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Submissions

The *SFRA Review* encourages submissions of reviews, review essays that cover several related texts, interviews, and feature articles. Submission guidelines are available at <http://www.sfra.org/> or by inquiry to the appropriate editor. All submitters must be current SFRA members. Contact the Editors for other submissions or for correspondence.

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EDITORS' MESSAGE

Being Human

Chris Pak

AS I WRITE, the UK's National Festival of the Humanities, *Being Human*, is poised for its 2016 launch at the end of this week. This event is funded by the UK's Arts and Humanities Research Council and the British Academy, with support from the Wellcome Trust. Over forty institutions across the UK receive funding to host events over the eleven days of the annual festival. Having curated an exhibition for *Being Human* at the University of Liverpool, it strikes me as encouraging that the only national festival of the humanities in the UK would choose as its theme a topic that is no stranger to those familiar with science fiction.

I cannot help but look forward to SFRA 2016. Delving into the Science Fiction Foundation Collection at the University of Liverpool's Special Collections and Archives for suitable exhibition material has allowed me the chance to think again about the place of science fiction in academia, and about what our role as scholars of science fiction means to the wider public. I am reminded of the successful 2011 British Library exhibition, *Out of this World: Science Fiction But Not As You Know It*, which was curated by one of next year's keynote speakers, Andy Sawyer. These events speak favourably of science fiction's potential to connect with a wider public audience, and for science fiction as a powerful mode to think through philosophical, social and political questions about what it means to be human - a question that evidently resonates in the UK amongst scholars of a diverse range of disciplines and with public audiences.

This activity and the presence of the Science Fiction Foundation archive in Liverpool makes the UK an ideal location for SFRA 2016. The SFRA 2016 website will be available any day now at the address www.liv.ac.uk/sci-fi-2016, and its appearance will be announced on the SFRA-listserv. In the meantime, I would like to draw your attention to the call for papers for SFRA 2016, on [p. 46](#) of this issue. I do hope to see you there!

For this issue of the *Review*, I had the pleasure of

interviewing writer Elizabeth Knox at Liverpool Waterstones One in June of this year, and I have produced a transcript of our discussion. We also have an excellent Feature 101 article, "Ecology 101," written by Gerry Canavan. Finally, we have our regular series of non-fiction, fiction and media reviews. Enjoy!

PRESIDENT'S MESSAGE

International SFRA

Craig Jacobsen

A FEW YEARS AGO, an earlier incarnation of the SFRA Executive Committee reaffirmed the association's commitment to its international character and articulated its hope that the annual conference would be held outside of the United States once every three years. I think that it is important that we remind ourselves of this goal and its significance occasionally. It isn't something that we can ensure will happen. We rely on the ability and willingness of a member, or sometimes a few, to coordinate each year's conference. Often work begins a year and a half before the conference begins. Coordinators have to scout venues, secure affordable lodging, seek institutional sponsorship, and rough out a budget well in advance. It's complicated and demanding, and sometimes things don't work out for one reason or another. That makes it difficult for us to say that we will meet outside of the US every three years. But we can say that in 2016 we will convene again outside of the US, and outside of North America, in Liverpool, England.

This pleases me immensely, and not because it keeps us within spitting distance of our one-in-three goal at an admirable one-in-four (Lublin, Poland in 2011), but because it reaffirms in deed that commitment to our international membership that was the genesis for the goal. The SFRA has an increasingly global membership, with particularly strong representation from the UK, and many others who will find the journey to SFRA 2016 shorter and less expensive than it has been in a few years. Simple fairness would argue that we not always meet on the western side of the Atlantic/eastern side of the Pacific/northern side of the equator.

Beyond simple fairness, though, is the simple fact

that science fiction is international. The study of it is international. SFRA must be international as well, beyond simply the addresses on our membership list. Every annual conference takes on some of the character of its host location, through both the inevitable experience of place and the conscious programming of the conference coordinator. SFRA 2016 will not simply be SFRA in Liverpool, it will be the SFRA of Liverpool, and all of us fortunate enough to attend will carry that experience away with us.

But only if we go. The sad truth is that, historically, the conferences held outside of the US have had the lowest attendance. That's understandable. For North American members, time and money commitments increase, and institutional support, for those lucky enough to receive some, might be more limited. Those are, often, challenges that can be overcome with enough lead time and planning. Just think of the people you met in Detroit, or Atlanta, or Phoenix who came all of the way from Australia, or Brazil, or Israel. The people who made you think "Wow, that's a long way to come." They planned, they saved, and they contributed enormously to the experience for the rest of us. Let's see some SFRA reciprocity. Start planning right now. Start saving now. Get your proposal ready, and I'll see you in Liverpool.

VICE-PRESIDENT'S MESSAGE

"Get Your Ass to Mars"

Keren Omry

THIS IS THE MESSAGE Arnie tells us urgently, in 1990's *Total Recall*. More recently, none other than Buzz Aldrin urged the same journey, and indeed, reading the newspapers these days, getting the hell out of here seems like good advice more often than not. A long time promoter of the extended space program, the famed astronaut urges the development of a 'master plan' to colonize Mars before 2040. While this 'master plan' is yet a ways away from fruition, the idea of carving out a space for travellers, for refugees, to rest temporarily or to build a new life seems more timely than ever before. As Europe stumbles on the pragmatics and the morals of providing homes for the displaced, as the United States fumbles among presidential candidates and university

campuses seem to have replaced the shooting range, as the Middle East erupts in bursts of religious and ideological dogma, the world of Science Fiction has in recent months given us a number of chances to reflect on these crises from a safe distance. Kim Stanley Robinson's ground-breaking take on the trope of the generation ship, together with films like *The Martian* or the trailer for the new *Star Wars* film, and topped by the thrilling announcement that scientists may have discovered an 'Alien Superstructure,' all point to the renewed interest in what's *out there*.

In the meantime, here on earth, the eagerly awaited Museum of Science Fiction, what the founders claim will be the world's first comprehensive SF museum, has just announced that they will begin issuing an academic journal on science fiction, which is great news for the writers and readers among the SFRA. I'll take this opportunity to give a heads up to our SFRA community about a 'Support a New Scholar' funding program that we're working on in the EC and will have details published for you soon. Finally, I hope you're all starting to think about our next SFRA conference at the University of Liverpool in June 2016. I look forward to seeing there, on Mars, or elsewhere!

SFRA Business

SFRA Business

Ciència i Ficció: L'Exploració Creativa dels Móns Reals i Irrerals, Barcelona 2-5 September 2015

Sara Martín Alegre¹

The SCCFF (*Societat Catalana de Ciència-Ficció i Fantasia*, <http://www.sccff.cat/>) is an association founded in 1997, as a spin-off of the Catalan writers' society. As an association established by writers it is, then, quite different from fandom-based organizations such as the *Asociación Española de Fantasía, Ciencia Ficción y Terror* (<http://www.aefcft.com/>), responsible for the annual HispaCon. This Autumn

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the SCCFF is heading towards a deep renovation which will make it the central hub of communication connected with the genres it promotes all over the Catalan-speaking area (including Catalonia, the Valencian Community and the Balearic Islands in Eastern Spain, and the South-east of France). The intention is to remain a meeting point for writers, publishers, academics and, secondarily, fans while making its public presence more prominent in its area of influence so as to alter the still prejudiced public perception of fantasy and SF.

The international conference reviewed here, '*Ciència i ficció: L'exploració creativa dels mons reals i dels irreal's*' ('Science and Fiction: The Creative Exploration of Real and Unreal Worlds'), was co-organized by the SCCFF and the *Societat Catalana d'Història de la Ciència*, a branch of the main official research organization for Catalan culture, the *Institut d'Estudis Catalans*. The conference, organized by a team headed by science historian Pasqual Bernat and writer/editor Antoni Munné-Jordà, ran from 2-5 September and was held in the beautiful headquarters of the IEC, right in the medieval heart of cosmopolitan Barcelona. Those of us who had the fortune to join the guided visit to the *Biblioteca de Catalunya* (the national Catalan library) enjoyed true time travel, going back to the 14th century when the building was one of biggest hospitals in Europe. Apart from enjoying spaces off-limit to regular library users, we were invited to admire—in the room entirely devoted to Cervantes—the library's collection of Isaac Asimov novels.

