 1989a: 44). Prospero, too, can criticize the behaviour of others, for example his condemnation of Sycorax's treatment of Ariel (*The Tempest* 1.2.250–93), while at the same time considering the selfish merits of such a scheme. Ransom struggles, though, to define the Hrossa in human or non-human terms (Lewis 1989a: 50), and it is this conflict that ultimately opens him up to the Otherness of the aliens. For example, whereas Stephano deliberately loosens Caliban's tongue by plying him with alcohol, 'Here is that which will give language to you, cat' (*The Tempest* 2.2.81–2), Ransom does not force English upon any of the inhabitants of Malacandra. He does, however, initially consider 'the dazzling project of making a Malacandrian grammar':

> *An Introduction to the Malacandrian Language – The Lunar Verb – A Concise Martian-English Dictionary* – the titles flitted through his mind. And what might one not discover from the speech of a non-human race? The very form of language itself, the principle behind all possible languages, might fall into his hands. (Lewis 1989a: 47)

Ransom's desire to unlock a universal grammar is not unlike that of Prospero's

enchantment of Ariel and Caliban: by forcing his language upon them, his purpose is not only to be able to communicate but to also disseminate the knowledge he has harvested, if he is able to return. The moral peril, then, is that 'the love of knowledge is a kind of madness' (47) and that, like Prospero, Ransom has to be saved from himself by the indigenous inhabitants: Ariel for Prospero, and the Hrossa, particularly Hyoi and ultimately Maledil, for Ransom).

As in *The Tempest*, language, music and environment are all closely linked in *Out of the Silent Planet*. The Hrossa give daily musical and poetical recitals so that, when trying to characterize his homesickness for Malacandra, Ransom notes that it is the 'great hollow hound-like music' (139) of the planet that haunts him, suggesting that this world too is an 'isle […] full of noises […] that give delight and hurt not' (*The Tempest* 3.2.135–6). However, whereas Stephano seeks to profit from his rebellion against Prospero, Ransom comes to want no such mercenary gain. There is a beauty associated with the language of the Malacandrians and a musicality to the planet which echoes Caliban's own sense of musicality (despite his apparently savage appearance). Furthermore, just as this music cannot be heard by either Trinculo or Stephano, so the music of the Malacandrians cannot be heard by Weston or Devine. Lewis is not only alluding here to the 'music of the spheres' (Ward 2008: 21) but also to an indigenous language that can only be heard by outsiders, such as Ransom, who reject their instrumental needs to embrace what lies beyond a utilitarian logic of control, power and self-gratification.

Devine Knowledge

Whereas Ransom's pursuit of knowledge is ultimately ambiguous, due to his encounter with the Other, there is no moral question mark surrounding the approach to language and knowledge adopted by Weston and Devine. Their ambitions are corrupt and dangerous throughout. Devine is characterized by material greed, exemplified by his intention to strip Malacandra of its gold, but Weston's motivations are both grander and nastier. Although he seeks fame, power and glory, Weston most of all embodies the imperialistic desire to 'seed itself over a larger area': 'the wild dream that planet after planet, system after system, in the end galaxy after galaxy' can be subjugated to the needs of mankind (Lewis 1989b: 216).

Both Devine and Weston can be aligned with Antonio and Sebastian who, in the heady magical atmosphere of the island, plot murder for power and prestige (*The Tempest* 5.1.126–9). Their approach to the inhabitants of Malacandra is one of fear driven by a desire to manipulate. Their justification is not unlike that of Prospero, in that just as Prospero seeks redemption and a reversal of fortune through revenge, so Weston and Devine believe they are

redeeming Malacandra from what they take to be the inhabitants' ignorance and backwardness. Like Prospero's goal of regaining the dukedom of Milan, Devine and Weston are driven by the furtherance of their own earthly desires. This can clearly be seen in how they speak to the Malacandrians:

> 'You let us go, then we talkee-talkee,' bellowed Weston at the sleeping hross. 'You think we no power, think you do all you like. You no can. Great big headman in sky he send us. You no do what I say, he come, blow you all up – Pouff! Bang!' (Lewis 1989a: 113)

Devine cautions Weston against such rashness, but Weston remarks that Devine does not 'know how to deal with natives' (113). But the reaction of laughter to his production of a necklace, 'the undoubted work of Mr Woolworth' (114), in order to bribe the Malacandrians reduces Weston's apparent superior knowledge to tatters. The rationality of all Malacandrians is juxtaposed to Weston's irrational, ignorant and patronizing display of empty threats. By contrast, Prospero is able to threaten, and directly address invisible creatures, as we see in the torturous way he reminds Ariel of the saving act he performed, causing Ariel to squirm with feelings of remorse and enforced gratitude:

> Prospero: If thou more mumur'st, I will rend an oak
> And peg thee in his knotty entrails till
> Thou hast howled away twelve winters.
> Ariel: Pardon, master,
> I will be correspondent to command
> And do my spiriting gently.
> (*The Tempest* 1.2.294–9)

This is the command of language and creatures Weston craves, but in satirizing this absence of power and control in Weston, Lewis shows how destructive it can be for the empowered as well as the powerless. The malevolent nature of Weston and Devine, coupled with the mockery it invites, recalls Trinculo and Stephano and their manipulation of Caliban's (rightful) anger against Prospero for their own ends. Both pairs of would-be colonialists – Trinculo and Stephano, Weston and Devine – receive a stern reprimand from the ruler of that island (Prospero and Oyarsa respectively), and all hopes of the success of their power-fuelled ambitions are dashed. Thus, through a series of comparisons, Lewis establishes the dangerous elements of Weston and Devine not just through their generic characterization in an sf tale of colonization but also by imbuing them with allusions to Shakespearean romance that yoke together material knowledge with moral and spiritual ignorance.

Hast thou not dropped from space?

In closing, I want to briefly consider the representation of the inhabitants and the invaders in *Out of the Silent Planet* and *Perelandra* alongside their representation in *The Tempest*. Lewis wrote that early sf began from the premise that 'the human race, are in the right, and everything else is ogres. I may have done a little towards altering that, but the new point of view has come very much in. We've lost our confidence' (Lewis 1982: 147). In Lewis's sf, in part indebted to the nuanced portrait of invaders as seen in *The Tempest*, the true aliens are the humans, Ransom included. This can be seen in the unexpected rationality of the Malacandrians and the uncorrupted nature of the Venusians in *Perelandra* whereas the humans are often irrational and corrupt. We also see this reversal of expectations in how the exchange of knowledge is reciprocal, for 'naturally [Ransom's] conversations with the *hrossa* did not all turn on Malacandra. He had to repay them with information about earth' (Lewis 1989a: 41). In this way, the dominant principle of colonizing, educating and exploiting is reversed, as the aliens learn from the humans, and vice versa. Indeed, as Lewis remarked in his own marginalia to *The Tempest*, 'the enchanted islands appear differently to the different people according to their character',[1] and this is the vision clearly presented in *Out of the Silent Planet* and *Perelandra*. The more the humans attempt to assert their knowledge, the shadier the beauty and nuance of Malacandra grow, whereas on Perelandra, the more knowledge is garnered by the Green Lady, the darker and smaller the world grows.

Lewis's planets are both like and unlike Earth: they depend on this tension between the closeness of the cosmic heavens and the distance of scientifically abstracted space. In this mixing of both a medieval, vitalistic view of the cosmos and a modern, empty perspective, Lewis both expands and contracts the universe. Similarly, Stephano's spurious claim that he was the 'man i'th' moon when time was' (*The Tempest* 2.1.136) might refer to a narrative trope, since at least the time of Lucian, of journeying between Earth and Moon as well as a direct reference to the taverns which bore this name in Elizabethan London. While this article has shown that Lewis's characters and stories might appear to be 'Out o'th' moon' (*The Tempest* 2.1.135), in the tradition of H.G. Wells, so also does Lewis engage deeply with thematic re-readings and re-writings of *The Tempest*. More than just source material, his critical engagement through imaginative retellings shows that Lewis's sf works are alike with Shakespeare's romances in more than just a generic name or a hidden meaning. *Out of the Silent Planet* is not just a scientific romance, it is a scientific Shakespearean romance.

Endnote

[1] C.S. Lewis, marginalia on p. 49 of *The Tempest*, ed. Morton Luce, 3rd edn (London: Methuen, 1926), held in the Old Library, Magdalene College, Cambridge.

Works Cited

Atheling Jr., William [James Blish]. 1964. *The Issue at Hand*. Chicago: Advent.

Brien, Alan. 1956. 'Shakespeare takes a journey into space.' *Evening Standard*, June 7: 7.

Caroti, Simone. 2004. 'Science Fiction, *Forbidden Planet*, and Shakespeare's *The Tempest*.' *Comparative Literature and Culture* 6.1: 1–12

Honda, Mineko. 1997. 'C.S. Lewis's Science-Fiction Trilogy: The Battle between Good and Evil.' *International Politics and Economics* 3.2: 39–76.

Hume, Kathryn. 2004. 'Quest Romance in Science Fiction.' In *A Companion to Romance: From Classical to Contemporary*. Ed. Corrine Saunders. Oxford: Basil Blackwell, 488–501.

Lewis, C.S. 1982. *On Stories*. London: Harcourt.

----- 1989a [1938]. *Out of the Silent Planet*. In *The Cosmic Trilogy*. London: Pan.

----- 1989b [1943]. *Perelandra*. In *The Cosmic Trilogy*. London: Pan.

----- 1990 [1960]. *Studies in Words*. Cambridge: Cambridge University Press.

----- 2000a. *Collected Letters, vol. 1*. Ed. Walter Hooper. London: HarperCollins.

----- 2000b. *Essay Collection and Other Short Pieces*. Ed. Lesley Walmsley. London: HarperCollins.

----- 2004. *Collected Letters, vol. 2*. Ed. Walter Hooper. London: HarperCollins.

----- 2012 [1955]. *Surprised by Joy*. London: Collins.

Morsberger, Robert E. 1960. 'Shakespeare and Science Fiction.' *Shakespeare Quarterly* 12.2: 161.

Schwartz, Sanford. 2009. *C.S. Lewis on the Final Frontier*. Oxford: Oxford University Press.

Shakespeare, William. 2011. *The Tempest*. Eds. Virginia Mason Vaughan and Alden Vaughan. London: Bloomsbury.

Slusser, George. 2005. 'The Origins of Science Fiction.' In *A Companion to Science Fiction*. Ed. David Seed. Oxford: Blackwell Publishing, 27–42.

Vaughan, Virginia Mason and Alden Vaughan. 2011. Introduction to William Shakespeare, *The Tempest*. London: Bloomsbury, 1–160.

Ward, Michael. 2008. *Planet Narnia*. Oxford: Oxford University Press.

The Fourfold Library (10): Hergé, *L'Étoile mystérieuse* [*The Shooting Star*]

Adam Roberts

It practically goes without saying that The Fourfold Library incorporates all sf written in all languages. Here, Adam Roberts selects a title from the Francophone section. A prolific novelist, historian and critic of science fiction, Adam's most recent book is *H.G. Wells: A Literary Life*, which was shortlisted for this year's BSFA Awards. When not writing (which is rarely!), he is Professor of Nineteenth Century Literature at Royal Holloway College, London.

I read so much science fiction as a kid, and was so indiscriminate in my reading, it would be impossible for me to delineate the complex tributaries of influence where my own writing is concerned. Still: I am asked to speak to *one* text influential upon my later career, not to many, and so, perversely enough, I am going to ignore my usual childhood and adolescent reading – which consisted overwhelmingly of cheap paperback novels, with bright-coloured covers promising space battles, robots or aliens – for something uncharacteristic. I was never, as a kid, much of a reader of comics or graphic novels. But there was one exception: Hergé's *The Adventures of Tintin*.

Most of Tintin's twenty-four book-length adventures are set in a recognizable contemporary world. But three (*Seven Crystal Balls*/*Prisoners of the Sun* and *Tintin in Tibet*) border sf, telling respectively mystical and xenobiological stories, and four are straight sf: *The Shooting Star* (1941–42), *Destination Moon*/*Explorers on the Moon* (1950–53) and *Flight 714 to Sydney* (1966–67). And other sfnal adventures were in the pipeline; I particularly lament the non-completion of *Tintin et le Thermozéro*, begun in 1960 but abandoned. There are rumours that an inked, coloured and completed version is due for publication soon. I hope the rumours are true.

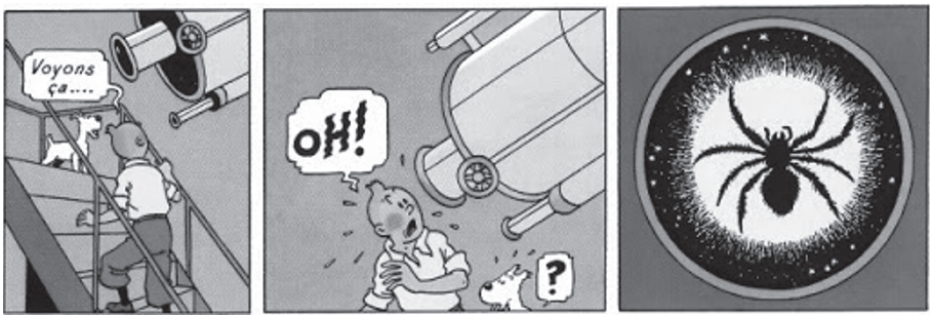
Actually, if we were feeling generous, we could add any of the stories in which Professor Calculus appears, since Calculus's genius is inventing what sf critics call *novums*: in *The Calculus Affair* (1954–56) he designs a sonic weapons system and in *The Castafiore Emerald* (1961–62) a new kind of TV. Interesting fact: Hergé based Calculus upon a real-life, goateed-and-bespectacled eccentric scientist, Auguste Piccard. As the inventor of both a bathysphere and a pressurized balloon gondola Piccard could claim, at different times in his life, to have descended deeper into the ocean and ascended higher into the stratosphere than any other person. Gene Roddenberry named the character Jean-Luc Picard in his honour. Two degrees of separation between Hergé and *Star Trek*.

To say younger me read *Tintin* would be an understatement so under it could limbo-dance into Khazad-dûm. I gorged on these books, pored over them,

examined each page, each frame with minute attentiveness. They hit both my key sweet spots equally: as funny as they are sense-of-wonderful, the two affects (laughter and the sublime) that mattered the most to me, and continue to matter the most to me. But they're also beautifully constructed ensemble narratives. Captain Haddock may be the first fictional character I genuinely loved, and I maintain to this day there is genius in his characterization, in the way his grumpiness and ludicrousness reinforce rather than corrode his marvellous courage and comradeship, and the way both these things grow, without any incongruity whatsoever, out of the cowardly booze-hound that appears in *The Crab with the Golden Claws* (1941).

Growing up, my favourite of all the Tintins was certainly the two-volume moon story. I loved those books: the rocket, its soaring launch, and the gorgeous lunar landscapes. Tintin and his friends traverse, all rendered in those distinctive bright colours and clear lines, so detailed they could be blueprint schematics and yet so vivid and compelling they seemed realer than reality. His *ligne claire* style is an overwhelming reason why I love Hergé. *Asterix* was fine and fun but too scrappily and clumsily rendered for me – not until I discovered Moebius and Francois Schuiten in later life did I find artists capable of the same clarity and precision. Indeed, I might wonder why the joy Tintin's moon adventure brought me didn't predispose me to a harder-edged, more space-tech kind of sf than the sort I actually write. I suppose its influence wasn't as pervasive as it might have been. And it's for that reason, in part, that I turn instead to an earlier Tintin adventure. It's a book that exhibits the same kind of sf smarts filtered through a slightly fevered symbolist imagination that's also behind the best of Philip K. Dick, J.G. Ballard, James M. Tiptree and Brian Aldiss, all of whom are manifest influences on my writing. Hergé's *The Shooting Star*, though, retains its own clean-cut Belgian aesthetic propriety and precision.