The conference, small and lively, was quite eclectic and, as such, truly inspirational. Its modest aim was analyzing how science and fiction connect and placing this connection within the context of Catalan academia, yet the international nature of the event opened up the debate well beyond national limits. The conference gathered together about 45 participants, with 30 papers submitted, a little above half of them by scholars based in Catalonia, and half by scholars based in other areas of Spain or internationally (there were visitors from Cork, Nice, Paris, Houston among other cities). The linguistic factor was at points difficult to navigate without the aid of automatic translation (or Babel fish!) since Catalan, the most frequently used language, and Spanish are more or less mutually intelligible but simply opaque to visitors who spoke neither. We all managed, however, to communicate using English, as is usual in

these cases, turning the frequent need for improvised translation into a good occasion to meet other delegates.

Two of the three plenary lectures are already available online (<https://cienciaificcio.wordpress.com/imatges/>), with the third one to be shortly available as well. The inaugural lecture, titled "*Lletres i tecnociència*", offered by Laura Borràs, the current president of the *Institució de les Lletres Catalanes* and a well-known specialist in the study of hypertexts, offered an impression of how technological advances affect writing, hence also the possibility of generating creative alternatives to plain print. Carme Torras, a distinguished researcher who carries out her work on robotics at the *Universitat Politècnica de Catalunya*, offered a lecture on the convergence of SF and current robotics, offering as well an overview of her own work, applied mainly to nursing robots intended to help elderly and disabled persons. The French writer, editor, scholar and collector, Jean-Pierre Laigle—whose amazing collection of SF-related phone cards was displayed as one of the three exhibitions attached to the conference—offered the closing lecture, "*La vie dans la haute atmosphère selon la science fiction*", at the charming library of the Museum Víctor Balaguer of *Vilanova i la Geltrú* (about 50 kms. south of Barcelona). He dealt with the quite overlooked subject of how, coinciding with the advances in aviation from the 1910s onwards, a series of fantasy and SF works speculated with the possible existence of aerial creatures, and even whole lands, to be found in the upper reaches of the atmosphere, occupying the blue heavens traditionally assigned by Christianity to God, his angels and the saintly ones. The Museum, by the way, accompanied Laigle's talk with an exhibition of the many SF and fantasy books it houses.

I believe it is safe to claim that the papers were divided into two quite different areas (or methodologies). The scholars with a background in the Humanities leaned towards examining science in the work of particular writers or in particular works by well-known SF and fantasy writers. In contrast, those inclined towards the sciences tended to review lists of novels and films paying attention to how they communicate with actual science and technology. A third hybrid category dealt more generally with state-of-the-art technoscience, with transhumanism becoming quite a bone of contention among the participants. The writers discussed were of quite a wide

range: Victor Hugo, Alexander Bogdanov, Edgar Rice Burroughs, Whitley Strieber, Frederick Pohl, Richard Morgan, Paolo Bacigalupi, Ray Loriga and, of course, local hero Manuel de Pedrolo, the subject of the third exhibition accompanying the conference (a display of his SF and fantasy books). Films and TV series with technoscientific connections also featured in many papers, from Kubrick's *oeuvre* to Chris Marker's classic *La Jetée* passing through *District 9* and *Breaking Bad*. Delegates will certainly remember (perhaps forever) Manuel Moreno and Joan Miró's paper criticizing the wildly inaccurate representation of sun and moon eclipses in fiction and film. Among the topics discussed in the 'hybrid' papers I'll mention the treatment in fiction of organ transplants, architectural dystopia, ecology, hypnosis and hibernation.

Since it is impossible to summarize all the panels, allow me to refer to the two that, in my view, generated much food for thought among the audience. The panel dealing with post-humanism and transhumanism included three very different papers, even linguistically: the paper in Catalan by Sergi Montegudo and David Castejón presented a certainly enthusiastic view of transhumanism, eulogizing advances that other specialists have found terrifying. The second paper, by Rocío Vanesa Ramírez and in Spanish, dealt with the possibility that artificial intelligence develops self-awareness from a far more cautious philosophical position. The third paper, by Saba Razvi, offered a reading in English of the controversial biopolitical issues that Paolo Bacigalupi raises in his biopunk novel *The Windup Girl*. The panel chair, Carme Torras, found herself explaining to the participants, who did not understand each other, how very different their papers were but at the same time how representative of the world-wide positions around this debate—which the audience joined in eagerly.

The other panel I wish to highlight dealt with how SF is used to teach science; it also connected with the paper by professor Joandomènec Ros, who has been teaching ecology in the Universitat de Barcelona for decades with the support of SF fiction. Antoni Hernández-Fernández, a secondary school teacher and an associate teacher at the *Universitat Politècnica de Catalunya*, based his presentation on the excellent materials he has helped to develop in order to teach science and technology using SF cinema to young students in Spain. The handbooks were not only exciting but were also oriented to producing ac-

tual science, which is a refreshing change from past times. Eric Picholle spoke on behalf of other French colleagues based in the Université de Nice Sophia-Antipolis about what they have wittily called 'the Nice way' to generate an interdisciplinary approach to SF studies in higher education.

Personally, the main lesson I took home and, arguably, the keynote of the conference is the realization that whereas from the perspective of science and technology the battle to teach SF in universities is (or seems) won – and I refer here to Spain and France mainly. This is not at all the case in the Humanities. It is easier, in short, for a Catalan scientist to include SF in his classes to illustrate his or her teaching than for a specialist in Catalan Literature to teach a course on Catalan SF (replace Catalan with Spanish or French and the problem remains the same). As an English Studies specialist, I made the point that in any case the SF taught by Catalan, Spanish or French scientists in their university courses is not local but mostly Anglophone (and in translation). The cultural and literary nuances are bypassed but, then, Anglophone SF is so overwhelmingly dominant and popular that few science teachers would think of replacing it with their local variety. This remains, thus, relatively unknown even in its own territory.

I cannot think of a better compliment to the organizers than this: the conference not only served its purpose but opened new ways of thinking about how science and fiction connect beyond Anglophone territories. Wonderful food for thought.

An Interview with Elizabeth Knox

Interviewed by Chris Pak

ELIZABETH KNOX is a highly regarded author from New Zealand whose young adult and adult fiction blends fantasy, horror and sf. Knox was awarded the New Zealand Order of Merit (ONZM) in 2002 for her services to literature and the 2000 Arts Foundation of New Zealand Laureate Award. In 1999, her novel *The Vintner's Luck* (1998) won the Deutz Medal for Fiction, the Reader's Choice Award and the Booksellers' Choice Award, and was long-listed for the Orange Prize for Fiction. Her YA duology *Dreamhunter* (2005) and *Dreamquake* (2007) were also extremely well-received, garnering three awards between them. Knox has written sixteen novels and a collection of essays titled *The Love School* (2008). More information and links to reviews and articles can be found on her website, <http://www.elizabeth-knox.com/>.

On the 2nd June 2015, I interviewed Elizabeth Knox at a Waterstones Liverpool One event to mark the UK release of her novel, *Wake* (2013). What follows is an edited transcript of that interview.

CP: The reading that you just gave us talks about trauma brought about by loss. The book [*Wake*] begins with a very different type of trauma, a very immediate, physical kind. The whole book does appear to be very much centred on this idea of trauma and with dealing with trauma, and how you find a way to get over it. Is that what you set out to try to do with this book?

EK: I started writing not knowing that I was writing this book, a novel, anything in particular. But what was happening in my life at the time was a catalogue of disaster that unfolded over about three years, with one year at the centre of it where everything happened, really, and the rest of the time around that year was just dealing with what happened. During that year my older sister had a psychotic break and I had to section 8 her. The novel's observations about the difference between the insanity that over-

takes the town and real insanity are based on my sister. Also my mother was diagnosed with motor neurone disease, a fatal, progressive disease, and my husband's younger brother was killed by a man who later went to prison for it. And Duncan was killed leaving behind four children between the ages of seven and twelve.