The original French title is better: *L'Étoile mystérieuse*, mysterious star, hurtling towards the earth, glows ever larger in the sky, sweltering the nights, heating the tarmac on the roads to such a degree it melts. All this extra heat can't be a function of merely reflected light. The thing must actually be burning with its own strange fire – although once it has passed, and an island-sized chunk has fallen off it and into Earth's ocean, any such flames are extinguished leaving only a brick-coloured and semi-buoyant rock. Tintin visits the observatory and is invited to see its approach for himself (fig. 1). It's only a tiny, mundane spider crawling over the lens, of course; a comic-horror misunderstanding. The star itself inhabits the regular cosmos of physics (more or less), not the Lovecraftian horrorverse of Ingmar Bergman's *Through a Glass Darkly* (1961). But this bizarre magnification presages the direction the story will take. After its near-miss and partial break-up, a chunk of the mysterious star falls to earth, or rather



to ocean. Since it is made of immensely valuable minerals unknown to our world, Tintin, Haddock, Snowy and various scientists mount an expedition to claim it.

The story itself is a steal from one of Jules Verne's lesser-known novels, *La Chasse au météore* (*The Hunt for the Meteor*), published posthumously in 1908. In Verne's story the meteor is made of solid gold and it falls to earth near the North Pole. Competing national expeditions race to be the first to claim it – the twist at the end being that the meteor, blisteringly hot after its re-entry, has melted right through the ice and has sunk, out of all reach, to the ocean bed. That's what happens to Tintin's meteor too, although it floats for long enough for Tintin to reach it. As for the rival expeditions, writing in Nazi-occupied Belgium, Hergé made them villainous Americans, co-ordinated by an evil financier called Bohlwinkel, drawn as a bulb-nosed, greedy-eyed Jew. After the war, and mindful of the US market, Hergé revised away the Americans such that in later editions the rivals are from the fictional country of São Rico, although their ships are still called the *SS Peary* and the *SS Kentucky Star* (Kentucky, São Rico, one presumes). But he left *in* the disfiguring anti-Semitism, which speaks to his post-war priorities, alas.

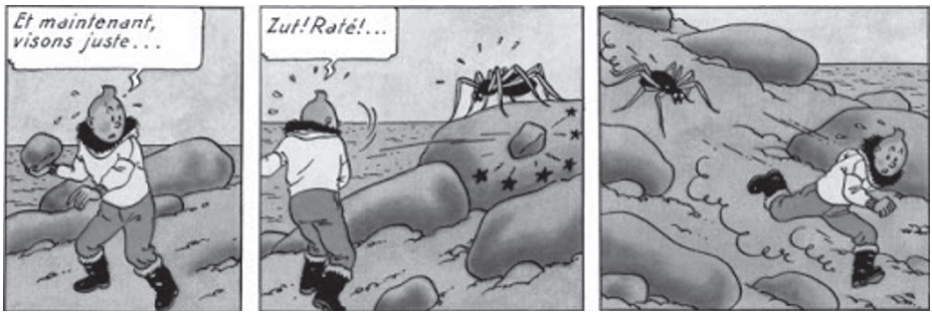
There's no point in trying to soft-pedal this matter, for Hergé himself, for most of his generation (on both sides, though we prefer not to think so), or indeed for science fiction as a whole. In the moon books, Tintin's rocket, splendid in red-and-white checkerboard livery, is straightforwardly modelled on a Nazi V2. As Thomas Pynchon notes, these same rockets sf fans love so dearly are as much evil Nazi terror-weapons as heroic Saturn Vs. The Apollo programme was overseen by the same Wernher von Braun who spent the war as SS-Sturmbannführer von Braun, responsible for 20,000 deaths amongst the slave labourers at the Mittelbau-Dora concentration camp which supplied the materials for his V2 rockets (to say nothing of the 3000+ Londoners his weaponry killed). Apollo is arguably one of humanity's greatest achievements, but it also seems to me absolutely inextricably intertwined with some of humanity's worst

excesses. Pretending otherwise is not only morally inept but self-deluding.

And although none of this occurred to me as a child reading Tintin, it strikes adult me (still reading Tintin) as part of the inadvertent, perverse genius of the series. Tintin explicitly stands for inter-racial friendship, most prominently with his Chinese best friend Tchang in *Tintin in Tibet*. *The Red Sea Sharks* (1958) articulates genuine horror at the modern-day trafficking of Black Africans, even if its representation of those Africans doesn't escape the racist stereotypes of *Tintin in the Congo* (1931). Tintin, this pale Aryan and agent of the bourgeois status quo, is also Tintin, queer hero, living openly and happily with Haddock, befriending people regardless of class or race.

To return to the subject in hand, *The Shooting Star* is *both* a piece of Nazi-era propaganda *and* an ingeniously surreal subversion of that propaganda. It's a story about a team from German-occupied Europe beating America to its meteoric prize (Tintin pips the Yanks to the post by means of a deck-launched German Arado 196 seaplane). But it's also a story in which the stellar prize proves to be a nightmare island. Tintin occupies the site in order to establish the legal claim. He eats his packed lunch (after tipping out a tiny spider that had crawled into the lunch-tin) and throwing away the apple core. But the mysterious constitution of the meteor causes mushroom spores to bloom with impossible rapidity and to prodigious size; the apple core grows in minutes to a titanic tree that drops apples the size of boulders; and in a beautifully structured callback to the scene at the beginning in the observatory, an actual giant spider emerges to chase Tintin across the rocky waste (fig. 2).

Finally, the mysterious star slips below the waves, as if it had never been,



with Tintin and Snowy being rescued in the nick of time. The story, superbly constructed and paced, possesses the quality of a bizarre dream – the little inset surreal dream-sequences in almost all of Hergé's stories are some of his most brilliant work – although in this case the dream becomes reality, surreality and all. Early in the story an escaped lunatic attempts to sabotage the ship by

blowing it up with dynamite. Tintin talks him down by addressing him through a megaphone and pretending to be the voice of God. I'd argue the whole story is a complicated riff on madness, on the insanity of the war years, on the arachnid ideology of Nazism, the giganticism of America, and the ultimately void prize for which they are competing. Those boomingly expanding mushrooms, anticipating the clouds that loured over Hiroshima and Nagasaki. Fevered and brilliant, by turns monstrous and hilarious, deft and beautifully rendered: a masterpiece of how the irruption of the outer universe into our earthly realm magnifies our concerns to horror. Sanity melts into madness, just as the tarmac dissolves into hot flowing tar at the book's beginnings, and the meteor itself resolves itself into empty sea; and so everything solid melts into fluidity and the series flows on. A masterpiece.

Exhibition Reviews

***Andrei Tarkovsky*, EYE Amsterdam, 14 September – 6 December 2019**
Reviewed by Martine Mussies

Saturday night fever with my (equally nerdy and geeky) friends: from Amsterdam Central Station we take the ferry to visit a non-rectilinear polygon with spectacular large overhangs. Is it a boat? An iceberg? A huge sculpture of a seagull? No, it's the EYE film museum, located on the other side of the equal-sounding lake, het IJ. Designed by Viennese architectural team Delugan Meissl (famed for their work on the Porsche Museum in Stuttgart), the white, oddly-shaped building houses a museum, an exhibition space, cinema, restaurant and an extensive film collection. Next to its permanent display about the history of filmmaking, EYE was also presenting an exhibition and film programme on the oeuvre of not only one of Russia's most influential filmmakers but also one of cinema's godfathers: Andrei Tarkovsky.

The exhibition focused specifically on Tarkovsky's quest for existential truth. Quotes about the filmmaker's philosophy of life were illustrated by immersing the visitor in Tarkovsky's imagery, such as his painterly beautiful Polaroids. But as dreamy and as timeless as the images might seem, the reality they represent is anchored in the nightmares of Soviet oppression. In the beautiful photograph of Tarkovsky's birthplace, Zavraje (near Moscow), I saw the 'wish room' from Stalker. Not only because the colour palette was strikingly similar but also because Zavraje was strictly guarded under Soviet politics. Living there must have felt like living in the wish room, in the eternal struggle between inner desire and imposed order.

There were also some unique documents, like the letters in various languages, which showed how internationalist Tarkovsky was. All the objects were organized around a particular movie with added explanations of Tarkovsky's metaphysical reflections on life. He regarded reality as a spiritual search for an 'inner voice', which could only be heard through his cinematic art as 'hieroglyphics of absolute truth'. In his work, Tarkovsky explored the difficulties of life in the Soviet Union, of living under the constant threat of nuclear war, what it means to be a human, and whether the physical body accounts for one's soul. The exhibition showed how these thematic concerns, among other spiritual and metaphysical themes, found unique and poetic expression in the course of his seven feature films. Tarkovsky's films are noted for their use of slow, long cinematic takes, dream-like visual imagery, and their preoccupation with nature and memory − features which have been of profound influence in the genre of science fiction movies as a whole.

Tarkovsky is well known for making a grounded and internalized type of science fiction that pokes at questions which are barely covered in conventional sf. His cinematic technique thrives in elements such as vision and time which are traditionally considered to be the province of metaphysics. For Nick James, writing on the BFI website, the essence of Tarkovsky's cinema is conveyed in how 'it appropriates time, complete with that material reality to which it is indissolubly bound […]. The image becomes authentically cinematic when (amongst other things) not only does it live within time, but time also lives within it'. Tarkovsky's technical legacy can be seen in the work of filmmakers such as Andrei Zvyagintsev, Lars von Trier, Terrence Malick and Claire Denis.

After the exhibition, the EYE not only served its visitors an exquisite dinner (with unparalleled views over the water), but also screened Tarkovsky's movies in full-length and digitally restored. I chose to watch *Stalker* (1979). For me, being emerged in Tarkovsky's world, I could only surrender to what the creen was showing me. Some scenes seemed endless. Was the image frozen? Did the film get stuck? But after a while I didn't bother to keep track anymore. Once inside the forbidden area, the Zone itself seems to take over reality, time, nature, death and perception.

'Anyone who wishes to watch my films like a mirror will see themselves' is one of Tarkovsky's statements I read in the exhibition. Following the director's line of thought, when one of his films was ready and released, it was no longer his, but a conversation between the art and the viewer. It is not surprising that his films have (after)lives of their own. It was not only wonderful, overwhelming and sublime to see *Stalker* from start to finish, it was also a 'feast of recognition', as if the film was a collage of much later media, films and games, even the 'ruin porn' of Chernobyl, that I have watched, played and analyzed in recent years. Tarkovsky's unique utilization of nature, elements and landscapes has influenced the production of contemporary science fiction movies in the sense that most of these films attempt to create post-holocaust environments characterized by relentless darkness and rain-soaked landscapes that elicit a feeling of the passing of time. Tarkovsky's cine-ecology is moist and soggy, often decayed and covered in fog, to show the chaos of nature. This delve into chaos is another one of Tarkovsky's legacies, evident in recent philosophical science fiction films such as *Annihilation* (2018) and *Arrival* (2016).

'If you search for meaning, you miss everything that happens' was another Tarkovsky quote that got stuck in my head. After watching the exhibition and the movie, I concluded that, for me, the strongest foundation of Tarkovsky's influence in science fiction films is the use of time to depict dreams and other metaphysical themes in a fashion as concrete as reality. But what I missed dearly – especially in the scene before they enter the Wish Room – was the music.

There were some sounds, like the sounds of water that seem to symbolize purity and flux, but even those merely provided a disconnection between the aural and visual experiences. As a synesthete, I had trouble turning off the music in my head that was evoked by the colours on screen and which were hard to ignore because of the total absence of film music. Therefore, at home, I improvised a flute melody (https://youtube/lC5Qgf2nE9o), based on my perception of the seemingly endless last scene in the Zone, thus adding another layer to the many afterlives of Tarkovsky's masterpiece.

***Seized By the Left Hand*, Dundee Contemporary Arts Centre, 14 December 2019 – 22 March 2020**

Reviewed by Anna McFarlane (University of Glasgow)

Following her death in 2018, Ursula K. Le Guin's contribution to literature has been the focus of significant attention. Her life and work were celebrated in Arwen Curry's documentary, *The Worlds of Ursula Le Guin* (2018), while Le Guin's acceptance speech to the American National Book Foundation in 2014, which took aim at the domination of the publishing world by Amazon, continues to resonate.

Recognising Le Guin's contribution must, inevitably, engage with the importance of gender in her work. Le Guin invites such attention simply owing to her position in the history of science fiction in the twentieth century – her work appeared at a time when sf was dominated by men, and when she began to attend sf conventions she was often the only woman on the panel (although Curry's film includes a fantastic photo of Le Guin standing alongside Octavia Butler on a panel that was otherwise all white men). However, it is also the content of her work that demands a feminist and a gendered approach; the attention that she paid to issues of gender throughout her oeuvre contributed fundamentally to the formation of New Wave science fiction, and ultimately to the potential of sf to address social and political issues today. Inspired by her parents' work on Native American anthropology, Le Guin was aware of the existence of alien cultures on Planet Earth, and sought to use this knowledge to defamiliarize her contemporary society.

Dundee Contemporary Arts Centre's tribute to Le Guin takes the fiftieth anniversary of her groundbreaking novel, *The Left Hand of Darkness* (1969), as a way of also intervening in ongoing debates about the significance of gender and changing relationships to landscape in the time of the climate crisis. Curated by Eoin Dara and Kim McAleese, the exhibition features work by, amongst others, C.A. Conrad, Harry Josephine Giles, Emma Wolf-Haugh, Isaac Julien, Huw Lemmey, Flora Moscovici, Quinie, Manuel Solano, Emma

Wolukau-Wanambwa, and Ming Wong.

The exhibition begins with a series of watercolour paintings by transfeminist New York-based artist Tuesday Smillie which depict the covers of various editions of *The Left Hand of Darkness*. The softness of the watercolours creates a warm effect, painted straight on to scrappy paper and framed to showcase this without polish. The effect is more evocative of the memory of a well-loved book that has been read many times rather than of the cover itself, and the use of different editions, including translations, welcomes the visitor to the exhibition by giving an impression of the novel's widespread influence as well as the readerly love that has been bestowed upon it. Following the paintings around the room the visitor ends at a blown-up page from Le Guin's 1976 essay 'Is Gender Necessary?', in which she engages with the criticisms of her use of the male pronoun in the novel. This page has handwritten comments in the margins questioning Le Guin's response – underlining some points of agreement while criticizing Le Guin's confinement by the gendered nature of the English language, writing 'OUCH!' next to Le Guin's statement that she didn't create a gender neutral pronoun because she didn't want to 'mangle the English language'. Nearby, visitors can pick up a takeaway piece that looks like a page from an old edition of the novel, inviting them to engage with a scene in which Genly and his companion, Estraven, travel through the Unshadow, a landscape where the weather conditions are overcast but lit with an omnipresent light, offering no shadows and therefore no way of situating oneself relative to the landscape. Alongside the rest of Smillie's contribution, this excerpt suggests we think about how our own physical and social landscapes shape our understandings of our own identities as we respond to and react against them, a statement made particularly well by being offered to visitors to take away and consider long after they have left the exhibition space. The process of engaging with this first room clearly conveys the influence of *The Left Hand of Darkness* while suggesting that the novel has opened up a space for further discussions of gender rather than offering a last word, conveying love and pain for Le Guin's work.