So these things all happened and basically I think I was writing about that - or how that made me feel. I was writing journal notes, too. I'm a sporadic journal keeper, so I wrote things down, but I started writing this horror novel because of this darkness that was inside me. Then I quickly realised that there were things that I could do with it in terms of writing about disaster, but not a *real* disaster. Because I think what happens with the what I, and other people, call 'crisis fiction' - where you have a book that's about the holocaust, or the massacres in Rwanda, or a school shooting - about real, historical incidents, but not written by participants or a immediate relative, is that the dignity of the real horrific event is imported into the fiction.

I wanted to avoid importing dignity. But I did want to write about how people survive a crisis and behave themselves. Do what people often do. I really don't believe in the whole dystopian notion, that when something terrible happens everyone starts tearing each other apart. Actually, usually, they start trying to help each other, and they do their best. So I wanted to capture that, and I wanted to explore the idea of different kinds of perils.

The book starts with a physical peril and moves on to psychological peril where people think they're going to lose their minds. You know, because they are trapped with an invisible monster that is picking away at the loose threads of their characters, so they do suffer somewhat, the survivors. And when they get to the end, when they really don't think they've got any hope, there comes what I call moral peril, where all you're left with is trying not to fail yourself or the people you care for. And I wanted to try to use horror to get that arc of things, but at the same time to provide all the usual thrills, of suspense and fear and creepiness. I wasn't going to cheat. I wasn't going to fail to do the real thing because I'm a horror reader, so it's not like I thought, "Oh, horror, I'll use this" and then started researching horror. I've been reading horror forever.

CP: And you can really tell that you've been read-

ing both horror and science fiction as well, because the whole book is flush with allusions to various works of science fiction and horror.

EK: And video games.

CP: and video games, yes. We'll definitely get to that - I'm very interested in that. And there's a lot to pick out from what you've said. I'll start with this therapeutic aspect, this kind of displacement. You mentioned books about horrific events, the holocaust for example, are almost too immediate and they import some sort of dignity. So do you find the use of horror a good way to approach trauma that isn't necessarily attached to a whole history that has this baggage?

EK: Yes. Well, the thing is, it makes you work harder, because you - people, readers - haven't already made up your mind about the events. If the writer gives them completely made up events, then they're actually letting readers exercise their judgement about how the people are behaving, rather than going "Oh, this person's on this side and believes these things, and that person's on that side, etc." So yes, that's what I was trying avoid. But specifically I was interested in this group of survivors being mostly comprised of ordinary New Zealanders from a whole age range. So the youngest person is fifteen, Oscar, and the oldest one's in her eighties, Kate. And most of them are strangers to each other and they're a various bunch - like there's a truck driver - he's a working class guy, and there's a documentary filmmaker who's an intellectual. It wasn't that I was being representative. They're all probable New Zealanders, and the way they operate is probable. And there's an American thrown in, who's the most equipped to actually deal with everything, not because he's an American but because he's already suffering from post-traumatic stress disorder [laughs], so for him it's one trauma on top of another [laughs]. Yes.

CP: And his way of dealing with that trauma and a lot of the characters' way of dealing with the horror of the events is to rationalise it in various ways, and he actually provides some very interesting explanations for the events that happen. He offers ergot poisoning, for example, as one explanation.

EK: Yes. Ergot poisoning.

CP: Yes. Some of the other characters, Oscar for example, the boy who's very interested in games, does something very interesting with rationalisation. He plays a lot of console games as a teenager and he begins to react as if he is in a simulation, and that paradoxically allows him to deal with trauma a little better. I wonder -

EK: He's got a more flexible mind than the adults, but he's also got this thing where he goes, "I'm going to deal with these strange things as they're happening and try to work out how they work." He doesn't keep working on his expectations. He gets that from playing games.

CP: So was Oscar there to point to all the expectations that an event like this might bring with it, as a horror event?

EK: I think it was partly that, but it was also - look, well obviously this book was written by someone who's read Dean Koontz and Stephen King. And Stephen King and I had read the same Dean Koontz book. *Under the Dome*: King got his inspiration partly from *Phantoms*, and so did I. King happened to finish and publish his before I did, and I was like "Oh! [laughs] Oh nevermind." We're both playing off *Phantoms* [EK: Also, King says he was inspired by the dome over Springfield in *The Simpsons* movie]. Anyway, there's a great character in King's *The Langoliers*, a novelist who is so used to generating plots that he's very good at working out what's happening. It could be this, it could be that. The novelist does thought experiments. I think Oscar's my version of that, the one who's doing the thought experiments. But he also started off as a loving portrait of my then fifteen year old son, who's a gamer. Very tall, too. Gawky, tall, great big feet.

CP: [laughs].

EK: Throws them down all over the place willy-nilly. But yes.

CP: Okay. So I'm really interested in that because the plot of the story plays with your expectations. It opens with the horror aspect, the insanity, the quite gory attacks, and after that unfolds at a

right angle and goes off in a different direction.

EK: Yes, it's a desert island story, practically. I've always loved the pleasure of "working out how to do things with limited resources" story. Which turns up in all kinds of books. You get that as a theme. So these survivors, in effect they're in a kind of desert island, which is a small New Zealand town full of corpses, and they've got to figure out [how to deal with that] for sanitary reasons. And also because Teresa, the cop, is absolutely convinced that they can be seen by everyone outside through satellite technology and she wants to convince the people out there to do everything they can to rescue them, because they can see that they're not the perpetrators, that they're good people burying the dead. So she's sort of doing this mental exercise, this public relations, as a way of maintaining her identity as the forces of law and order.

So yes, the survivors face challenges, like how do you do mass burials when you've got very little flat land? You know, what's the protocol? So it starts from there – who does the burying. And because one of the characters is Maori he has some strong rules about the fact that anyone who's handling corpses can't be cooking food. So some people have become cooks. Others are the burial detail. So it was all this lovely problem solving that I wanted to do.

And then I wanted slowly to turn horror to suspense, when it becomes clear the survivors are still in danger. That there's something there. There's something getting at them, and there's this mysterious man who's the only one who won't join them, who keeps running away from them. Who is he and what's his story? And then it bends into science fiction because he is literally a Man in Black.

CP: And that mysterious character, he appears quite early in the book actually, so he's always in the back of your mind, he's always there, much like Sam's alter ego is there in the back of your mind all the time.

EK: Yes.

CP: As you said he's a man all in black, and his blackness is very much emphasised, I was curious because I don't know much about racial and social aspects in New Zealand. Why did you make him black?

EK: Yes, well, it's partly that I was just tickled by the black Man in Black. But it was also because New Zealand is full of Asians, Pacific Islanders and so on, and then just a few refugees from various other places. It has a very small African population, so Myr's appearance is partly an excuse for the characters to keep telling themselves, 'He's not joining us because he's so different than we are, he doesn't understand us.' The fact that he's [got] very dark skin gives them that little hesitation before they begin really looking at him and wondering about his reticence, and what his story might be.

CP: Well I was quite interested in that bringing together of the mystery of his position, and also the social positioning that might have. And as you mentioned this book is about isolation as well, it's almost like an experiment with fourteen individuals, but there's also a reference to the island itself, New Zealand as isolated and being the subject of traumas such as the one depicted in the book. I was wondering about the relationship, then, between New Zealand as an isolated place, and this small town as a reflection of that.

EK: Well there's a whole lot of things going on. I mean the fact that they sort of do go into the old "number eight wire" technology. That they're so determined to be able to run their lives, and that they've got funny little complaints about it. That kiwi "number eight wire" thing, that you can fix stuff for yourself, which comes from having very few resources going back several generations, so that you had to re-use and adapt and make do. If you pulled down a house you had to re-use the nails, because otherwise you'd be waiting three months for a ship to arrive with nails. So [laughs] the survivors have got that going on.

But also I was dealing with islands within islands within islands. So there's the Stanislaw's Reserve, which is the fenced wildlife reserve, with a predator-proof fence. And then the people trapped inside the wall of inertia which, if you go into it, makes you pass out and eventually stop breathing. And then the survivors keep trying to imagine what would be happening outside the No-Go. If there was such an extraordinary event, a global threat like this strange alien thing happening, in New Zealand, what would it mean for the management of the thing. Wouldn't it be taken away from New Zealanders?