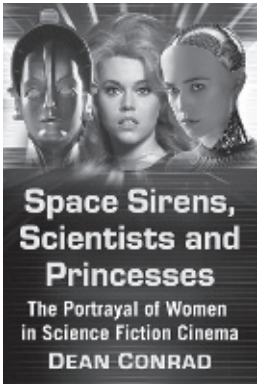
Following Smillie's room there are some time-based , starting with Sophia al-Maria and Victoria Sin's beautiful and threatening film. One enters the dark room and a face distorted by heavily made up lips trembles open-mouthed in a Lynchean silent scream. The figure is against the backdrop of a galaxy's starry swirl; they are alone, but they are engaged with everything. The figure's heavy make-up covers most of their face, but one eye and the surrounding skin remain clear, a move that pushes the viewer to consider issues of hybridity and authenticity. There is a temptation to understand the 'real' face as the one without make-up, but at the same time the avant-garde drag queen extravagance of the face, with diamantéd eyes and an accentuated black mouth, has so much

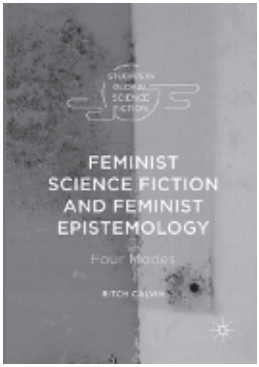
impact that authenticity becomes less important than the viewer's confrontation with this image. The figure moves gently and murmurs barely intelligible pronouncements of love and space, both soothing and unnerving, bringing the viewer to an inviting but dangerous space of speculation.

The final room in the exhibition broadens out and combines considerations of gender with Le Guin's interest in anthropology, alien cultures, and landscape. Abel Rodriguez, an elder of the Nonuya tribe in Columbia, a group displaced from their territory in the Amazon, contributes a series of black and white drawings which show his native landscapes. The sense of loss in documenting a landscape, and offering a viewpoint that will not be repeated, is palpable in Rodriguez's simple lines which do so much to give a sense of the size of the trees and the experience of looking up at the forest canopy. At the same time, they are almost examples of botanical art that take seriously the responsibility of preserving these images for posterity. In the centre of the room are a series of specimens from Dundee University's collection that complement the tension between individual responses and scientific engagement evoked by Rodriguez's drawings. These include a cross-section of a hen and a seahorse, showing the complex differences in reproduction that exist across earthly species, offering some estrangement from human biological and social norms. The room also houses a film by Scottish artist Andrew Black, who has made an alternative image of Skye to counteract the sanitization of its landscape as it is packaged for visiting tourists at the expense of those who live there. The camera is placed close to the earth, so close that grass and mud and rain are at times splashed on or stuck to the lens. Scrawled texts appear over his rough images of windswept fields and farm animals, covering the land in obscenities and described snippets of queer acts taking place in the sparsely populated landscaped romanticized by visitors. Through its focus on landscape, this second room draws delicate connections between Scotland and the wider world, showing art as a site for the reimagination and reclamation of lost landscapes.

Alongside the exhibition, the DCA is screening accompanying films in its in-house cinema; a double-bill of Lizzie Borden's *Born in Flames* (1983) and Wanuri Kahiu's *Pumzi* (2009), two films that engage, respectively, with reimagining sexuality and climate justice. The cinema is also screening *Storytelling for Earthly Survival* (2017), a documentary that explores Donna Haraway's work through her own participation, blending the discourses of speculative fiction with theoretical work. In both the exhibition and the accompanying films, the DCA have curated an exhibition that makes an argument for speculative fiction as theory, but also as political praxis, finding in this fifty-year-old text a guide to engaging with contemporary issues surrounding identity, landscape and the climate crisis.

Book Reviews





Ritch Calvin, *Feminist Science Fiction and Feminist Epistemology: Four Modes* (Palgrave Macmillan, 2016, 304pp, £79.99)

Dean Conrad, *Space Sirens, Scientists and Princesses: The Portrayal of Women in Science Fiction Cinema* (MacFarland, 2018, 326pp, £38.50)

Reviewed by Gemma Field (University of Cape Town)

There is now a substantial lineage of feminist sf criticism, from Sarah Lefanu's gynocritical approach of the late 1980s to Jenny Wolmark's application of postmodern theory in the mid-1990s, then onto Justine Larbalestier's reclamation of fan history in the early 2000s, followed by the more recent cultural histories of Lisa Yaszek and Patrick Sharp. As the work of Brian Attebery has demonstrated, male critics also have much to contribute in terms of gender studies. Both Calvin and Conrad follow in Attebery's footsteps but offer contrasting perspectives – one in terms of feminist philosophy, the other in terms of female representation.

Calvin argues that the categories of 'feminist science fiction' and 'epistemological science fiction' are so broad that they lack analytical value, and proposes a synthesis of the two as 'feminist epistemological science fiction' (FESF). The nature of epistemological enquiry means that any definition of FESF will always be a working definition; the four modes of reading that Calvin proposes concern questions of knowledge. FESF texts ask epistemological questions that pertain to the realms of gender and sex by interrogating 'the development of rational thought, the emergence of science and the scientific method, and – more negatively – for groups and individuals who have been marginalized and excluded from knowledge production and validation processes', typically women and people of colour.

Calvin's project is necessary in the face of the historical perception, from Jean-Jacques Rousseau to the comments made in 2005 by Harvard President Lawrence Summers, that 'women do not have the capacity for thought or for knowledge (as it is defined by the men in question) and that lack renders women unsuitable for many of the social, political and cultural practices in society'. This

is the underlying problem that Calvin seeks to address: if women cannot think as men do, then they have no legitimate rights or recourse; they are not seen by men to have a stake in the social world, and their insights and opinions are of no consequence. Key to maintaining the epistemological hegemony is disregarding, silencing or removing the platform for critical and alternative epistemologies that have been proffered by historically marginalized groups.

It is not necessary to be familiar with the study of epistemology to read and enjoy Calvin's work. The first chapter explains the study in broad but succinct strokes. Calvin proceeds on the assumption that knowledge is indeed possible but questions the assumptions of mainstream knowledge and enjoins new formulations through the literature of FESF. From Plato's preoccupation with the ideal form and René Descartes's mistrust of physical experience, knowledge-making privileges abstract over embodied knowledges. Only the mind and its rational products may be trusted and in the end, as Calvin argues, this 'skepticism [provides] no pathways outside of or beyond the confines of the mind'.

Calvin uses his own gender-neutral pronoun 'zhe' to refer to individuals in the text, a novel but initially confusing formal choice. The first mode of FESF – its use of plot – proposes 'an alternative view, or, at the very least, [will] urge the reader to reconsider zher own assumptions about knowledge and "the truth"'. Calvin's example of Marge Piercy's *Woman on the Edge of Time* (1976), in which her heroine time-travels between the mental institution where she has been committed and the feminist utopia of Mattapoisett, 'places both the protagonist and reader in a position of epistemological uncertainty' between two competing truths, one experiential and the other official.

The second mode of FESF assesses the validity of truth claims from the perspective of narrative structure. In the case of Joanna Russ's *The Female Man* (1975), the presence of four protagonists/narrators (whose names all begin with the letter J) destabilizes the notion of a unified subject: 'Because of the fragmented, fragmentary and nonlinear structure of these novels, the reader – and the female protagonists themselves – is placed in a position of epistemological uncertainty'. Calvin demonstrates how the manner in which the narrative is relayed to the reader calls 'into question the veracity of the "truth" and of particular characters or suggest other means of validating truth'. Calvin argues that the multilayered structure undermines the reliability of the narrative voices, including what they describe and to a certain degree the narrative itself. The second mode demonstrates how narrative structure can either question its veracity or reinforce its legitimacy by excluding a contradictory (often female) viewpoint from its knowledge base.

Calvin's third mode challenges the empirical, masculinist norms of science

in science fiction. He identifies a common feminist critique in which 'nature is something to be controlled and overcome […] via objective, scientific means'. His example of Helen Collins's *MutaGenesis* (1993) presents this critique starkly: on the planet of Anu, women are treated as second-class citizens, while the male scientific elite has abolished biological reproduction in favour of eugenics and in vitro fertilization. This third mode demonstrates how 'science has been corrupted and used for ideological purposes' by patriarchy.

The fourth mode concerns the relationship between epistemology and language. Language is a fundamental but often overlooked aspect of epistemology, as it shapes and is shaped in turn by our understanding of the world. All the texts in this chapter comment on the 'treatment of language and linguistics, [and] the ways in which they represent the relationship between language and reality, and the relationship between gender and language'. This is embodied in the genderless world of Gethen in Ursula Le Guin's *The Left Hand of Darkness* (1969). The heterosexual outsider, Genly Ai, is always 'looking for and seeing gender in the Gethenians', even though the distinctions he makes mean nothing to his hosts. Because Genly 'cannot fully understand the state or condition of not being sexed', this creates different ways of seeing the world, which are articulated through Genly's struggle to communicate and comprehend the Gethenian culture. Calvin's theoretical approach brings a novel perspective to familiar works by Le Guin, Piercy and Russ, but achieves its convincing effect through conscious and concerted close reading.

By contrast, in his book, Conrad's purpose is to plot the representation of women in sf cinema across its 130-year history. Conrad declaims at the outset that he has no ideological axe to grind or agenda to disseminate; his project is 'a cinema history, [not] a work of cultural, critical film or feminist theory'. Indeed, he repudiates what he calls 'uber-theory' and states that his work is to 'to observe patterns and trends' in the history of science fiction film, not to posit ontological questions or propose to find their answers in cinema. In his 'broad brush strokes', he outlines a straightforward chronology of the subject 'to find connections between characters, narratives and themes across time'. His account is chronological, divided into seven chapters according to what Conrad considers to be different periods of women's representation and the moments that marked decisive shifts therein.

In chapter one, Conrad notes the stereotypical representations of women in late nineteenth-century cinema, which set the stage for the gender disparity characteristic of later sf cinema: attractive assistants and nagging wives, either being saved by or assisting the hero. Formal innovations, and the rise of the first female sf star, Birgitte Helm (*Metropolis* [1927] and *Die Herren von Atlantis* [1932]), did not deter the entrenchment of these stereotypes in the post-WW1

films covered in chapter two. In chapter three, Conrad contends that the arrival of the Space Age and the ideological backdrop of the Cold War reinvigorated the genre, and offered new representations for women as either scientific professionals or as mediators. *The Day the Earth Stood Still* and *When Worlds Collide* (both 1951) stand out in this regard, although the damsel-in-distress element of the former, as well as in *Forbidden Planet* (1956), also indicate the sexual conservatism of Hollywood cinema.

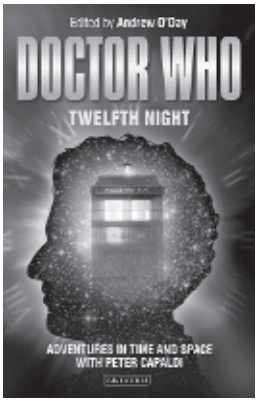
Chapter four describes an 'intermission' between the changes in the 1950s and the real upheaval in representation that took place from the late 1970s to the mid-1980s. This is rather a period of stagnation in which conventional sexual roles for women were rehashed, and women were either objectified or fetishized in such films as *The Day of the Triffids* (1961) and *Barbarella* (1968). It was during this time, however, that the professional scientific woman appeared in substance for a while, notably in *Planet of the Apes* (1968) and *The Andromeda Strain* (1971).

Chapter five is for Conrad the highpoint of the representation of women in sf cinema. In *Star Wars: A New Hope* (1977), *Alien* (1979) and to a certain extent *The Terminator* (1984), female characters assumed greater narrative prominence in terms of action, capability and intelligence (although agency remains debatable). Conrad is wary of what he sees as an uncritical adherence to traditional masculinity in the new characters, typified by Sarah Connor's transformation from relatable waitress to gun-toting badass in *Terminator 2: Judgement Day* (1991), which he contrasts unfavourably with the rarefied regal sass of Princess Leia. For Conrad, Ellen Ripley's trajectory in the first two *Alien* films is the apotheosis of the more feminist trend. Whereas the first film was lauded more for its aesthetic and dramatic situation than Sigourney Weaver's lone female survivor, in the sequel, Ripley comes into her own as a feminist icon by confronting her trauma and saving a surrogate daughter in the process.

Chapters six and seven describe a decline in which female characters lost their scientific credibility and intermediary roles. Films such as *Terminator 2*, *Alien*^{3} (1992) and *The Fifth Element* (1997) flattened out the emotional dimensions of female representation in the dramatic equivalent of early Lara Croft renderings. The caricaturing of female identity became commonplace in sf cinema, and consequently precluded both audience identification and character development. However, it could also be argued that male roles suffered a similar downward spiral in the same period, as the scientist heroes of films such as *The Andromeda Strain* gave way to superhero and spy franchises, in which brawn – not brains – propels the narrative.

Conrad supplies a useful contribution to the fields of gender and media studies, as well as the study of the science fiction film. His history is exhaustive

and presents useful evaluations. The determination to avoid any kind of political or theoretical standpoint allows the reader to draw their own conclusions about the films under discussion, whilst highlighting what the author considers to be the most influential films and characters over the decades.



Andrew O'Day, ed. *Doctor Who: Twelfth Night* (I.B. Tauris, 2018, 320pp, £12.99)

Reviewed by Valerie Estelle Frankel (Mission College/ San Jose City College)

The release of *Doctor Who: Twelfth Night* emphasizes how much the criticism keeps going and how recent readers expects it to be nowadays. Very recent, in fact, since Peter Capaldi reigned as the Twelfth Doctor from Christmas 2013 to Christmas 2017. One presumes a book on Jodie Whittaker will soon follow, when her own saga ends.

The eleven essays explore different aspects of the Capaldi era, from close viewing of single episodes to the Doctor's context within the much-larger series. It is divided into themed sections: The Doctor and His Companions; Further Politics and Themes; Promotional Discourses; and Fandom. With index, episode lists and fan appreciation charts, it is an informative book typical of I.B. Tauris. All the contributors are academics, all widely published in Fan Studies, Television Studies and, of course, *Doctor Who.* There is much emphasis on Steven Moffat's influence as showrunner. In his introduction, Andrew O'Day contextualises the essays by considering Moffat's reintroduction of older monsters and tropes as well as the return of The Master (Missy).

Richard Hewett's opening essay, cleverly titled 'A Young-Old Face: Out with the New and in with the Old in *Doctor Who*', compares Capaldi with his predecessor, Matt Smith. As Hewett notes, Capaldi runs less and fights less, and is in many ways an heir to the classic Doctors, from his tendency to talk things out with this adversary to his deliberate homages in dress and accessories. 'Capaldi's status as an "old" Doctor lent it pathos that would arguably have been less effective if played by one of his younger predecessors', Hewett notes, going on to cite his forgetfulness of the clockwork monsters and his guarded interactions with Lady Me. His companions, of course, are very young, helping to balance the dynamic even as the character comments on the Time Lord's longevity.

In his chapter on 'discourses of Scotland and Scottishness', Douglas

McNaughton considers how, though Capaldi is the third Scottish actor after McCoy and Tennant, he is the first to keep his accent and nationality. The essay journeys through depictions of Scottish characters in stories such as 'The Highlanders' (1966-7) and 'Terror of the Zygons' (1975) to 'Tooth and Claw' (2006) to consider their treatment within the franchise. According to McNaughton, these stories depict Scotland 'as a colonial periphery, as exotic and dangerous in its own way as unruly nineteenth-century India.' By contrast, McNaughton sees Moffat's decision to present Capaldi as a fierce angry Scot as being influenced by his own Scottish identity, well aware of his character's context in the larger British world.