And in fact you do know that there are Australian helicopters out there and American satellites that have been moved into different orbits so that they can fly over the top of Kahukura. So my idea was that New Zealand wouldn't be able to run its own disaster – that kind of disaster, the scary unknown threatening event. Which is true. That is how it would play out.

CP: Ah right. A vulnerable position?

EK: Well not really. It's just, you know, our army's like, well, they crawl around in the tussock.

CP: [laughs].

EK: [laughs]. No, I'm kind of insulting them, but yes. [laughter]

EK: Small scale. [laughs].

CP: Well. The satellites: as you already mentioned Teresa's convinced that they're watching to provide this external evaluation, where –

EK: The satellites are standing in for God.

CP: Yes. And I was curious as well because the narrator who opens the book talks about the survivors, so there's this sense that we have the story after the events have already happened, we know that there are survivors, so it's almost as if that external evaluative role is always there, and the reader is being –

EK: Survivors of the initial event. With the Wake the story might be post-mortem. And it was a book that needed the possibility of an occasional narrative voice, mostly because there were a couple of sentences in that voice I couldn't let go, because of their beauty. I thought, "dammit! I need that narrative voice, something above the usual third person."

CP: Well, that kind of strategy really did make it feel, as you said elsewhere, that it was a moral tale, that it had a very strong moral aspect and that it's asking the reader to kind of also fill that –

EK: But an undecided moral aspect, you know? Like

it's an experiment. Because all the characters behave differently. Everyone succeeds or fails to different degrees with their duty of care and some of them are very, very strong and make the wrong decision about important things. Like the old woman, Kate, who is one of the strongest people, but who has decided to be strong about the wrong things. So the novel is saying strength isn't in itself a good thing. Which is something I was learning from going through all those experiences that I was going through at the time. I was learning a lot about looking after people, and I was learning a lot about, you know, being strong and it's not always a good thing.

CP: That does remind me of the way you've kind of portrayed Sam with the kind of confident persona that she has and the less capable one. But the less capable one appears to have some strength that comes out towards the latter part of the book? So was that play part of your strategy for tackling this point?

EK: No, I wasn't really over-determining Sam; the Sams. Gentle Sam isn't stoical and compassionate because she's limited. She's stoical and compassionate because she's a care-giver of old people and she's spent a lot of time learning from them. Learning to care for them, and also from them. So I think it's what she's picked up, whereas other Sam is full of rage and rejection of everything really [laughs].

CP: Yes. Well, I was fascinated by the play between those two characters. She's the only one who is within the settlement when the book's started?

EK: Yes.

CP: So she's also a bit of an outsider, much like the mysterious black character –

EK: Well yes, she's a mystery. I mean she's the exception: they say everybody who went mad died, except Sam. We know this. Sam went mad and we know she didn't die - it throws the other characters off the whole time because they've got an exception. But they don't keep thinking, "why is she an exception?" because they can't get their head around why she might be.

CP: Yes.

EK: That's the science fiction. The novel makes an insidious move into science fiction.

CP: [laughs]. Yes. Well, that move actually, from horror to science fiction, does introduce that community building aspect, and with that comes a lot of social commentary. I've heard this book described as dystopian but I perhaps would disagree with that description.

EK: Yes, it's not. I mean, I do, I think *Dreamhunter* and *Dreamquake* – my YA books – were described very intelligently once as utopian *and* dystopian, and I think almost all my books have got some element of dystopian / utopian, and in fact most of my books have some elements of utopian / dystopian. You know, usually one thing is balanced against another. Usually there's been something bad that's been turned to good or something good that's been turned to bad.

CP: Well in the context of your wider work – *The Vintner's Luck*, for example, about a – it's set in the 1800s, overlapping with the Napoleonic War?

EK: Yes.

CP: And there's the appearance of an angel in the book.

EK: Yes.

CP: He visits –

EK: Yes, he's the main character [laughs].

CP: [laughs]

EK: Yes. Angel. Yes.

CP: Okay. *Mortal Fire* has a lot of – well, it's set in a valley, or a space where magic can be conducted by the people there. So there's a lot of fantasy elements in your previous work, and your young adult work. This one seems much more horror and science fictional.

EK: Yes.

CP: So it does feel like a bit of a departure from

your earlier work.

EK: It's not so much straight fantasy. It is a departure but that doesn't mean I'm giving up fantasy because the book I'm writing at the moment is an arcane thriller / fantasy so, you know...

CP: [laughs] right.

EK: Got to try something different or I just get bored, yes? [laughs].

CP: So when you were writing *Wake*, then, was it a challenge? It's quite obvious that you're well aware of science fiction after reading this book, but was it a challenge to write this, then, compared to the other works?

EK: I often think of science fiction ideas, so it wasn't that it was science fiction. The thing that gave me a hell of a lot of problems was the sort of change from the seventy pages of bloodshed and mayhem at the beginning to how it slowly turns into a suspenseful story about survivors. So it was that complete craziness and then I had to put the brakes on. What I did was keep thinking that change had produced a pacing problem. I chased that gear change up and down a hundred pages, re-writing and re-writing, and then I suddenly realised it was a tonal problem, not pacing, and that I had to make the first bit more frightening and also make it slightly colder? More clinical. But also to introduce a slight sense of absurdity, which gives the reader signals that there's some kind of intelligence behind what happens. Because there's some very horrible things that happen, that are also slightly absurd?

CP: Yes, I think that comes through.

EK: Yes, and it's not just because the author is having a bit of fun. It's because some *thing* is having a bit of fun with its victims.

CP: I definitely sensed that, and I wasn't sure whether that was me reading into it, but I definitely picked up on this very weird sense. And funnily enough, as the book went on, because it was so exaggerated, I kept on looking for explanations, and one of my immediate ones was to think that all the corpses would re-animate.

I kept picking up on little games it seemed like you were playing that might suggest that might happen, but foreclosing it. So I thought that was really effective. And it also makes the shift into the community aspect of the book – towards the middle – very much marked in a way, as well. And unexpected. So were you trying to portray a small community in ways that might be unexpected for readers who've read a lot of this kind of thing?

EK: I wanted the people to be very real, so I didn't throw together stereotypes. I threw together people. And I was aware from the very beginning that I was trying to write a desert island story of a certain sort, because I like desert island stories, and so yes, I was letting all those things play out, the possibilities of that. But I also wanted to keep suspense in there, so that you're never quite sure that the characters are safe. They go off walking at night on their own. Technically speaking, they should know everybody who's there. They know that the corpses are slowly being put into the ground. They know they're not going to get up again, or you could *assume* they're not going to get up again and still there's this feeling, the creepy, haunted feeling. Which there should be because there's an invisible monster there [laughs].

CP: So about the invisible monster. Now, it's an invisible monster. But because it's invisible, and

EK: undetectable in every way.

CP: Yes. And also –

EK: Apart from the way it makes people feel and behave.

CP: Exactly, yes. And because it makes people feel and behave in certain ways, and it's immaterial, it feels like it's everywhere within that space as well. So, what does that monster do? Why is that monster there?

EK: I kind of wanted to make the monster out as a being. It's an alien, an entity. And I didn't want it to be full of malice and just determined to thrive on mayhem and bloodshed and everything. I wanted it to have its ways: the ways in which it behaves and has done things for a long time. But I wanted it to

be educable under the right circumstances. So by the time you get towards the end of the book the monster's character is changing. Which was also my intention. Everybody who is in the story gets changed one way or another, including the invisible monster.

CP: Yes, and I found that fascinating as well, actually. That felt like quite a departure from the genre of horror, although that might reflect my reading [laughs].

EK: [laughs].

CP: But the monster also felt like it was symbolic for – you could detach the literal aspect of it and it could almost be one way in which social dynamics can be –

EK: Well, yes: an invisible monster is always symbolic. So you just go with the built in possibilities. You don't know when you've lost the monster, or you don't know whether you've locked it in with you when you've tried to lock it out. You don't know whether or not it's looking over your shoulder.

I've always loved invisible monster stories of every sort, like the monster from the Id in *Forbidden Planet*. And "The Horla," – is it Guy de Maupassant? Yes, Guy de Maupassant's "The Horla," you know, about the man whose bedside milk starts being drunk, not by him, and then when he's out in his garden he can see rose stems bending, as the Horla follows along after him, sniffing the same rose he did. Basically it just haunts his life. It enjoys what he enjoys.

CP: Perhaps there was an echo of James Herbert's *The Dark*?

EK: Ah, yes, well I read that so long ago it's probably mulched in there. But that's the thing about these things, they haven't made such a big mark on you that you think, "There was that and that." Having been a horror reader for years, then having written the book, I realised I'd created a kind of Lovecraftian monster. But I hadn't read Lovecraft. My early horror reading was Algernon Blackwood, M R James, Robert Chambers - and Shirley Jackson. And my Dad put Richard Matheson into my hands.

CP: Oh, right, okay.

EK: Once I'd finished the book I thought, "Well, I better read some Lovecraft." It was really startling. Because Lovecraft's heirs aren't quite Lovecraft. Lovecraft's got his own weird stuff going on. But I'm very glad I've read him. You sort of need to.

CP: Yes.

EK: What I do, I write genre, but I write literary fiction. I don't *use* genre – and I don't *play* with genre. I actually think what I've always been doing is wholeheartedly writing books that are as literary as I want them to be, as serious as I want them to be, but as genre. There are a few people doing that. When I was very young and I was reading my way through science fiction – the Gollancz science fiction and so forth – the things that really stuck with me were the things that were deep and had this sort of vibration of life in them, like Ray Bradbury or...

CP: Were there any other authors that you might want to cite in this context?

EK: Yes, I'm – well obviously Ursula K. Le Guin. That's kind of obvious. And Ray Bradbury. I have particular books that I passionately love, like Clifford E. Simak's *Time and Again*. George R. Stewart's *Earth Abides*. Early Philip José Farmer. His short stories, "Mother", "Daughter," – the ones about the man who gets swallowed by the giant slug creature so that he can cause it to breed. And Philip K. Dick, you know, and Alfred Bester.

CP: Oh, yes.

EK: All those works remain incredibly exciting.

CP: So for you, science fiction or any genre fiction is not exclusive of any literary quality.

EK: I don't think that of any genre. What I think is that literature appears in any genre. I mean, there are books that are literature, and they can appear anywhere.

CP: So what makes a book literature, then?

EK: Well it lasts, that's it. That's the only measure. You can take bets, you know. When you get a new book that's only just appeared, you can say, "Well that's literature, that will last." Eventually it's your job to help

it last by being enthusiastic about it, because otherwise it doesn't happen. But, yes, that is actually the only thing, literature is what lasts, so the fact that Ursula K. Le Guin has many books that have never been out of print: *The Left Hand of Darkness* and *The Dispossessed* and The Earthsea Books. You can go back through history – of, for example, detective fiction. There's lots of detective books in the world. Crime books. But then there's Raymond Chandler. There's Elmore Leonard. There's the people who are fantastic stylists, like Georgette Heyer in romance. Dorothy Dunnett, Alexander Dumas, Robert Louis Stevenson. Great writers. The people whose characters are real.

CP: Fascinating. I do want to – we've chatted for about thirty minutes now, and I just wanted to give the opportunity for everyone to ask any questions if they had any. So would anyone like to?

AS: I got the feeling that from the way you were describing it that you talk about events in your life, obviously that rather unfortunately influence the writer and I'm sorry for that, but it also struck me that of course New Zealand had something of a traumatic international event that I'm beginning to realise, and it just came to me that this book seems to be quite informed by the experience of New Zealanders seems to have gone into it.

EK: It did, yes. I was already writing the novel when the crisis in Christchurch happened, and I have a lot of relatives in Christchurch. None of them were hurt. Two of them lost their houses permanently. But, you know, I got good first hand stories. Those can give you a sense of the magnitude of the disaster as an experience, let alone anything else. And it's changed the whole country, particularly financially. [laughs]. Oh boy.

Anyway, so yes, the earthquake was there. I did think whether I should acknowledge it. And I kept thinking about, you know, people helping each other when that earthquake happened. And I got to the point where in the book somebody is arguing for the good behaviour of human beings in calamities, and I thought, okay, has Christchurch happened or has it not? Then I thought, no it's too big. I just can't, I had to decide that this is before Christchurch, and so I went back to talk about the Wahine disaster. The Wahine was a ferry that sank in 1968 in Wellington

Harbour with a loss of fifty-two – fifty-two? – people. I remember it. I was a little girl. I remember it really well. And so I went back to that. But Christchurch is still there. Haunting the book.

AS: *It had its own invisible monster as well.*

EK: [laughs]. Yes, it wouldn't go away. It kept growling.

CP: Okay, do we have any other questions?

[anon]: *you mentioned earlier that you were working on an arcane thriller. Can you tell us anything more about that?*

EK: Ah, well it's – [laughs]. Okay. Well, I'm working on an arcane thriller. Why I describe it as an arcane thriller was that I became aware as soon as I started writing it that because it was about a young woman with some strange recent mental problems, like she's losing time, and she's also the author of a book about library fires, and she experienced a library fire in her grandfather's library as a child. Gradually it becomes clear that something is being looked for in the libraries that burn. You know, there's a thing.

When I realised that the book became a thriller, a mystery, then I had this thought: that what annoys me about arcane thrillers is that they sort of dabble with the fantastic, you know, like the whole holy blood, holy grail in *The Da Vinci Code*, of which somebody says in my book would after centuries be only a homeopathic holiness. Basically the holy blood stuff felt like a great let-down. So I like arcane thrillers and I always feel vaguely let down by them. I wanted to write one that slowly opens up into fantasy. And opens with elegance, but deals with craziness. Because I had got over those terrible events that caused me to write *Wake* and *Mortal Fire* (*Mortal Fire*'s the bright twin of *Wake*'s darkness. They're sort of companion books, they're written in the same time, though one's YA and one's adult.)

And then I realised right at the start of the arcane thriller – *The Absolute Book* – that I was managing this sense of the largeness of the world, and myth, and the scope of time, and all the things that you can do with an arcane thriller. And writing it was causing me great excitement and joy. And I was going to throw in mythical beings and gods, and I was just going to go in there, with appetite, with MI-5 and anti-

quarian bookshops, and libraries, and literary festivals. Yes. So I'm having a ball with it. That's really all I can say. [laughs] And it's going to make perfect sense plot wise, no holes. Not one hole.

AS: *How far along with it are you?*

EK: I'm somewhere between a quarter and a third, but I plan to finish it this year, because I really want to make a mad rush at it. I'm enjoying it, you know. When you're really enjoying something you should write it fast. And woe betide anyone who prevents me.

[laughs]

CP: Well I might as well just jump in: I'm right in thinking you're writing a memoir now?

EK: Yes I am. I'm writing about my mother and motor-neurone disease. Partly because I want to write about the care of the elderly and care-givers who are underpaid. You know, that whole thing, I want to write about that. I also wanted to write about my mother because she's a real character. She dealt with losing her ability to talk with great panache and creativity, so that makes a good story. And also I really want to write about Duncan, my brother-in-law being killed. And about his kids. And about the trial of the man who killed him. Because, you know, because the feelings of victims of crime, is kind of interesting to think about. So, it's mostly that. And then it's, you know, just life. I don't want to write a memoir about my life, so the fact that it's just of a period of time that can pull in all sorts of things, but not have to do a whole lot of stuff? Not the full story. Just three years of a life. It's quite attractive as a project. But it's not easy. It's turned out to be a very difficult, not because it's upsetting but because I'm frightened of annoying various in-laws. [laughs].

CP: Yes. You don't get that displacement that speculative fiction gives you.

EK: No personal displacement, yes. So, you know, that's makes the work an exercise in diplomacy and delay.

GM: *Could you tell us a little bit about the genre community in New Zealand? Because we don't see much of*

it up here but I assume that you're not the only writer down there.