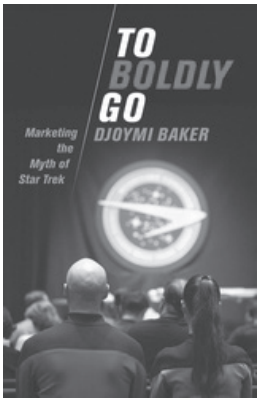
Both Robin Bunce and Eric Leuschner consider the depiction of the military in the series. Bunce looks especially at the Zygon conflict in the context of a Soviet allegory, considering what Earth's philosophers might say about the Doctor's solution and how it depicts our world. There is a great deal about the Twelfth Doctor's conflict with Clara Oswald's boyfriend, Danny Pink, even as Bunce notes how many old soldiers the Doctor faces in his few seasons and how they put his own actions in context. Leuschner, meanwhile, contrasts UNIT's time under Brigadier Lethbridge-Stewart with his scientist daughter, ostensibly pledged to avoid conflict, but in practice the more militaristic of the two.

David Budgen thoughtfully considers the role of the uncanny within the Christmas specials. While in Tennant's era, they were glamorous, stand-alone episodes, Capaldi's are darker, allowing viewers to find melancholy closure with Bill Potts, River Song, and finally himself. Budgen explores the episodes not only in the context of previous lighter specials but also in terms of ghostly Christmases as they appear in literature and folklore. Andrew Crome examines the Twelfth Doctor's struggle against death, seen with his loss of Clara and his saving of Lady Me. Crome spends just as much time on the public's discomfort with the episodes 'Heaven Sent' and 'Hell Bent', which necessitated content warnings and angry letter campaigns.

Matt Hills and Paul Booth consider the larger-world context: the advertisements and trailers in which Capaldi first appeared, and his fan tour beside Jenna Coleman before his series launched, which drew attention to issues of branding, fan criticism and Capaldi himself, his own fannishness, age and British identity. The former essay is denser, bringing in deconstruction and phrases like 'the paratextual assuaging of change' that aim this essay at the serious scholar, as it cites many scholarly works (including Booth). Both offer thoughtful examinations of the two-way dialogue between fans and creators within the internet era. These essays also preserve the fannish dialogue and controversy of the time – a valuable choice, as the episodes will last but their context will only remain if books like this one saves it for readers. In this

vein, Brigid Cherry analyzes the changes in fan fiction and art (along with fan responses to the older Doctor) in the contexts of fan studies and shipping. It finishes with the fans' joy in Moffat's adoption of Billy Hanshaw's spiralling clockwork credits sequence. With this moment, *Doctor Who* welcomed fans into its creation and established how necessary their own works are to the creative process. The collection concludes with Dene October's analysis of fan responses to the reintroduction of the Master as Missy. October notes how 'The academic focus has shifted from fan as media dupe or resistant textual poacher to cultivated brand advocate and social media influencer.' In swift succession, October then quotes five writers on fan studies and considers how they view the state of recent fandom. The essay also considers Missy's transformation through the fans' posts, and their specific objections, as well as the filter of trans characters and the show's treatment of them. As the essay considers fans' reactions, it bridges into their posts about the Thirteenth Doctor being female, a logical extension of much of the criticism of Missy. It is a thoughtful essay although more about fans' reactions to Missy than Missy herself.

Although the collection thoroughly covers the Twelfth Doctor and his issues, it treads lightly on the issue of Clara and Missy and even more lightly on Nardole and Bill. It is a useful companion for every Whovian, but also a valuable text on how fan studies and fandom itself is evolving to create a new era of fan creators and contributors.



Djoymi Baker, *To Boldly Go: Marketing the Myth of Star Trek* (I.B. Tauris, 2018, 297 pp, £69)

M. Keith Booker, *Star Trek: A Cultural History* (Rowman & Littlefield, 2018, 191 pp, £23.95)

Reviewed by Michael Godhe (Linköping University, Sweden)

From a modest beginning in American television in the 1960s, *Star Trek* has become one of the best-known popular culture phenomena in the world. Besides generating a huge industry, the *Star Trek* franchise has established a devoted fan culture. One of the reasons for its popularity was pointed out by Michèle and Duncan Barrett in *Star Trek: The Human Frontier* (2000): the franchise's various iterations frequently ask questions about what it means to be human in a constantly changing world set against the backdrop of rapidly technological transformation. If, post-Enlightenment, science and technology are seen as

a foundation for economic, cultural, social and even spiritual development, *Star Trek* asks: is there an essential human nature and what is it that constitutes a human being? While in recent decades sf has tended to have a dystopian stance, *Star Trek* is fundamentally utopian.

It goes without saying that a huge amount of academic writing on *Star Trek* has been produced, from a broad range of different and sometimes conflicting theoretical perspectives. So, what could possibly be left to be said about the *Star Trek* franchise that has not been explored before? In fact, quite a lot, as M. Keith Booker and Djoymi Baker demonstrate. Both writers offer fascinating insights into the *Star Trek* universe and provide valuable contributions to studies of the *Star Trek* franchise as well as sf studies in general.

While Baker discusses how *Star Trek* relates to classic myths and has itself become a modern-day myth, Booker presents a cultural history of *Star Trek*, which in many ways is also a cultural history of the U.S. since 1966. Booker's study consists of an introduction and five chapters. In the first chapter, Booker discusses how *Star Trek* has evolved over time, from the release of the original series (1966–69) to *Star Trek: The Next Generation* (1987–94), and the other incarnations of the *Star Trek* fictional universe, including the motion pictures (1979–2002), J.J. Abrams' cinematic reboot (2009-16), novels, comic books, fandom, and so on. In chapters two and three, Booker situates the franchise in different contexts: first, the internal context of sf television and film as well as sf literature, including Astrofuturism and the New Wave, but also the sf boom beginning with the *Star Wars* franchise (1977–) and the cyberpunk movement; secondly, the external context where *Star Trek* addresses American social issues of the last fifty years. A special emphasis is placed on the Vietnam War as well as the Cold War and the nuclear arms race. In chapter four, Booker considers the role of technology in *Star Trek* and how it is much more optimistically depicted than in other sf from the same period. In the final chapter, Booker examines *Star Trek* fandom.

As he states early in his study, the original series had trouble getting on the air since it 'was simply unlike anything that had been on television before'. Booker points out that the close relationship between characters such as Kirk, Spock and McCoy, who were able to establish genuine bonds, was something that attracted a small but devoted early audience and continued to attract a growing number of viewers during the decades to come: 'The supporting cast […] was also crucial in delivering its message of multiracial and multicultural

harmony in the utopian future.' Thanks to its sequel as well as the following series and motion pictures, the franchise was able to show how humanity changes for the better in a utopian, post-economic (and post-scarcity) future where capitalism has come to an end.

Star Trek: A Cultural History is a very well written and entertaining study, an excellent introduction to the *Star Trek* universe, especially the original series. Although an overview, Booker also gets into some detailed discussions of individual episodes from the series and films, pointing out how the franchise both challenges and reinforces hegemonic discourses. The franchise is both ahead of its time but also filled with contradictions regarding gender and ethnicity. For example, Booker is pointing out that the central character of *Star Trek: Discovery* is a black woman while at the same time the Klingons are represented 'as a particularly savage and vicious race via a panoply of xenophobic stereotypes that might have been derived from a handbook on racism and colonialism'. But despite this, Booker also points to the human question in the franchise: that a 'central emphasis on social issues is one of the most distinctive features of the *Star Trek* franchise'.

The purpose of Baker's study is clear from the beginning: 'This book charts how *Star Trek* has woven ancient storytelling traditions into its futuristic world, but has then promoted itself as the new mythology of our times'. Baker enters into a critical dialogue with earlier research, both in terms of myth and the franchise itself. Like Booker's study, it is eloquently written. The book consists of an introduction followed by four chapters. In the introduction and the first chapter, Baker discusses *Star Trek* alongside a brief history of myth as well as myth in the age of *Star Trek*. She situates the first series in the context of ancient storytelling and early American television, with an emphasis on the episode 'Who Mourns for Adonais?' (1967). Whereas, in the subsequent franchise, myth becomes a promotional tool, in the original series it was also part of the contemporary media landscape. Baker argues 'that *Star Trek* is myth, twenty-first-century style: a complex set of stories passed on and updated from one generation to the next, in various media, that have become part of the broader cultural heritage'. In this sense, *Star Trek*'s relation to myth is also part of its cultural history, and Baker's analysis could be well juxtaposed to Booker's study.

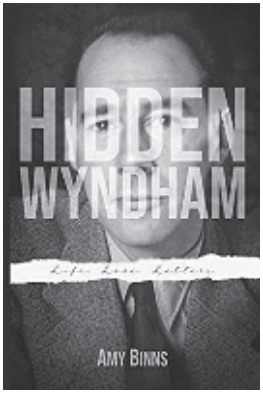
To understand myth in *Star Trek*, it is not enough to analyze *Star Trek* as a closed fictional universe, although the later franchise is in many ways self-referential and intratextual. Baker situates the original series in the context of American television, a small-screen domestic medium where myth 'understood as a set of traditional stories […] was carried across media forms and genres in its transition to television.' When the original *Star Trek* used myth, it was not an innovation but rather a convention of retelling myth in children's programmes and

sf shows from the 1940s onwards. Using myth was a legitimizing strategy, and Baker claims that 'Who Mourns for Adonais?' dealt less with *Star Trek*-specific concerns or Gene Rodenberry's secular world-view, but rather connected the series to the use of myth in American television 'as part of a continuum of trends in the use of myth that encompasses issues of high and low culture, genre blending, cinema competition, demographic appeals, camp aesthetic, cross-media adaptions and morality debates'.

In chapter two, Baker discusses how myth is malleable (and has always been) and argues for an intertextual approach when analyzing the whole *Star Trek* franchise since it has become more and more self-referential over time, achieving a status as a 'form of popular culture mythology'. In this way, *Star Trek* appropriated myth and retold it in a futuristic setting, blending traditional myth with the franchise as a myth. In the third chapter, Baker discusses how *Star Trek* not only contributed to scientific discourse surrounding the Space Race but also used cosmology as myth. This chapter is the most interesting in the book. As the Barretts show, the question of what constitutes a human is the guiding principle behind the plot in the *Star Trek* series. Baker goes even further and claims that the *Star Trek* franchise forms a mythology where Earth is the centre of human existence in a post-Copernican universe, and by that, also the centre of our human cosmos. In the fourth chapter, Baker discusses myth-making in relation to fandom and fan culture, both official and unofficial rituals, showing how the retelling of the *Star Trek* saga continues. The uses of myth in *Star Trek* are multiple: 'it is a textual strategy of legitimisation, a marketing ploy to maintain the franchise's commercial viability, and a popular cultures phenomenon' with the fan culture.

Star Trek: The Original Series was, as Booker states, 'arguably the single most important work ever produced by American popular culture.' We have been living with the *Star Trek* universe for more than fifty years now, but the socio-political context since the first series has changed dramatically. The first series was broadcast against the backdrop of the Cold War and the nuclear arms race, while the second series was played out against the transition from the Cold War to Francis Fukuyama's (in)famous declaration of the end of history in 1989. The later series take place against the backdrop of post-Cold War tensions, globalization and 'the war on terror'. The scientific and technological contexts have also changed, with the first series anticipating (and promoting) the Moon landing, while the other artefacts in the franchise have faithfully followed ongoing developments in science and technology, for example computerization, A.I. development, and so on. Even if the latest product, *Star Trek: Discovery*, has more darkness and flawed characters than the first series, the audience and fans know that this is just a world on its way of becoming a utopia, thanks

to the franchise's status as a modern myth and as part of our cultural history and heritage.



Amy Binns, *Hidden Wyndham: Life, Love, Letters* (Grace Judson Press, 2019, 304 pp, £10.95)

Reviewed by Kate Macdonald (Oxford Brookes University)

This well-written study of John Wyndham's life and work is a valuable baseline text that could well be the Wyndham biography we have all been waiting for. It's an emotionally intelligent narrative, drawing on a wide range of materials that convinces the reader of the biographical and historical facts of Wyndham's life, while also making space to invite new interpretations of Wyndham's literary legacy. Binns is careful not to advance a particular theoretical framework or defining event to underpin her reading of Wyndham's works. This is biography rather than hardcore sf criticism, and is aimed at the general reader as well as sf scholars.

The principal primary sources are Vivian Harris's two works about his elder brother, and the hundreds of Wyndham's letters to Grace Wilson, his long-term lover and eventually his wife. There are also some frustratingly limited glimpses from those volumes of Grace Wilson's diaries that Binns was allowed to see. These materials are fundamental to understanding Wyndham's life, and his role in the evolution of British science fiction, since they cover the thirty years of his creative life. Grace was a powerful source of stability and integrity that counterbalanced the drain on Wyndham's emotional energy from his mother and to a certain extent his brother. She was a teacher, a profession she loved. Had her relationship with Wyndham been exposed, she would certainly have lost her career and her independence, and so they lived in neighbouring rooms at the Penn Club from 1935 until 1963.

When Grace and Wyndham did finally marry, they surprised many of their friends, and probably all of Wyndham's friends and colleagues in the sf community who did not know that she even existed. This secrecy preserved her privacy but also isolated her. The descriptions of Grace from this biography bring Diana Brackley of *Trouble with Lichen* (1960) forcibly to mind: beautiful, fiercely intelligent, self-supporting, logical, dispassionate and also desperately in love. Wyndham's strong female characters are among the most important aspects of his fiction: Grace was undoubtedly his model for how intelligent

women could be independent protagonists in sf.

Wyndham's separation of his private and public lives was a protective mechanism formed in his childhood. Binns begins her biography of John Wyndham Parkes Lucas Beynon Harris, to give him his full name, with a vignette of Wyndham and his younger brother Vivian with their parents, about to go to afternoon tea at their maternal grandparents' house. Mrs Harris was financially dependent on her rich ironmaster father, as was her husband, since he was not fortunate in his business affairs. The day ended with an episode, recounted by Vivian, when Wyndham was woken in the evening and forced by his father to drink a glass of sherry. The women in the room were horrified, since Mrs Harris's family was strictly non-conformist, and the servants were shocked at the master forcing drink on a seven-year old boy to prove his position as head of the family. Yet they could do nothing to stop the boy drinking the wine, and he went to bed puzzled as to why his mother did not stop him doing something she had always said was wrong.

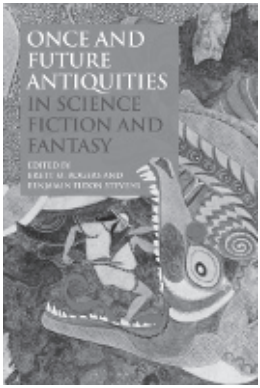
This disturbing episode presents themes that Wyndham's fiction would address much later: the ineffectual mother, the tyrant father, the gendered roles in group dynamics, the wearisomeness of other people's strong emotions about ideology, and the power of rational thinking for recovery and healing. It also makes plain that Wyndham was the son of an abusive father and an affectionate but inadequate mother, and that he loved his brother.