EK: No, no, I sort of only tangentially get to be a member. You know, it's a bit weird because I think I'm considered to be a bit more like literary fiction, though I have won a science fiction prize in New Zealand, so I've been kind of embraced and kind of held at arm's length. But perhaps I am being embraced and held at arm's length along with Margaret Mahy, who was only writing children's books – when I say only, I mean she wasn't *trespassing* into adult fantasy, she wrote young adult along with junior fiction and so on.

Margaret is the person who I always feel is my imaginative mother in New Zealand literature. The fact that she was there made it possible for me to – well, made me feel more comfortable doing the things that I wanted to do anyway. So there's some very fine writers, and they do have presence. A lot of them seem to have a presence in America. It's funny. The literary fiction carves off toward England. And good genre goes either to Germany in translation – there's Paul Cleeve. Then Juliet Marillier, Sherryl Jordan, Helen Lowe, Karen Healey, people like that, sort of carve off towards America. My young adult books have much more presence in America than they do in England, too. But there are very, very, good young adult publishers there.

GM: And do you get a lot of noise from the noisy neighbours?

EK: Oh, the noisy neighbours? No, we ignore each other. We've got nothing to teach each other. They're like, "Oh, New Zealanders are incredibly boring," and we're like, "Australians are incredibly annoying," and we don't read each other's fiction, which is terrible. I mean I do, because I'm aware that it's just nuts not to. I read poetry and literary fiction. I love, for instance, Margo Lanagan? I don't know if you know *Black Juice* and so on? She's a great writer. I mean, I think she's a very Australian writer. There are fantastic non-realist Australians. And it's actually a bit of a tradition anyway, because there's old fellows who wrote things that were – could be magic realism. Patrick White's books are not entirely realist. And Randolph Stow. Fantastic writer. A bit rarefied but yes, a great Australian sort-of-non-realist of older times.

CP: I actually noticed there was a lot of magic realism coming out of Australia and I think I somewhat assumed that the speculative fictions and the literary communities overlapped quite strongly and that there wasn't such a division, but that is a mistake, then, is it?

[laughs]

EK: No, I think we're like siblings, you know? We're the annoying little sister or brother or something of this great big swaggering, "We're going to inherit the Earth" Australia.

CP: Are there any other questions?

EK: I just insulted Australia.

CP: Oh well. I think you're safe.

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Ecology 101

Gerry Canavan

[1] THERE HAVE BEEN frequent attempts to draw distinctions between *environmentalism* as an umbrella term for a series of interrelated, usually reform-liberal political movements and *ecology* as an ostensibly neutral field of scientific inquiry concerning the web of relations and interconnections between organisms and their environments.

[1.1] In practice, however, such distinctions have tended to collapse in the face of the overawing ecological crises with which humanity has been confronted in the late twentieth- and early twenty-first centuries. Ecological apprehension of late capitalism in the contemporary moment is far from politically neutral, and tends in a contemporary context to be rather fiercely anticapitalist, in ways that frequently go significantly beyond liberal reformism. (Indeed, the use of “ecology” and “ecological” by humanities scholars on the left to describe their own work has typically denoted a deliberate attempt to *go beyond* “mere” environmentalism, in the name of something more radical.)

[1.2] “The realms of ecology and capitalism are opposed to each other—not in every instance but in their interactions as a whole,” John Bellamy Foster writes in *Ecology Against Capitalism* (7). In an earlier work, *The Vulnerable Planet*, Foster points to the “four laws of ecology” as proposed by Barry Commoner in *The Closing Circle* in 1971, as a means of distilling the ecological worldview into its core elements:

1. Everything is connected to everything else.
 2. Everything must go somewhere.
 3. Nature knows best.
 4. There is no such thing as a “free lunch.”
- (118)

Foster’s proposed “four laws of capital,” in turn, suggests the extent to which ecology and capitalism necessarily find themselves in inevitable and irresolvable conflict:

1. The only lasting connection between things

is the cash nexus;

2. It doesn’t matter where something goes as long as it re-enters the circuit of capital;
3. The self-regulating market knows best;
4. Nature’s bounty is a free gift to the property owner. (120)

In this use of the word “ecology,” it is intended to suggest *as a matter of scientific determination* that no environmentalist reform of capitalism is or could ever be viable, and that a new economic order will be required for genuine sustainability; this proposed social system is what Foster and others call *ecosocialism*, or what Kim Stanley Robinson (borrowing a term from agriculture) has called *permaculture* (see “Comparative Planetology”). In both cases, the proposed alternative system is to be one that does not degrade or undermine the conditions for its own continuation, as both industrial and agricultural systems do under capitalism; as Robinson puts this proposition elsewhere:

Justice becomes a survival technology. [...] Real justice would alleviate the poverty that has desperate people stripping away forests and soil in much of the world, and it would reduce the hyper-consumption of the rich, which is equally or even more destructive of resources and excessive in carbon burn. The only possible road to sustainability’s necessary carbon neutrality involves justice. (Canavan, Klarr, and Vu 213).

[1.3] For this reason, ecological knowledge is often understood to logically entail anticapitalism by making visible what K. William Kapp once called capitalism’s “economy of unpaid costs” (231). “To call for capitalism to pay its way”—to demand, that is, that capitalism take into full account the natural world from which it draws its resources and into which it dumps its by-products and refuse—is “to call for the abolition of capitalism” altogether (Moore 145).

[1.4] However, even this easy equation between ecology and leftist politics must ultimately come under some reevaluation, with regard both to anticapitalist or *anti-Western* political movements that are only superficially or opportunistically “ecological”—or, indeed, fully anti-ecological in their political agenda—as well as recognition of the various ways that the property rights that undergird Western cap-

italism have sometimes led to *greater* conservation and environmental protection than would have been possible in their absence. As will be discussed below, the ecological history of human civilization does not necessarily yield simplistic or unidirectional political conclusions.

[1.5] From this perspective, however, we *can* certainly say that all ecology is in *some* sense political ecology, in terms of its application to real-world situations and cultural institutions; in practice ecology necessarily implies some evaluation of human social relations as either ecologically salutary / sustainable / rational / desirable or else destructive / irrational / unsustainable / undesirable. But neither the right nor the left should be understood to have some total or undisputed claim on the political implications of ecological thought.

[1.6] In what follows I will primarily be discussing ecology as a scientific phenomenon with political, cultural, and literary-aesthetic implications. I hope this piece will serve as a useful companion to similar “101” pieces that have run in this space, perhaps most directly Eric C. Otto’s “Environmentalism 101” (also available in the eBook *SF 101: A Guide to Teaching and Studying Science Fiction*.) While some overlap is unavoidable, I have endeavored to focus here less on political movements and more on ecological science’s use within humanities discourses as a cognitive standpoint that highlights the (at times quite troubled) interconnections between organisms (especially human beings) and their environments, especially as that standpoint manifests within contemporary SF.

[2] The term “ecology” was coined (as *Ökologie*) by Ernst Haeckel in 1866, drawing together the Greek roots for “house” and “study”—the etymological origins thus again suggests the tension between “ecology” as a pure science and “ecology” as a theory of best practices for domestic management, whether that management reflects the unconscious, automatic consequences of evolved animal behaviors or the deliberate intervention of human actors (which, again, are to be evaluated as either adaptive or maladaptive for the various organisms involved).

[2.1] Now another strong internal tension within the idea of ecology becomes visible as well: ecology is at one and the same time the principle of mastery that allows agents in an ecological system to control that system *and* the principle of hard limit that constrains mastery and makes impossible certain levels

and types of growth within systems.