Wyndham and Vivian shared a privileged but emotionally insecure childhood in Edgbaston. Their lives changed irrevocably when the collapse of their parents' marriage was exposed in court. Mrs Harris took to a peripatetic life moving from one expensive hotel or spa to another for the next forty years, and the boys were sent away to school. In Binns's perceptive phrase Wyndham 'found himself in an institutionalised, genteel state of homelessness that would last almost his entire life'. His happy years at the progressive boarding-school Bedales would give Wyndham practical skills for community living and an expectation of equality between the sexes, but did very little to equip him for a career.

Wyndham's move to the Penn Club as a permanent resident in 1925 gave him a lively home in London full of people his age, who shared his progressive outlook and who also had little money. He lived there on a small allowance from his family while he wrote fiction for the new pulp magazines (though his first book was a detective novel). The biography contains an excellent six-page List of Works that shows the trajectory of Wyndham's writing from pulp to innovation. It also shows the gap in his output caused by the war. He served initially as a censor and fire-watcher in London, and from 1943 in the Signals Corps as a cipher operator in France and Belgium. The war fed his future writing: throughout the biography Binns identifies moments in Wyndham's life that emerge later in

his fiction, linking his creativity to his experiences.

While I was writing this review, several messages from another Wyndham biographer, David Ketterer, were relayed to me, criticizing Binns' interpretation of the materials, particularly of Grace Wilson's diaries, access to which he appears to have deliberately restricted (personal communications 7 November 2019; 27 January; 4, 5, 20, 21, 24 and 28 February 2020). This highlights the difficulties Binns has had in researching this biography. It is to be hoped that Wilson's diaries will one day be made available for scholars to read freely: she deserves a biography in her own right. In the meantime, Amy Binns has written the accessible, well-resourced John Wyndham biography that his fans should be buying: it's the one we've been waiting for.



Brett M. Rogers and Benjamin Eldon Stevens, eds. *Once and Future Antiquities in Science Fiction and Fantasy* (Bloomsbury Academic, 2019, 256pp, £19.99)

Reviewed by Rob Mayo

Classical reception remains a vibrant field, and the wealth of essays collected here suggests that this particular avenue of critical enquiry is far from exhausted. In conjoining science fiction and fantasy under the sign of 'SF&F', Rogers and Stevens employ David Sandner's notion of 'displacement' as 'the fundamental characteristic of the fantastic', persuasively noting the conceptual resemblance to Darko Suvin's notion of cognitive estrangement. Both sf and fantasy are fundamentally displaced/estranged from the reader's contemporary world, as too is the ancient world, which provides a rich source of inspiration for artists in both modes. Notwithstanding the elegance of Rogers and Stevens's approach, this review will focus on the essays which apply it to science fiction.

The first of the collection's four parts examines how contemporary texts have drawn influence from particular areas of classical study, most notably, archaeology. The first essay unfortunately risks displacing the reader unless they are already well-versed in classical reception: its ungainly title, 'More 'T' Vicar? Revisiting Models and Methodologies for Classical Receptions in Science Fiction', requires both knowledge of author Tony Keen's influential 2005 blog post ('The 'T' Stands for Tiberius: Models and Methodologies of Classical Reception in Science Fiction') and recollection of Captain Kirk's full

name in *Star Trek*. This initial barrier to entry belies an excellent introduction to the issues inherent in reception studies, which also calls for a theoretical approach to science fiction that moves beyond Suvin.

Laura Zientek examines the influence of archaeology on sf via Jack McDevitt's *The Engines of God* (1994). Zientek demonstrates how McDevitt's novel reveals a rich knowledge of archaeology and philology, and concludes with a kind of anti-displacement as the 'Monument-Makers', which McDevitt's astronauts seek, are revealed to be no more technologically advanced than their investigators. Claire Kenward's essay, meanwhile, is one of the collection's highlights. The interventions in the events of the Trojan War, as described by Homer and Virgil, by time-travelling characters (The Doctor in *The Myth Makers* [1965] and Thor and Loki in a 1979 Marvel comic storyline) provide a thought-provoking parallel for classical reception in general.

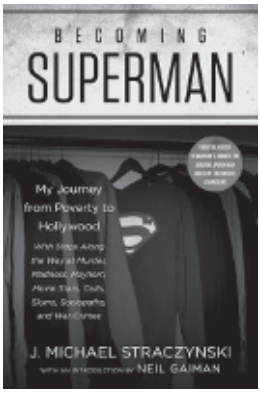
The second and third parts of the collection take as their respective themes texts which are 'Displaced in Space' and 'Displaced in Time'. Regrettably, although perhaps not entirely surprisingly, the three essays which form the first of these sections focus on fantasy texts. While not without interest for sf scholars, it's likely that at least one of these essays will catch the eye of most readers, covering as they do such texts as Philip Pullman's *His Dark Materials* (1995–2000), Studio Ghibli's *Spirited Away* (2001) and the novels of Helen Oyeyemi.

Part three features Rogers and Stephen Moses' consideration of *The Rocky Horror Picture Show* (1978) as 'backward-looking science fiction'. Moses and Rogers shed new light on the camp classic with their elaboration on the influence of the myth of Atlas, but their focus is indeed backwards to the world of antiquity rather than on how myth might inform an understanding of science fiction. Jennifer Ranck provides a clearer example of the genre in her essay on the Canadian TV series *Continuum* (2012–15), which she identifies as a parallel narrative to that of Cassandra in Aeschylus's *Agamemnon*. Although not a direct retelling, the series depicts a time-travelling protagonist who resonates with Cassandra due to her foresight, and both texts reflect a regrettable real-world continuity of powerful women being dismissed and disbelieved.

The final part of the collection once again skews towards fantasy rather than science fiction – unexpectedly so, given the inclusion of an essay by Vincent Tomasso on a novel by Gene Wolfe, which Tomasso categorically states 'is not, even loosely speaking, science fiction'. The essay does, however, include a thoughtful section on 'how that genre's conventions overlap with historical fiction', illuminating his decision that *Soldier of the Mist* (1986) belongs firmly in the latter camp. The two other essays provide enjoyable forays into role-playing and table-top games. C.W. Marshall's essay on the integration of classical

monsters into *Dungeons and Dragons* is an impressive display of deep research into the game's many iterations in its forty-five-year history, while Alex McAuley examines how Virgil's depiction of Augustus provides the basis for one of the central stories underpinning the world of *Warhammer 40K*. Aside from a short meditation by Catherynne M. Valente, McAuley's essay closes out the volume, appropriately finding in the distant, alien, and 'collaborative and serialized [...] *40K* universe' the evidence of 'ancient echoes', rebounding between many authors in an evolving manifestation of classical reception.

Although not exclusively a work of science fiction criticism – sf scholars would be better served by the editors' earlier *Classical Traditions in Science Fiction* (2015) – this is a lively and thought-provoking volume. The essays display an impressive knowledge of the minutiae of, for example, archaeological theory and table-top gaming, and the range of 'high' and 'low' texts supplies an entertaining variety amid an otherwise rigorous thematic focus. Rogers and Stevens's collection provides a remarkably consistent sampling of work from scholars working in slightly grey areas of science fiction criticism, and may provide a valuable diversion (or displacement?) for science fiction purists.



J. Michael Straczynski, *Becoming Superman* (Harper Voyager, 2019, 458pp, £22.00)

Reviewed by Raymond K. Rugg

J. Michael Straczynski is best-known for the TV series, *Babylon 5*, *Star Trek: Deep Space Nine* and *Sense8*, but he has also written for TV animations and comic books, the latter explaining his title. Straczynski's memoir is a tale of how science fiction influenced one individual, and how that individual in turn influenced science fiction.

However, if it weren't for the title, one might not at first realize that this is a book about sf. The subtitle is 'My Journey from Poverty to Hollywood'. The sub-subtitle is 'With Stops Along the Way at Murder, Madness, Mayhem, Movie Stars, Cults, Slums, Sociopaths and War Crimes'. One might be excused for thinking that the book is more about glitterati gossip than it is about fantastical fiction. But the cover photo does feature a photograph of a Superman costume hanging in a closet among other mundane clothing, along with a teaser that the book contains an introduction by Neil Gaiman, so at least there is a nod toward the genre-orientated content to be found within.

And in fact, the foreword is a delightful small-scale example of the sort of insider memories of working in science fiction that Straczynski delivers. Gaiman

describes the first time he properly met Straczynski. It was in 1991 and the conversation was about Gaiman's collaboration with Terry Pratchett, *Good Omens* (1990). Now we are in 2019 and *Good Omens* is a blockbuster TV show, and Straczynski's book is on the *Los Angeles Times* bestseller list. It is this same sort of give and take, the interconnectedness within the sf community in general, and the television sf community in particular, which makes *Becoming Superman* an important read for anyone who is interested in what happens behind the scenes.

The chronology of Straczynski's life is fascinating and his family history makes up a large part of the book. But in addition to being interesting, it is also vital to his story. We see Straczynski suffering an almost unspeakable childhood and taking refuge in the wish-fulfilment offered by Superman, a shining idealization of what people could and should be, in contrast to the chaos of his upbringing. From George Reeves' portrayal of the Man of Steel on the small screen, Straczynski's interests grew to encompass other superheroes in the pages of DC and Marvel Comics, as well as TV shows such as *The Twilight Zone*. Straczynski sought out Hugo-winning stories to read and would later go on to win a Hugo himself. The work of Harlan Ellison had a significant impact upon him and he was later a part of Ellison's life. As Straczynski immersed himself in fiction, the idea that he could one day work within the industry helped to put him on a path out of a life that was very nearly unbelievable and unbearable.

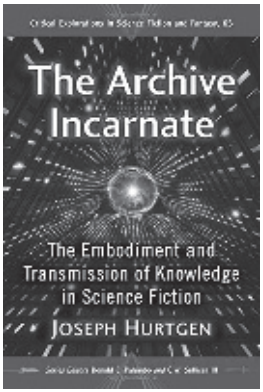
Straczynski's insights into the industry are more than worth the price of admission. Readers will acquire a fresh perspective on television programmes such as *He-Man*, *The Real Ghostbusters*, *Babylon 5* and *Deep Space Nine*, among others. And while it is shocking to realize just how much art is thrown over in favour of economics and politics in the creation of TV sf, Straczynski's anecdotes serve to make us grateful that we get even as many quality stories as we do, thanks to those in the industry who work and struggle on our behalf.

Comic books had helped Straczynski endure the horrors of childhood, when Superman had given him someone to look up to as a role model. In the twenty-first century, DC Comics asked him to reinvent his childhood hero; to make Kal-El relevant and relatable for today's readers. Just as he had endured his early life, so Straczynski used his role in comics to help people endure the reality of a post 9/11 world.

Straczynski's style is wry yet at the same time it is grandiose in a way that might be off-putting in a less accomplished writer. Many of his experiences, both in the industry and within his own family, might seem as if they have been embellished or even entirely fabricated. He is, after all, a master storyteller and some of the events described strain credulity. But he is also a former journalist (yet another nod to the influence that the Superman story would have upon

his life) and he expresses a journalist's reverence for verifiable facts. In the same way that he gives us a peek into the creation of television programmes on which he has worked, he also gives us a peek into his research for *Becoming Superman*, letting us in on conversations with family members that he undertook in an effort to confirm facts about his past. In the end, this is Straczynski's story and he's certainly entitled to be taken at his word.

Younger readers may not understand the full impact of the changes that have taken place since Straczynski first discovered science fiction. It may be difficult for them to understand the low regard in which the genre was often held. The current pop-culture landscape is one in which comic books are the source material for the world's most popular and lucrative movies. The science fiction and fantasy genres are no longer considered to be strictly kid stuff. Impossible and fantastical storylines comprise a large share of mainstream entertainment. And to some degree, this is because of Stracynski's contributions to the field. From his advocacy of better female representation in cartoons to advancing a multi-season story arc on television to recognizing and addressing real world tragedy in the make-believe world of comic books, he has worked to add legitimacy to the genre that helped him to survive and thrive in his own life. Despite his self-declared retirement from the field of comics, projects such as *Becoming Superman* indicate that Straczynski is not yet completely done reshaping the world of the fantastic.



Joseph Hurtgen, *The Archive Incarnate: The Embodiment and Transmission of Knowledge in Science Fiction* (McFarland, 2018, 158 pp, £56.95)

Reviewed by Andy Sawyer

'The Archive' in Archive Theory (something which has amassed a considerable amount of writing over the past few decades) is something that, like 'The Academy' as opposed to the actual working practices of those studying or teaching in universities, is interestingly tangential to what archivists do, or think they do. (Disclosure: I am a librarian rather than an archivist although I have worked closely with archivists.)

Science fiction, with its emphasis on epistemology and systems of knowledge (which demands relationships with archived knowledge and systems), not to mention its systems of megatexts and hypothetical histories that authors and readers need to enter into the world of the fiction, is a fascinating example of how 'archival fiction' can be constructed. Other genres are equally indebted. Max

Saunders's 'Archive Fiction' (2011), which Hurtgen refers to in his introduction, cites examples such as Dan Brown's *The Da Vinci Code* (2003), A.S. Byatt's *Possession* (1990) and Umberto Eco's *The Name of the Rose* (1980). Other examples could be culled from further categories of fiction that engage with the piecing together of fragments of knowledge, such as detective fiction, cosmic horror (in which 'forbidden' books obscured in libraries play an important part), or generic hybrids such as Josephine Tey's *The Daughter of Time* (1951) and Jorge Luis Borges' mixtures of actual and imaginary citations.

We might also consider how sf scenarios explore the reconstruction of knowledge. Examples include the rediscovered fragments of a lost civilization and the fight to preserve this knowledge within the post-apocalypse, as in Walter M. Miller's *A Canticle for Leibowitz* (1959) and George R. Stewart's *Earth Abides* (1949); 'secret histories' such as Mary Gentle's *Ash* (2000); the unreliability of archives (Gentle again with *Left to His Own Devices* [1994]); or the political importance of understanding history, as in Katharine Burderkin's *Swastika Night* (1937) and George Orwell's *Nineteen Eighty-Four* (1949). Or simply the knowledge underlying the story, the *Galactic Encyclopaedia*-style infodumps in the *Foundation* and *Dune* sequences, and the way this 'knowledge' of an invented future transforms today's extravagant future into tomorrow's cold fact (albeit often in ways that Hugo Gernsback overlooked).

This example-listing, though, is not what Joseph Hurtgen's book is about, although he does nod to it in his useful introduction on Archive Theory and sf. The first law of archives, I was once told, is selecting what to throw away, rather than what to keep. So, the small block of cannabis resin was removed from one archive I was told about, although the preserved lizard remained with another; while the fairly substantial amount of money found in an envelope among miscellaneous papers in another was returned to the donor. Archives, too, can be shaped (by accident or design) by their custodians or users to create multiple, even contradictory narratives. (Thomas Richards's fascinating *The Imperial Archive: Knowledge and the Fantasy of Empire* [1993] is cited here.) And archives can be deliberately designed as tools of repression: 'We do not often visit archives, but the archives still have a keen interest in us,' says Jussi Parika, introducing Wolfgang Ernst's *Digital Memory and the Archive* (2012), referencing the meticulously organized archives of the East German secret police.

All this goes to underline the more serious point that Hurtgen makes during the first section of the book, in which he draws upon theorists such as Jacques Derrida, who introduces *Archive Fever* (1995) by exploring the archive's connection with authority – the 'archons' or 'superior magistrates' who guard and interpret the documents that 'speak the law'. Derrida's *mal d'archive*,

Veronica Hollinger suggests in *Parabolas of Science Fiction* (2013), echoes the anxieties about the fragility of the physical or cultural archive suggested in H.G. Wells's *The Time Machine* (1895), John W. Campbell's 'Twilight' (1934), Angela Carter's *Heroes and Villains* (1969) or Russell Hoban's *Riddley Walker* (1980). Similarly, Michel Foucault has shown the Archive to be a system of gaps, shapings, concealings and control.

Drawing usefully upon Hollinger and other sf critics such as Istvan Csiscery-Ronay who have used this theorization, Hurtgen presents five chapters on Ray Bradbury's *Fahrenheit 451* (1953), Margaret Atwood's *The Handmaid's Tale* (1986) William Gibson's 'Johnny Mnemonic' (1981) and *Neuromancer* (1984), Bruce Sterling's *Distraction* (1998) and Neal Stephenson's *Snow Crash* (1992) and *The Diamond Age* (1995), to cover Archive-related anxiety, Archival control and Archive resistance within each text. There is also a short epilogue briefly analyzing two later texts: Cory Doctorow's *Down and Out in the Magic Kingdom* (2003) and Ernest Cline's *Ready Player One* (2011).

Why the emphasis upon these particular fictions, most of which have already been written about at great length? Partly, perhaps predominantly, it is because they are examples of Hurtgen's title: *The Archive Incarnate.* This is not the simple relationship between sf and archive that I have suggested above, but the way the fictions engage different versions of the Archive as they allow, or enforce, interaction between information systems and their human subjects. Archives may liberate, as we realize what is hidden from us, but they can also control. Bradbury, for instance, engages with 'old' technology (books) as opposed to the 'passive' consumption of television. Millie Montag may take part in 'interactive' scripted scenarios, but they are *scripted*, denying her the agency of reading (and thinking) for herself. By beginning here, Hurtgen implies that, since Bradbury, this dichotomy has been reversed. The end of the novel shows the survival of the Archive of traditional liberal/humanist values (embedded in books carefully, as Hurtgen notes, selected by Bradbury) but it is a tentative survival, contingent upon the selection, survival or memory of those who embody them. In contrast, Atwood presents a 'personal' archive recorded (on cassette tapes, also now an obsolete technology) surviving only by chance, and given to us by a future distanced from both us and the world of the fiction. From the comments upon Offred's tale in the novel's appendix, this future world itself shows elements of ideological and gendered control. The novel not only includes Offred's hidden, personal archive, but the Commander's 'archive' of fashion magazines. From this, we can understand much about the relationship between Gilead and our own time.

The later cyberpunk and post-cyberpunk examples explore the ambivalence of the 'liberating' new technologies of cyberspace. Gibson's totalizing yet

disembodied Matrix offers opportunities for enterprising humans – and AIs – to absorb and even liberate information. But there is also Johnny Mnemonic, bootlegging data but with no way of accessing it. Sterling's *Distraction* is set in a post-information age USA where, triggered by email spambots, 'archived information on the net can colonize minds', and such systems are delocalized and deterritorialized. Stephenson's 'Primer' in *The Diamond Age* allows liberation and defiance of social expectations.

In all these scenarios, Hurtgen takes us through the contradictions and fault-lines. The book works as an introduction to archive theory (which is only tangentially a 'theory of archives'), and how sf has engaged with systems of storage and dissemination of knowledge. There is a formality about its structure which sometimes approaches the wooden, and there are occasional errors: 'Keveney' instead of 'Kaveney'; 'dime novel era of the '30s and '40s'. It leads us to, but never quite engages with, the question that increasingly comes to the fore as we read through the book: we are now archiving ourselves, willingly becoming part of networks and storage systems to be used against each other. Has sf caught up with this? To fully engage with that aspect of 'The Archive Incarnate' would, as Hurtgen seems to hint in his closing pages, have meant a much longer book. But his engagement with the *embodiment* of the archive usefully shows how sf's metaphors speak vividly to us.

Maureen Cawthorn Bell, ed. *James Cawthorn: The Man and His Art* (Jayde Design, 2018, 446 pp, £45)

Reviewed by Mark Scroggins (Florida Atlantic University)

For better or worse, the illustrator and author James Cawthorn (who died in 2008) will probably always be recognized for his association with Michael Moorcock. The two men were close friends and collaborators for many years, beginning in Moorcock's earliest days editing Edgar Rice Burroughs fanzines, which Cawthorn illustrated. Cawthorn provided pictures for and helped plot the early Elric stories – indeed, Cawthorn's input was crucial, both visually and conceptually, to Moorcock's early conception of the albino Prince of Melniboné. He drew covers and illustrations for Moorcock's fantasy novels and the Moorcock-edited *New Worlds*; he and Moorcock co-wrote the sf novel *The Distant Suns* (1975) as well as the script for the 1975 film adaptation of Burroughs's *The Land that Time Forgot*; and he produced early graphic novels of Moorcock's *Stormbringer* and Hawkmoon sequence.

Cawthorn did a great deal more along the way, as *James Cawthorn: The Man and His Art* makes clear. This book is an extraordinarily sumptuous collection, bringing together a detailed biographical sketch by the artist's sister Maureen Cawthorn Bell, numerous tributes and memorials by his associates, great swathes of Cawthorn's writing, and hundreds of pages of well reproduced artwork, a good deal of which has never been published before. That's a mixed blessing, for an awful lot of Cawthorn's drawings don't really bear extended examination.

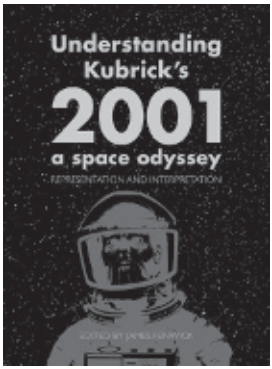
Cawthorn readily admitted to being entirely self-taught, and on various occasions commented that he didn't have the patience to master certain techniques. There's often more grace and energy in his rough sketches than in his finished drawings, which tend to be somewhat fussy and overworked. Worse yet, his figures and faces reflect more the clichés of comic book and strip cartoon art than they represent actual human bodies and features. His action scenes – and sword and sorcery, after all, takes heroic battles and the struggles of man and monster as its stock in trade – tend to be tangled and difficult to decipher.

Cawthorn's greatest influences seem to have been such illustrators as Hal Foster and Burne Hogarth, though one can see a good deal of Mervyn Peake entering into his work. (Cawthorn introduced Moorcock to Peake towards the end of the latter's life, and the association proved crucial for both men: Moorcock was instrumental in getting Penguin to reprint the Gormenghast books whilst his own fiction, particularly *Gloriana, or, the Unfulfill'd Queen* [1978], has been deeply influenced by Peake.) But his lack of formal training, coupled with his impatience with canons of composition and design, make Cawthorn's work rather a hit-or-miss affair. This is perhaps most evident in his graphic novel work like *The Jewel in the Skull* and *The Crystal and The Amulet*, his Hawkmoon adaptations, where sumptuously detailed two-page spreads alternate with action sequences of sometimes desperate muddle. (Titan Books have just reprinted these two as a single volume in their 'Michael Moorcock Library' series of graphic novels.)

It's heartening to be reminded, however, of just how solid a *writer* Cawthorn could be. *The Man and His Art* reprints a baker's dozen of the brief essays that make up the 1988 *Fantasy: The 100 Best Books*. (Moorcock had been commissioned to do the book, but other commitments intervened; while it was published under both men's names, Cawthorn wrote the great majority of its entries.) As is common with such compendia, each of these two-page mini-essays is largely taken up with introduction and summary, but Cawthorn rarely misses an opportunity to put in a word or two of shrewd literary criticism or commentary; and the authors surveyed – from Jonathan Swift to Terry Pratchett, Thomas M. Disch and Peter Ackroyd – present a rich and idiosyncratic overview

of the fantasy field, with a refreshing refusal to consider J.R.R. Tolkien as in any sense an epochal figure.

Cawthorn's shortcomings as a draughtsman are sometimes evident in *The Man and His Art*, but there are still an impressive number of beautiful and haunting pieces collected here. When he put his mind to it – or when fortune struck – Cawthorn's work is pure gold, like the iconic half-shaded bust of Elric in his dragon helm which has become almost synonymous with the character. While Cawthorn is unlikely to escape the shadow of his more famous younger friend Moorcock, much as John Tenniel is unlikely ever to escape his association with Lewis Carroll, there's much in this collection, both graphic art and prose, that rewards attention.



James Fenwick, ed. *Understanding Kubrick's 2001: A Space Odyssey* (Intellect, 2018, 260pp, £20)

Reviewed by Simon Spiegel (University of Zurich)

There is no doubt that *2001: A Space Odyssey* (1968) is a seminal work in the history of sf cinema. Literature on it has never been scarce; in fact, *2001* has already been called the movie on which most has been written about. Whether this is true or not, there is hardly an aspect of *2001* that has not yet been covered. Still, the 50th anniversary of its original release in 1968 has triggered a new wave of publications. Among these new books, James Fenwick's collection is certainly the one that is most clearly targeted at a scholarly audience.

As Fenwick notes in his introduction, academic engagement with Kubrick's oeuvre has undergone a remarkable shift in recent years. Kubrick was notorious for avoiding public appearances and giving very few interviews. This and the dominating trends in film studies led to the interesting situation that the work of a director who in many ways seemed like the perfect embodiment of an *auteur* was mainly approached ;from semiotic, structuralist and formalist frameworks'. The *auteur* was – quite fittingly from this theoretical perspective – only accessible through the film text.

This changed quite dramatically when the Stanley Kubrick Archive at the University of Arts in London opened in 2007. Kubrick was an obsessive hoarder who hardly threw anything away, and the archive provided researchers with vast amounts of new material. This led to a new 'empirical turn' in Kubrick scholarship characterized by extensive archival research. A recent and (in the context of

2001) important example of this new approach is Michael Benson's *Space Odyssey: Stanley Kubrick, Arthur C. Clarke, and the Making of a Masterpiece* (2018), an extensive 'making-of' for the film that covers the unusual production in great detail and sheds new light on how Kubrick interacted with his various collaborators. According to Fenwick, his essay collection is meant to offer a 'third way' of approaching the director's oeuvre, by combining the two approaches 'and to begin to arrive at a more rounded and complete scholarly perspective'.

The book is divided into six parts titled Narrative and Adaptation, Performance, Technology, Masculinity and the Astronaut, Visual Spectacle, and Production. The grouping of the texts seems at times to be a bit forced, but each part starts with a useful introduction that contextualizes the chapters and gives a brief overview of existing research.

The first part comprises three chapters. Simone Odino focuses on the genesis of *2001* and relies heavily on archive material. He traces how Kubrick looked for a suitable subject for a new film after *Dr Strangelove* (1964) and even briefly considered making a film for the UN before collaborating with Arthur C. Clarke. It is to his credit that he is able to come up with new details on the pre-history of *2001* not already covered by Benson. While not earth-shattering, Odino's argument that *2001* grew out of Kubrick's concern with nuclear warfare is an interesting one. The relationship between Clarke's novel and Kubrick's film is at the heart of Suparno Banerjee's chapter. It is a classic example of a textual analysis which, after a long theoretical prologue, leads to a rather pedestrian comparison of novel and film. Banerjee's main point is that both texts should be treated as independent works and not as adaptation or novelization. This is certainly convincing but it is not new. Finally, Dru Jeffries looks at Jack Kirby's more or less forgotten comic adaptation of *2001*. While Jeffries stresses that Kirby takes Kubrick's film only as a starting point, he gives only a rough impression of what the comic is about. It is also a shame that his chapter lacks any illustrations. Most readers will have seen Kubrick's movie, but only a few will know Kirby's comic. It is only a slight exaggeration to say that, in their strengths and weaknesses, these first three chapters stand for the volume as a whole. If a film has already been covered as extensively as *2001,* it is very difficult to come up with genuinely new lines of analysis. For readers already steeped in its exegesis, there is therefore little to be gained from the chapters that choose more traditional, hermeneutic approaches. Banerjee's contribution is a case in point.

The second part, though, is something of an exception insofar as it treats a subject that has seen little research so far – acting. Acting is one of the notoriously weak spots in film studies because it is very difficult to write about it in a theoretically informed way. Yet Kubrick, who has been accused of

encouraging both wooden, emotionless acting (*2001*) and complete overacting (*The Shining* [1980]), is an interesting touchstone here. The two chapters focusing on this topic highlight the director's unusual approach toward acting, which does not conform to traditional Hollywood naturalism. Fenwick's own contribution focuses on Dan Richter, the mime who not only played the ape, Moon Watcher, but was also responsible for the choreography of the whole 'Dawn of Man' sequence. Richter has already covered much of this in his own *Moonwatcher's Memoirs* (2002), and Fenwick's new contribution is to give more detail on Richter's training in the American Mime Theatre, which aimed toward a realism where every movement was psychologically motivated. Fenwick sees this approach not only in the beginning of *2001* but also in later films by Kubrick, for example the first meeting between Barry and Lady Lyndon in *Barry Lyndon* (1975). Vincent Jaunas, on the other hand, argues that the actors in the later parts of the film constantly downplay the physicality of their bodies and perform many movements in a mechanistic way. For Jaunas, this mirrors one of the film's main concerns: 'Humankind's becoming-machine is presented as a human tendency that leads them to rely on technology to gain control, but which, when brought to its logical conclusion, eventually suppresses their own […] subjectivity, thereby threatening their very humanity'.

While these two chapters partially succeed in opening up new avenues for research, several other authors deliver more or less sophisticated rehashes of points that have been made before. Kubrick's strong affinities with the sublime – not only, but especially in *2001* – are well established. Rachel Walisko's treatment of the subject is nevertheless rewarding to read. In contrast, Antoine Balga-Prévost's chapter, which has another go at the film's relationship with technology, is a typical example of restating the obvious in a more fanciful way, sometimes bordering on the obscure. On top of that, he also manages to wrongly call the cut from bone to spaceship, arguably the most famous match cut in the history of film, a jump cut.

Fenwick's declared aim is to establish a third way in Kubrick scholarship. It is probably fair to say that his volume does not completely achieve this goal. Most contributions can be quite clearly classified as either traditional hermeneutic analysis or as more archive-based, and very few succeed in or even attempt a synthesis. It is also only logical that it is (for the most part) the authors who rely on archival research who are able to come up with genuinely new information. How much a reader gets out of *Understanding Kubrick's 2001* will depend largely on how knowledgeable he or she already is about the movie. For Kubrick experts, there is only the occasional nugget to be found. This is also true for Filippo Ulivieri's chronology of the film's production that concludes the book. Ulivieri is one of the leading experts on Kubrick, and his chapter is the result of

quite intensive labour, but for anyone who has already read Benson's volume, it has little to offer.

Matthew Jones, *Science Fiction Cinema and 1950s Britain: Recontextualizing Cultural Anxiety* (Bloomsbury Academic, 2018, 240pp, £28.99)

Reviewed by Sara Wenger (Virginia Tech)

In this study, Matthew Jones re-examines various topics of debate from mid-twentieth century Britain and questions the public responses to sf films of the time. By placing prominent topics such as race and immigration, nuclear technology and communism alongside the discourses surrounding prominent sf films of the 1950s, Jones showcases the complicated nature of post-war Britain without falling victim to essentializing narratives. Pamphlets, posters and advertisements that accompanied the release of the films serve as the text's primary sources, including material from *It Came from Outer Space* (1953), *Quatermass II* (1957), *Behemoth the Sea Monster* (1959), *Invasion of the Body Snatchers* (1956) and many more. These materials helped frame the films in their initial release and shape how the public – and scholars – came to understand sf from this era.