[2.2] As Richard Grove shows in his 1995 *Green Imperialism*, however, it would be incorrect to say that ecology only emerges as a concern this late in history. In fact, many of the intellectual developments we now associate with ecology actually have their origins in European imperialism, as Europeans in settler colonies in the tropics frequently attempted scientific management of and intervention within their environs in the name of creating viable and sustainable colonies. Grove notes that much environmentalist rhetoric has its origins in these kinds of colonized spaces, a noteworthy and unacknowledged case of the “periphery” influencing the “center.” He also traces the importance of the spatial topoi of *the garden* and of *the island* to early ecological thought, as well as the devastation that the imperialists often brought with them to these island through improper management and invasive species, which ultimately came to premeditate a fully *global* devastation that is yet to come but seems to us, today, to be always just around the corner. But Grove also destabilizes the familiar postcolonial narrative of villains and victims by noting that the imperialists were sometimes *more* ecologically “rational” than native groups, and that the legal absolutism of the imperial state often unsettlingly allowed for conservationist policies in the colonial sphere that were possible neither under the precolonial status quo of the Global South nor under the entrenched free markets of Europe.

[2.3] David Mazel’s tour-de-force chapter “American Literary Environmentalism as Domestic Orientalism” in *The Ecocriticism Reader* (1996) similarly demonstrates the difficulty of disentangling the desire for ecology as a neutral ground from the ideological construction of terms like “wilderness” that are always embedded in political and historical assumptions about property rights, utilitarianism, white settlement, gender, and the state. Just as Mazel notes that environmentalism is always both resistance to power and the exercise of it, so too we have already seen it is with ecology, which is always both a tallying of mankind’s crimes against the environment as well as, precisely through that tallying, the blueprint for continued human domination over the planet.

[2.4] As David Harvey has warned the Left in such works as *The Enigma of Capital* (2011) and elsewhere, anticapitalists neglect the “blueprint” component of ecology’s relationship with capitalism to

their peril, as capitalist innovation has repeatedly turned seemingly impenetrable *limits* into mere *boundaries* to be leaped. Perhaps the most emblematic recent case is the discourse around Peak Oil, which for a time in the early 2000s seemed to be an indisputable, silver-bullet argument against capitalist sustainability but which has now utterly vanished as a salient political argument in the face of improved oil sand, oil shale, and deep-sea drilling efficiencies that now seem to promise enough oil to last beyond any of our lifetimes. That these new oil-extraction technologies are themselves *incredibly* ecologically destructive to any lifeforms living nearby has been a relatively small component of the quasi-utilitarian calculus governing their use, not nearly enough to prohibit their development and spread across North America and, increasingly, around the world. Indeed, in many cases an ecological claim has been made on the side of the hydrofrackers, to argue the technology is not only mostly safe but less globally and climatologically harmful than a turn to coal would be.

[3] While ecology was an increasingly important field of scientific inquiry in the early twentieth century, it was the 1962 publication of Rachel Carson's anti-pesticide *Silent Spring* that catapulted ecology to the forefront of public consciousness in the industrial West, as well as launched the environmentalist political movements that would frequently draw on scientific ecological analysis as evidence and as polemic. Carson's text is an exemplary one in many regards, not least of all for its demonstration of the link between ecology (as a means of thinking about the interdependent flows between organisms that sustain life) and *futurity* through her frequent invocations of the bad future that contemporaneous social and agricultural practices were bringing about. "How could intelligent beings," she asks, "seek to control a few unwanted species by a method that contaminated the entire environment and brought the threat of disease and death even to their own kind? Yet this is precisely what we have done" (8-9). Ecology's focus on evolutionary processes, feedback loops, and tipping points necessarily produces a temporality that—especially in our time—suggests the possibility of radically apocalyptic, even extinctive change if ecological cycles become disrupted, distorted, or destabilized. In the late twentieth century an ecological mindset has thus been closely linked to notions of apocalyptic futurity: once-stable (or stable-appearing) systems crashing, collapsing, being thrown out

of whack.

[3.1] This observation returns us to Foster's observations about the inevitable relationship between ecology and anti-capitalism, a relationship that can be traced back to Marx's horror in *Capital*, Vol. 1 at the "metabolic rifts" produced by capitalist industrial and agricultural practices. Marx's analysis of agriculture in *Capital* is an early articulation of the negative ecological futurity that now dominates ecological analysis of the future: "All progress in capitalist agriculture is a progress in the art, not only of robbing the labourer, but of robbing the soil; all progress in increasing the fertility of the soil for a given time is a progress towards ruining the lasting sources of that fertility" (638). As Foster himself shows in *Marx's Ecology*, Marx derived his appreciation of this ecological crisis in the making from the work of Justus von Liebig, whose work in soil ecology led to the development of chemical fertilizers to artificially replenish the soil—a practice of scientific management necessary for the continuation of agriculture at the time but which, in two hundreds of years since, has now contributed to the destabilization of the entire planet's nitrogen cycle. And the nitrogen cycle is only one of any number of ecological stabilities that industrialization and global capital have disrupted, the most famous of which is surely the carbon cycle that is now producing rapid anthropogenic climate change.

[3.2] Traditionally, the environment was been viewed as a potentially hazardous space of danger that was to be transformed, through settlement, into empty, homogenous space for use by human beings—especially in white-settler colonies like the United States that have been so structured by the ideology of the frontier. The rise of ecology as a scientific category inverts this ideological formulation: now the environment is not cultivated and made useful by settlement, but is rather destroyed by its settlement. Rather than a threat that must be tamed by being brought into the flows of human commerce, the environment is primarily seen today as that which is threatened by capital, in need of whatever partial or fitful protection is possible from it.

[3.3] At the same time, ecology is understood to represent a final limit point past which technocapitalist modernity cannot transcend: it is the thing to which capitalism is ultimately and finally subject. Thus, ecology represents a key figuration in our theorization of capital at all stages: the beginning of

capital (in the primitive accumulation of early settlement or frontier life), the middle stage of capital (in the conflict between expansion and conservation), and the end stage of capitalism (as mounting ecological pressures force the system to either significantly reform or else finally collapse).

[4] As much of the examples thus far discussed have suggested, ecology as a discourse (especially in the hands of nonexperts, like ecocritics in the humanities) can be rhetorically hard to disentangle from closely held Romantic and frequently quite moralistic assumptions about the beauty of nature, and about the supremacy of the natural world over either human artifice or social institutions. Nature is taken to be the ultimate source of value—almost a replacement for God—as well as the guarantor of sustainability and stability. Nature is posed as a place of harmony, unity, and balance that human beings degrade, disrupt, and ruin—in almost theological terms. Human beings oppose nature, the suggestion would consequently be, to their great peril; nature is thereby ideologically posed both as what is threatened by mankind but also what will soon rise up and punish a mankind who has failed to heed its warnings.

[4.1] James Hansen's famous "Gaia hypothesis" sees this sort of poetic valorization raised to the level of scientific proposition, wherein the entire planet itself is refashioned as a kind of homeostatic, self-regulating superorganism currently fighting off a very bad cancer (humanity). The radical political movement often called *deep ecology* suggests a revision of our social and technological behaviors so as to minimize any and all deviation from that natural harmony, at times teetering on the edge of out-and-out misanthropy.

[4.2] As Dana Philips argues in *The Truth of Ecology* (2003), these formulations are often predicated on a transcendent vision of the Earth as a unified totality that is actually significantly out of sync with the last fifty to a hundred years of practiced ecological science. In fact, our attraction to such values as harmony and balance (and our desire to use them as weapons in a political fight) bears little or no relationship to actual ecologies on this planet, which are far less stable, self-regulating, or well-ordered than the typical "bumper sticker" use of environmental metaphors in politics and culture would seem to allow; in fact ecological niches (a term itself that misleadingly suggests a relationship of "perfected fit-

tedness" between organism and environment that cannot really be supported by how actual ecologies work) are highly unstable, and prone to rapid change and catastrophic collapse.

[4.3] A similar intellectual moment has been underway in a recent strain of ecocriticism frequently called "dark ecology," which rejects literary ecocriticism's fondness for harmony and unity in favor of the strange, the ugly, the ironic, and the grotesque. The figure most closely associated with this movement is Timothy Morton, whose work since his influential *Ecology without Nature* (2007) has been devoted to articulating a vision of ecology that is distinct from the old, no-longer-workable notion of "Nature" as an immanent and stable totality. This ecology is multiple, unknowable, never fully traceable in human terms—more at home with squids and cave lichen than with the attractive charismatic megafauna we typically associate with environmentalist conservation and preservation movements. This formulation at times almost seems to put ecology someplace beyond politics altogether, somewhere in the realm of Goth, punk-rock, or emo aesthetics instead.