Jones highlights how Britons were not a monolithic group, organizing chapters into sections that address the same overarching issue but approach public debates through contrasting perspectives. For example, Part A discusses 'Communist Infiltration and Indoctrination', with the first chapter analyzing British hostility to communism and its subsequent effect on sf films at the time. Meanwhile, the succeeding chapter flips this narrative, turning to more tolerant discussions around communism presented to the 1950s British public.

For Jones, nothing is assumed to be as simple as it appears. In each chapter, Jones utilizes sf films outside of the British canon: one of the two films discussed is British while the other is American. The British public's reception is neither the same nor situated within the same geopolitical realm as their American counterparts. For instance, the fears and anxieties that were (assumed to be) prevalent in British society at the time would be inherently different culturally, socially and geographically to those located across the Atlantic. Furthermore, as the British economy struggled to regain its footing after World War Two, the United States was experiencing increased financial prosperity. The United States utilized its (comparative) stability to expand its hold across the globe, whereas the reach of Britain remained in retreat. Not only do these things matter

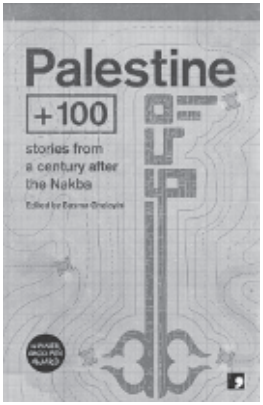
in a geopolitical sense but in a social sense, setting the stage for American and British viewers to evaluate sf films in vastly different ways.

After characterizing the relevant public debates through geopolitical and historical analyses, Jones shifts his attention to the ways in which these various debates were able to 'inflect the meaning of particular shots and sequences contained within specific films'. One of the strongest features in this book is its unabashed dedication to and absolute enthusiasm for sf cinema. For example, Part C features a chapter on the immediate aftermath of the Notting Hill Riots. In exploring *It! The Terror from Beyond Space* and *The Trollenberg Terror* (both 1958), Jones emphasizes how the films work to humanize sf creatures, leaving audiences to ponder on the brutality witnessed not only on the screen but also in other popular media: 'This positioning of the alien as a sympathetic creature and the resultant questioning of the boundary between Self and Other were not limited to these two films. It became a feature of some prominent examples of 1950s science fiction cinema, a fact that did not escape British film magazines of the era'. In the period after 1958, British sf cinema allowed viewers to question the dichotomy of Self and Other; more precisely, the feelings of uncertainty that sprang from its slow erasure, where once-established boundaries were less noticeable.

Jones notes that it is not enough to merely compare extraterrestrials to humans – in other words, allowing the alien characters to act as stand-ins for black residents of the UK – but that the undermining of the Other, the humanizing of something that was not originally considered to be human, and the reconsidering of the 'monster' as being something not-so-monstrous after all, means something beyond the screen. Divisions thought to be fixed could now be seen as artificial, socially-constructed, and able to be opposed. In the same vein, I wish Jones could have spent more time on the subject of race and immigration. Arguably, this short analysis by Jones merely reflects the very white-centric films that were released in mid-twentieth century UK and US cinemas.

In his concluding remarks, Jones urges readers to 'break out of [...] "accepted patterns" of thought and move towards a more pluralistic history of the genre'. After all, Britons – similar to the wide range of sf films included in this book – are much more than they appear to be historically, socially and politically. British cinema-goers have their own understandings of cultural productions that do not necessarily align with American understandings. To apply sf receptions of American film-goers to those of British cinema-goers would not only be unfair but mostly incorrect. Indeed, many scholars still rely on what Jones calls, 'pseudo thought and supposition' in their analyses of the sf films of the time. While Jones offers thoroughly researched counter-narratives to the dominant

readings of 1950s sf films, there is still much work to be done. As the alien creature in *It Came from Outer Space* (1953) says to the townspeople of Sand Rock, Arizona: 'We have a long way to go.'



Basma Ghalayini, ed. *Palestine+100: Stories from a Century after the Nakba* (Comma Press, 2019, 240 pp, £9.99)

Reviewed by Emad El-Din Aysha

Palestine+100 is an anthology of science fiction stories penned by Palestinian authors for Comma Press, an independent publisher in the UK. The stories are all set in 2048, a century after the establishment of the state of Israel and the forced displacement of Palestinians. The book follows on from the success of Comma's *Iraq+100* (2016), set a hundred years after the US invasion of 2003. Both projects were meant to ameliorate a similar problem, namely, the dearth of sf in the literary traditions of countries like Iraq and Palestine, if not most of the Arab world. Gritty realism, the historical novel, surrealism and magic realism are the chief genres that Palestinian and Iraqi authors are comfortable with, evident in both anthologies. Many of the stories are combinations of sf and magic realism, while themes of loss, despair and hopelessness pervade the vast majority, themes all too common to realism and the historical novel. This is perfectly understandable given that Palestine and Iraq have always been conquered lands, on the front line of many an invading force ravaging the Middle East. Before I go further, though, I must disclose that I am also one of the contributors to *Palestine+100*. Nevertheless, I want to introduce this anthology to a predominantly western readership in the context of Arabic sf.

'Curse of the Mud Ball Kid', by Mazen Maarouf, is the most surreal and tragic of the stories. It is set in a future world where the dreams of Palestinian children are literally stolen, by satellite, and beamed into the past as cannon fodder for debilitating video games. The central character in it is a boy, the last remaining Palestinian, dying and resurrecting himself repeatedly. Yet, a kind of cosmopolitanism is evident in the story since the caged boy is displayed to tourists, with echoes of Franz Kafka's 'A Hunger Artist' (1921). The sufferings of the boy are also akin to the never-ending plight of Sisyphus and Prometheus, mythical characters punished for their defiance but nonetheless examples of free will to mankind. While the cycle of death and resurrection is a clear nod to the Christian saviour who bears the burden of the sins of others.

Although both *Palestine+100* and the Iraq anthology sport authors from the Iraqi and Palestinian émigré communities, cultural cosmopolitanism is more of an explicit theme in the Palestine anthology. This is most evident in 'N', by Majd Kayyal, with parallel worlds inhabited by Palestinians and Israelis used as a solution to the two-state problem. The cosmopolitan past of cities like Cairo is touted as a model, housing people from all over the world, Jews included, in a wonderful cultural mix. Humour too has a strong place. 'Final Warning', by Talal Abu Shawish, has an alien mothership forcing the Palestinians and Israelis to make peace with each other. The alien non-invaders begin by knocking out all the electrical equipment, reminiscent of *The Day the Earth Stood Still* (1951). The story also has much in common with a little-known short story, Henry Kuttner's 'Or Else' (1953), with an alien threatening the whole human race with annihilation if two desperately poor Mexican farmers don't stop fighting over a common water well.

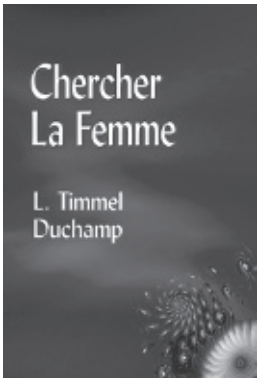
Overall, *Palestine+100* is more innovative in terms of narrative construction than the Iraq anthology, and actively utilizes the blending of genres in this regard. 'Sleep it Off, Dr Schott' by Selma Dabbagh is told through a first-person narrative interspersed with transcripts handed over for approval to the UN, something no doubt meant to reflect the internationalized existence of the Palestinian cause. Unless international bodies like the UN recognize you, and unless you write to them in the proper manner, you do not exist. For example, in stories like 'The Key' by Anwar Hamed, told from the perspective of Israeli characters, it is almost as if Palestinians only exist as a nightmare on the fringes of Israeli consciousness. Nevertheless, they continue to haunt the moral conscience of those who would prefer to wish away their existence. 'The Key', in particular, becomes an Arab-style parable or 'hikaya' (حكاية), since the moral punchline outweighs both the storyline and the world-building.

This haunted quality, though, is more than simply a defence mechanism in *Palestine+100*: it is also a springboard to the future. 'The Association', by Samir El-Youssef, begins with the mysterious death of a historian, an apparent suicide. Later, an investigative journalist tries to discover the identity of a secret society that is believed to be behind the assassination. Its mission is to expose the historical lies that went into a peace treaty that has left a future Palestine stultified and unable to move on. Another noteworthy story is 'Vengeance' by Tasnim Abutabikh, which is about setting the historical record straight. A young Palestinian, Ahmed, is trying to get even with a black-market engineer, Yousef, the descendent of a Palestinian who is supposed to have sold his land to the Zionist settlers. The fact that Yousef is a kind and benevolent man cuts no ice with Ahmed, whose own ancestors suffered from this supposed land-sale. It is only the historical facts that open up an avenue to the future, since Ahmed

takes up where Yousef left off; building black-market respirator units that help people survive the polluted air. This is a motif Arabs recognize, not being able to breathe (think, speak) without the permission of the ruler. Getting something off your chest in Arabic is called 'tanfees' (literally, deflating your lungs). Yousef himself says the Israelis control everything, even the air we breathe, and the only way to fight back is to stop fighting (and suspecting) each other. There is a long history of Palestinian literature exposing the class fissures that made the country susceptible to foreign domination, blaming the 1948 defeat on these self-same social divisions.

But is that really the case, or just an exercise in self-flagellation? Focusing too much on the past can blind you to the prospects of the future, which might be the reason why Palestinian literature has been inching in a fantastical direction and for a long time. Science fiction may be a rarity in Palestinian literature but the fantastical is not. Palestinians have been living a surreal existence ever since 1948 and this has tempted many writers into the realms of surrealism and magic realism, from Emile Habibi to Ibrahim Nasrallah with some sf themes emerging from the fray. There are rumoured UFO visitations in Habibi's *The Secret Life of Saeed: The Pessoptimist* (1974), and social media technologies that change your biology and moral makeup in Nasrallah's *The Second War of the Dog* (2018).

Note that both Habibi and Nasrallah were also dedicated to chronicling Palestinian history in their novels, seeing no contradiction whatsoever between flights of fancy and preserving the identity of the Palestinian people. Likewise in *Palestine+100*. The opening story, 'Song of the Birds' by Saleem Haddad, is the epitome of this. A prosperous and independent Palestine is discovered by the narrator, Aya, to be an electronic illusion. Her rebellious brother Ziad guides her, supposedly from the grave. Aya's father however, representing the older generation, is happy with this virtual world and does not want to question it. His comatose wife suspects something is wrong but quite literally can do nothing about it. It is only the children that fight back. Identity is not just the past, it is also the future, and preserving one helps with ushering in the other. That is what science fiction is all about and, as genre-bending as *Palestine+100* is, it meets the criteria of a pathfinding work of sf.



L. Timmel Duchamp, *Chercher La Femme* (Aqueduct Press, 2018, 320pp, £16.02 [import only])

Reviewed by Gautam Bhatia

Within the hoary sf tradition of First Contact stories, there exists perhaps a sub-genre: contact between human and alien species that is not governed by the logic of conquest, conflict or even co-operation, but which exposes weaknesses of human character and the fragility of our interior landscape. In Stanislaw Lem's *Solaris* (1971), this encounter results in catastrophe; in Leigh Matthews' more recent *Colony* (2017), it ends in transformation.

L. Timmel Duchamp's *Chercher La Femme* is a subtle and complex work, lying at the boundary of this sub-genre. Julia 9561, a diplomat representing the Pax System, is in command of *Pax III*, a spaceship that is approaching a mysterious planet called La Femme. Her remit is to discover what happened to her predecessor, *Pax I*, and to recover its crew, who have refused to return. Julia must also investigate the social, political and economic structures on La Femme 'with a view to future trade interests'. An old and familiar story.

As part of her mission, Julia is called upon to handle a fractious crew as well as the presence of two 'Word Processors'. These are human beings who have undergone special surgery, so that they can communicate with the alien species, the Delta Pavonians, whose technology is required to get the spaceships to La Femme. And above all, Julia must reckon with cryptic messages sent by Paul 22423, a crew-member of *Pax I*, pointing out not only that La Femmeans communicate via telepathy, but also warning that nobody who identifies as female must make the trip to La Femme. With her destination drawing ever closer, and a disturbing sense that La Femmeans are able to get inside the minds of her crew, Julia must decide when, how and on what terms to engage with the alien presence, which claims to offer human beings nothing more or less than their own desires.

Chercher La Femme's First Contact tale is complicated by the fact that the human species is itself almost unrecognizable. Humans can now occupy three different spatial dimensions: virtual-space (V-space), constructed-space (C-space, or 'a specific site in v-space that has been furnished with its own particular environment [...] a private space providing an environment tailored to individual desires and needs'), and 'meat-space', what we would understand as our physical dimension. Additionally, human beings can – and Julia has – split themselves into multiple 'secondaries', different and specific facets of a single personality, whom they can then summon at will for advice and counsel at difficult times. In an inversion of norms that is somewhat reminiscent of Joe Haldeman's treatment of homosexuality in *The Forever War* (1974), most human activity takes place in V-Space or C-Space, where everything can be moulded according to human desire, while meat-space is considered (relatively) dirty and unclean. Humans are now uncomfortable with spending an extended period of time in meat-space, which constrains them to the bodies they have been born

with, and they do it only when they absolutely need to.

In other words, a near-unrecognisable humanity interacts with a near-unrecognisable alien species. The Delta Pavonians are rarely seen on-stage, but their presence in the story is constant: it is their technology that powers the *Pax* spaceships to La Femme, and each spaceship has on board its interpreters, its Word Processors. Unintelligibility across species is, then, a recurring theme in *Chercher La Femme* (somewhat reminiscent of Ted Chiang's 'Story of Your Life' [1998]). For example, after the first time that La Femmeans reveal themselves to the crew of *Pax III*, there is a dispute over what their visit *means*. While Julia is convinced that it is 'a celebration', 'welcome' or 'greeting', the psychologist Fuyoko believes that it is an attack on their consciousness. Each of the disputants attempt to *translate* (in a manner of speaking) the conduct of La Femmeans into recognizably human terms, while struggling with the possibility that they might simply be wasting their time, if what La Femmeans have done is simply not reducible to human concepts at all. This unintelligibility runs through the novel: after each encounter with La Femmeans, the humans struggle to define what exactly *happened* and each individual account yields a different description that – once again – corresponds to the observer's own world-view and assumptions about Contact.

The unintelligibility travels both ways. La Femmeans appear unable to understand the concept of gender, and repeatedly refer to all human beings as 'men', a fact that puzzles Julia until she realizes that it reveals something about the notions of gender that remain part of the detritus of Paxan social psychology. Readers familiar with Duchamp's work will be reminded of previous novels such as *The Waterdancer's World* (2016), where beliefs about gender are taken and interrogated ever so gently, almost without the reader noticing how they arise.

Nevertheless, there is a sense that Duchamp has overpopulated her novel. The sheer profusion of concepts, from v-spaces to 'transudation' (the interpretation of the Delta Pavonians), word-processors to secondaries, threatens to overwhelm the story itself. Apart from Julia, the characters are impressionistically drawn, perhaps understandably so, as Julia – with her personal history and interior landscape – is undoubtedly at the centre of unpacking the significance of First Contact. The unintelligibility that is the substance of the novel sometimes bleeds into its form. Duchamp is dealing with a set of concepts that do not yet exist as part of our store of common knowledge, and she is virtually compelled to invent a private language to describe them. This runs the risk of creating situations where the reader lacks even the basic tools that are required to imaginatively construct what is not – or cannot – be described in the novel itself. The use of the word 'transudation', that cannot be further broken down, and by itself, suggests nothing, is a good example of this.

However, perhaps that's the point? A novel that explores the boundaries of communication, of what is possible, and what is not, when two incommensurable consciousnesses meet each other, that leaves one with the haunting feeling that the effort will always come up short, must perhaps also come up short in how much *it* can communicate to the reader. Perhaps that vague feeling of dissatisfaction on closing the novel, a sense of something left incomplete (while nonetheless appreciating the manner in which it has been crafted, as well as Duchamp's literary skill and imagination), is inevitable, given the themes that it deals with. To those used to the demands that Duchamp makes upon her readers, this will be familiar; to those not, it may take some getting used to, but it is an effort that will be rewarded.

Nnedi Okorafor, *Binti: The Complete Trilogy* (Penguin/Random House, 2019, 368pp, £19.88)

Reviewed by Shelby Cadwell (Wayne State University)

This combined edition consists of three novellas by Nnedi Okorafor – *Binti* (2015), *Home* (2017) and *The Night Masquerade* (2018) – plus a new short story set in the same universe. Okorafor's eponymous heroine is a member of the real-life Himba tribe, although living on a far-future Earth that has been transformed through climate change into a salt-laden desert. At the start of the first novella, Binti is at a crossroads. The first of her people to receive an invitation to Oomza University (one of the most prestigious academies in the galaxy), Binti must decide between following her dreams to study and explore the cosmos, and the inevitable ostracism from her tribe if she leaves her homeland.

Binti steals away to a nearby spaceport and, with other students, boards a 'living ship' headed for Oomza. Within the first few pages, Okorafor introduces multiple forms of technology that will be of critical importance throughout the series: living ships, enormous creatures with the ability to fly between planets; astrolabes, which in the *Binti* trilogy are closer to a far-future smart phone (part communications device, part record keeper, part AI); and 'edan', a catch-all word for a technological device so old that its function is no longer known. These elements are more than magic tokens in Binti's quest: they give texture to Okorafor's finely detailed spaces.

As Binti and her classmates sit in the ship's dining hall, the Meduse – a collective of jellyfish-like creatures – burst in and massacre the students as

retaliation for Khoush scientists (a rival tribe to the Himba) removing and stealing their chief's stinger, and putting it on display at Oomza University. The only survivors are Binti and the ship's pilot. Upon realizing that Binti's *otjize* (a mix of sacred red clay and floral oils that Himba women use to clean and protect their skin and hair) has healing properties to their species, the Meduse strike a bargain with her. Not only is Binti able to trade the healing *otjize* for her life, she is even able to convince the Meduse to let her broker peace between them and the University. But before the Meduse will trust her in this role, they first inject her with their DNA, which causes her to grow 'okuoko' (tentacle-like sensory organs) in place of her thick plaited hair. This is the first instance in which Binti becomes more than human.

Home begins with Binti leaving Oomza University a year later to return to her hometown of Osemba to go on the Himba's traditional desert pilgrimage (a rite of passage for women of Binti's age). Although news of Binti's peacekeeping efforts has travelled, her people are still more angry than proud of their prodigal daughter and concerned about her 'bad influence' on the younger girls in the tribe. Binti's plans go awry when the nomadic 'Desert People' take Binti on their own quest.

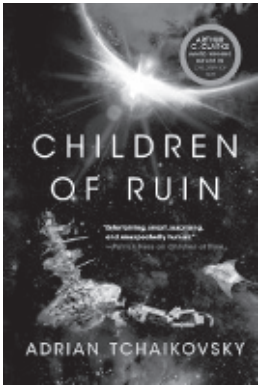
Although Binti is aware of her Desert People ancestry, this is the first time that Binti has met with this side of her family. She learns from her grandmother that the Desert People are a tribe called the Enyi Zinariya and that they are 'old Africans [with] technology that put [the Himba's] to shame'. One of the most important facets of this alien technology is described as a tiny 'living organism […] Once you had them in you, it was like having an astrolabe in your nervous system'. These 'nanoids' are also transmitted genetically through DNA, meaning that Binti herself has had one within her, just waiting to be 'activated'. *Home* ends with Binti discovering that the Khoush have attacked her hometown in an attempt to kill her Meduse friend, the student ambassador Okwu. When, in the final book, Binti returns, her worst fears are confirmed. Binti tracks down Okwu and the other Meduse, and convinces them not to attack the Khoush. It is left to Binti to attempt to negotiate a peace between the Khoush and the Meduse.

In the course of the trilogy, Okorafor weaves together a complex network of technologies, identities and abilities within a framework of Nigerian fables, equational mathematics and sf/f tropes. The highly detailed worlds of Osemba and Oomza University contrast an insular, kinship community with a sprawling, inclusive, outward-facing institution where knowledge is the most valuable currency. Rather than present these as impossible alternatives that Binti must choose between, Okorafor carefully positions each as part of a larger whole, where seemingly contradictory ideas can co-exist with one another.

Like Okorafor herself (the daughter of Nigerian immigrants now resident in

New York City), Binti lives on the borders between multiple identities. Although she struggles to blend them into a true self, Binti refuses to sacrifice one aspect of herself in favour of another. Instead, Binti reflects, adjusts and maintains her sense of self throughout the many shifting circumstances and environments around her. This points to one of the great strengths of Okorafor's authorial voice – a fearlessness that allows her to take narrative risks and reap great rewards. In particular, Okorafor opens a door to conversations about racial prejudice, ecology, gender relations, biopolitics and, what Okorafor terms, 'Africanfuturism'.

In this regard, there is a critical relationship between the trilogy and Afrofuturist predecessors. Binti's hybrid identity strongly recalls the relationship between Lilith Iyapo and the Oankali from Octavia Butler's *Xenogenesis* trilogy (1987-9). Although Okorafor stops short of fully exploring the ramifications of Binti's altered DNA on future generations (a primary concern in Butler's trilogy), she does acknowledge Binti's anxieties about the possibility of becoming a mother, and more pointedly, a mother of *what*. A further allusion, in *The Night Masquerade*, to Sun Ra is counterpointed when Binti travels to Saturn's rings and is called upon by the alien creatures there to make a recommendation in favour of or against Oomza University, which she unequivocally supports. Although 'space is the place' for Binti, her place is also within the university. This marks a shift from the Afrofuturism of Sun Ra, and towards an imagining of institutions (mostly) untarnished by systemic racism and sexism. In sustaining these critical conversations about Afrofuturism, it is my hope that Okorafor's trilogy can serve as a generative well for readers to draw upon for years to come.



Adrian Tchaikovsky, *Children of Ruin* (Pan, 2019, 576 pp, £8.99)

Reviewed by Chris Hussey (Cambridge University)

Adrian Tchaikovsky continues his love of all things eight-limbed in his successor to the Clarke Award-winning *Children of Time* (2015). Given the reception that the first novel had, it would be fair to say that whilst expectations may have been high for this work, it would always be fascinating to see how Tchaikovsky might replicate or expand on the world-building undertaken in its predecessor. Arguably, not only has he succeeded in developing this yet further, he has also propelled the gripping narrative of his invented galaxy to

create numerous avenues for future exploration.

Whilst reading the previous novel might not be prerequisite to understanding and enjoying this new work, it certainly adds useful context and flavour, and would be recommended. At their core, the novels are terraforming narratives, and *Children of Ruin* begins with one of these explorations having found potentially inhabitable planets, and preparing them for future colonists in the wake of Earth's inevitable demise. Their dilemma, of having two possible planets on which to start their project, when one is a more conventionally habitable landmass and the other an oceanic sea-world, inevitably has consequences. Disra Senkovi, a brilliantly talented yet wilfully disobedient scientist, is allowed to develop the aquatic world, aided by octopuses he brought with him as pets, whilst others attempt to terraform the seemingly more favourable world. Their respective developments lead to a series of events that shapes the rest of the novel, and irreparably changes the nature of Tchaikovsky's universe.

This is primarily where the narrative continues from the first novel: where humans and Portiids now live harmoniously, mutually supportive of one another, and where together they now strive for conquest of the stars. The interfacing between the human and arachnid has become the status quo on their planet, and it is their collaboration that takes them into space to follow signals emanating from another terraforming mission that came from Earth, which we find to be Senkovi and his colleagues. This quest inexorably brings the two story-arcs into collision course – although in ways we might not necessarily expect.

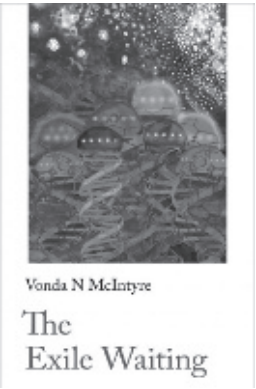
Tchaikovsky switches between these different narrators with consummate ease, whether human, arachnid or cephalopod, so that it appears entirely natural to be reading from the perspective of a non-human creature. In capturing these distinctive styles of narration, Tchaikovsky makes the story easy both to follow and enjoy. Additionally, this refreshing change in perspective provides a contrast to the predominantly human point of view in science fiction, whilst also framing the interactions between humans and other species as a need for a common language, a desire that becomes part of the narrative.

The writing is often scientifically technical without being off-putting in tone or style, therefore making both terraforming and inter-species communication feel approachable and readable. Indeed, there runs a distinctly humorous thread throughout the text, often linked to Senkovi as a lovable rogue, socially awkward and ultimately unfit to be a stereotypical rebel. His actions are therefore enjoyable, whether in relation to his beloved octopuses or fellow members of the crew, and he becomes an unwitting symbol for self-discovery.

Despite its length, the novel moves at a brisk pace – and Tchaikovsky packs a huge amount in without it feeling either gratuitous or lacking in development. The scope of what he achieves in terms of the world-building

and multiple perspectives is startlingly effective, and comfortably sets up future sequels. Compared to other terraforming narratives in sf, Tchaikovsky brings a humane believability to his writing, which is all the more important when contrasted with the more alien and exotic elements in the text. In a similar way, Tchaikovsky distinctively portrays the respective otherness of the spiders and octopuses, despite their common number of appendages, by paying attention to their unique forms of communication and sentience. Tchaikovsky's ability at gesturing towards the singularity of other forms of consciousness is especially demonstrated when he introduces a sentient viral threat into the novel.

Children of Ruin is a truly stellar, fully engaging terraforming narrative that progresses in unexpected ways, and enriches the genre with its ambition and style. It enables Tchaikovsky to show off his mastery of narrative voice(s) that makes the novel an excellent read, and an adventure in which you should definitely partake.



Vonda N. McIntyre, *The Exile Waiting* (Handheld Press, 2019, 316pp, £12.99)

Reviewed by Paul March-Russell (University of Kent)

About forty minutes into the documentary, *The Worlds of Ursula K. Le Guin* (2018), Vonda McIntyre makes a brief intervention on sf and the Women's Movement, segueing into the now legendary *Khatru* symposium on women and sf. Three minutes later, we see Le Guin typing and lined up are a series of books – feminist texts by Simone de Beauvoir, Charlotte Perkins Gilman, Tillie Olson and Virginia Woolf – propped up by copies of Joanna Russ's *And Chaos Died* (1970) and McIntyre's *Starfarers* (1989). These juxtapositions are significant: Le Guin's place in such a pantheon is assured, as the documentary attests, but so too should be Russ and McIntyre. More than this – as McIntyre's short appearance suggests, she (like Russ and possibly even more so than Le Guin) was intrinsic to the feminization of sf during the 1970s.

Russ, Le Guin, and now McIntyre – these writers are all physically departing at exactly at the same time as contemporary authors are rediscovering their exciting synergy of sf and radical politics. Handheld Press are therefore to be applauded in republishing McIntyre's debut novel from 1975, accompanied by both the short story that preceded it, 'Cages' (1972), and Una McCormack's insightful afterword. Its title, as McCormack notes, was taken from a poem by Le Guin; McCormack also outlines the friendships, collaborations and feminist

networks that McIntyre was part of in or around the novel's publication. Albeit rough in places, *The Exile Waiting* bursts with an imagination enthused by the activism of which McIntyre was both participant and instigator.

The novel's explosive quality also stems from the collision of two story elements – the behaviourally conditioned 'pseudosibs', known only as Subone and Subtwo, and the dying earth scenario (which also acts as the setting for McIntyre's award-winning sequel *Dreamsnake* [1979]). Whilst the latter indicates McIntyre's respect for the conventions of far-future fantasy – a decadent, introverted and feudal society in which technological innovation has atrophied – the former indicates her desire to intervene in that tradition. Subone and Subtwo, having escaped the 'cages' of their origin, arrive on Earth in the belief that their advanced technology and intellect will overpower their Terran hosts. Subone however, not unlike Walter Tevis's 'man who fell to Earth', loses himself in the sexual decadence of the society whilst Subtwo is forced by circumstance to reassess his colonial ambitions. McIntyre not only critiques these would-be colonialists, she also uses them as a means of opening-up and exploring the prejudices and discriminations that constitute this far-future hell.

The link between these two narrative arcs are the characters Mischa and Jan. The latter has travelled with the pseudosibs to bury his dead lover, a poet, on her home world. The former is a telepathic thief, one of the mutants shunned by the world of Center, the nuclear bunker now ruled by a host of Mafia-like families, and forced to live within the underground caverns beneath Center. Mischa dreams of escaping off-world and eventually inveigles her way into Subtwo's company. In the dramatic turning-point of the narrative, Subone kills Mischa's brother and is in turn stabbed by Mischa, who has to flee with Jan into the underworld. Their escape, and developing bond, echoes the flight of Genly Ai and Estraven across the frozen wastes in Le Guin's *The Left Hand of Darkness* (1969). McIntyre does not explore their growing relationship with quite the same depth as Le Guin but what she does is throw light upon the horrifically disabled humans that Mischa and Jan find amongst the caves. (McCormack, following Kathryn Allan's pioneering work in this area, writes penetratingly about McIntyre's exploration of disability and its social stigma.) Importantly, it is the solidarity that emerges between these various outsiders which ultimately defeats their oppressors.

McIntyre, who was only in her mid-twenties when she wrote *The Exile Waiting*, writes with a spare and economical style. While drawing upon previous depictions of a decadent far-future, she efficiently and effectively constructs the feudal society of Center. As McCormack notes, gender differences are largely subordinated to other questions of power – men and women can equally be victimized or villainous. Other aspects of the novel are less convincing, for

example, Subtwo's inexplicable love for Madame, one of Mischa's previous tormentors, whose conduct turns volte-face in the course of the narrative. Alternatively, in the figure of Mischa, we have an intelligent, resourceful and courageous young woman whose believability is never strained. The initial intercutting between Jan's journal and the main narrative echoes a similar technique in Gene Wolfe's *The Fifth Head of Cerberus* (1972), and although it is largely abandoned once Jan and Mischa come into contact, it nevertheless helps to establish Jan's character in the first place. This cutting between points of view also complements the motif of telepathy that here, as in another contemporaneous novel, Robert Silverberg's *Dying Inside* (1972), is primarily viewed as a curse, binding Mischa to her other distressed siblings. By contrast, the almost telepathic bond between Subone and Subtwo gradually dissipates, leaving them both lost and isolated within this alien society.

In addition to the elements of power, stigma and decay highlighted by McCormack, a recurring presence in the novel is that of the abyss – the labyrinthine caves, the charnel-house of corpses, the ice garden, the vast bunker itself. McIntyre's characters are plunged into both a literal and a metaphorical void, from out of which light is shed upon the illusion and violence of power. In retrospect, a lineage can be drawn from McIntyre to such contemporary authors as Becky Chambers and Kameron Hurley. As readers, not only of sf's past but also its future, we are hugely benefited by having the roots of that genealogy restored and made available to us.

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