[4.4] When this line of philosophical speculation returns, in the end, to the realm of the political, as it does in Morton's later *Hyperobjects* (2013), it is ecology in the mode of radical unknowability rather than scientific certainty—structures (like the climate, or capitalism) so "massively distributed in time and space relative to humans" that we are barely able to cognize them at all. In Steven Shaviro's own appropriation of the term, SF actually becomes one of the best tools available for attempting to partially, incompletely think such hyperobjects: a "psycho-socio-technological cartography" that "traces our place alongside, and within, these hyperobjects that threaten to overwhelm us" (4).

[5] Still, the major uses of ecology in SF have reflected a more down-to-earth sense of futurity that is both more reductionistic and more concretely political, and traditionally both apocalyptic and anticapitalist. The major texts in the eco-apocalyptic genre—ranging from a complex, polyvocal work like John Brunner's wonderfully horrifying novel *The Sheep Look Up* (1972), modeled on John Dos Passos's USA Trilogy, or Margaret Atwood's *Oryx and Crake* series (2003-2013) and Paolo Bacigalupi's *The Wind-Up Girl* (2009) and *The Water Knife* (2015) to pulpy big-screen thrillers like *Silent Running* (1972), *Soylent Green* (1973), *The Day after Tomorrow*

row (2004) and *Snowpiercer* (2013)—have tended to understand the ecological in almost exclusively negative terms. Drawing freely from the tropes of post-nuclear and post-plague scenarios now almost two centuries old—see Mary Shelley’s *The Last Man*, from 1826—apocalyptic ecological critique is now so familiarized and habitual that nearly all contemporary science fiction falls under its general aegis, including such radically non-ecological narratives as *The Walking Dead* (comic 2003-, TV 2010-) and *World War Z* (book 2006, film 2013), which are typically read in ecological terms (epidemic; invasive species; the symbiotic relationship between predator and prey; the view from human extinction and “the world without us”), even though the zombic “ecologies” they posit are purely fantastic.

[5.1] Undoubtedly this sense of the ecological as inherently or inimically negative has something to do with the larger history of science fiction, which in its more optimistic flavors (especially in its Golden Age) has itself been a largely anti-ecological genre, imaging fantastic technological devices like zero-point-energy engines, replicators, and perfect-efficiency recycling machines precisely in order to “get around” the constraints that the ecological poses. This *Star Trek*—or perhaps, more directly, *Jetsons*—future encounters the ecological as an unwelcome interruption of what is attractive about futurological fantasy in the first place—as in the seventh-season *Star Trek: The Next Generation* episode “Force of Nature” (1993), where the crew discovers that the warp drive on which the entire Federation (and the interior narrative logic of the entire franchise) depends is actually tearing apart the very fabric of space. (The solution is the imposition of a Warp-Five speed limit in the name of spacetime preservation which is, itself, hastily abandoned by the time *Star Trek: Voyager* premieres just a few years later.) This need to deploy some “ecological cheat” to get around the unhappy facts that would otherwise taint the fantasy become especially necessary in the case of extraplanetary colonization, to be discussed below.

[5.2] The sense that ecology might “ruin the future” was, interestingly, also the mood with which environmental propositions were originally received by many leftist political movements during the moment of their earliest articulation in the political mainstream in the 1960s and 1970s. Despite my above remarks about the seemingly natural affinity between ecology and anti-capitalism, in fact

the application of limit (especially environmental limit) to socialist and leftist critique was quite delayed. As Donald Sassoon notes in *One Hundred Years of Socialism*, the early Greens were generally conservative, and that rhetoric around limits and “zero growth economics” appeared very reactionary at the time of the 1973-1974 oil shock, when the collapse of growth rates meant widespread unemployment and suffering especially in traditional left constituencies like industrial workers. Sassoon notes that the 22nd congress of the PCF “explicitly rejected” the idea of zero growth economics, as it was seen as “preparing for a future of penury and restrictions”; its president, George Marchais, said that “growth is necessary to meet the requirements of social and national progress” (qtd. in Sassoon 676)—suggesting again that an optimistic, progressive futurology and ecological reasoning are somehow fundamentally incompatible.

[5.3] Indeed, as Hans Magnus Enzensberger suggests in his 1974 “Critique of Political Ecology,” there is a sense in which ecological thinking has tended to be specifically repurposed, or misappropriated, for the purposes of conservatism and reaction (as in many ecological readings of J.R.R. Tolkien’s legendarium); as Enzensberger writes, “The bourgeoisie can conceive of its own imminent collapse only as the end of the world. In so far as it sees any salvation at all, it sees it only in the past” (17). Enzensberger juxtaposes the neo-Malthusian arguments of people like Paul Ehrlich in *The Population Bomb* (1968) with the anti-limit, optimistic futurology of Fidel Castro:

In certain countries they are saying that only birth control provides a solution to the problem. Only capitalists, the exploiters, can speak like that; for no one who is conscious of what man can achieve with the help of technology and science will wish to set a limit to the number of human beings who can live on the earth . . . That is the deep conviction of all revolutionaries. What characterized Malthus in his time and the neo-Malthusians in our time is their pessimism, their lack of trust in the future destiny of man. That alone is the reason why revolutionaries can never be Malthusians. *We shall never be too numerous* however many of us there are, if only we all together place our efforts and our intelligence at the service of mankind, a mankind

which will be freed from the exploitation of man by man.

survive the trip without civil war, famine, and reigns of terror?

[5.4] Reactionary fear of overpopulation, ecological devastation, and competition over energy sources—of a future in which the fantastic economic and technological growth that characterized postwar prosperity becomes impossible—is everywhere we look in science fiction from the 1970s and after. I have already mentioned *Soylent Green*; we can think here just as easily of *Logan's Run*, which maintains a glittering palace of technoutopian futurity at the cost of universal suicide the day you turn 21. In Larry Niven's novel *The Mote in God's Eye* (1974) the logic of overpopulation is transformed into the society of the Moties, who (without any biological ability to check their reproduction) endlessly repeat a cycle of civilization, overreach, crisis, and collapse. In Isaac Asimov's *The Gods Themselves* the energy crisis is solved by the invention of a miraculous solar "pump" that would be the perfect green energy source if only it weren't leeching its free energy from the universe next door. I have suggested elsewhere that even cyberpunk should be read as a kind of reactive backlash to ecological thinking, insofar as the rapid 1980s relocation of the object of SF desire to a place inside the computer can itself be read as an attempt to circumvent the "reality principle" of ecological scarcity by positing an interior cybernetic world where such limits no longer apply.

[5.5] To the extent that twentieth-century science fiction historically imagined a radically unlimited, techno-optimistic future of Promethean world-transformation—provided we don't, say, nuke ourselves in the meantime—ecological science has therefore tended to function not as a licenser or guarantor, but as its bad conscience.

[6] Despite this seemingly antagonistic relationship, however, science fictional thought experiments have quite commonly often been deployed in the other direction, in the service of ecological polemic. Not long ago, for instance, SF author Charles Stross posed a simple question to the readers of his blog, "Charlie's Diary":

You, and a quarter of a million other folks, have embarked on a 1000-year voyage aboard a hollowed-out asteroid. What sort of governance and society do you think would be most comfortable, not to mention likely to

We can recognize the central problematic of this thought experiment as *sustainability*, in two senses: first, the need for a renewable material environment within which the limited resources available to the asteroid at the start of the journey could recycle, remaining available to humans as the voyage continued; and second the need for a sustainable *cultural form*, an ideology in the Althusserian sense, that could survive and *reproduce itself* within those techno-natural constraints. In the first case, we might say, we need a natural ecology, and in the second we need a political one. And so it wasn't very long before the commentators figured out Stross's punchline: we are *already*, alas, in precisely this situation, only we live *atop* our planetoid and not inside it.

[6.1] The notion that the Earth can itself be thought of as a vast "spaceship" long predates the immense geodesic dome at the center of Disney's Epcot Center (that theme park's most famous, most iconic structure). Perhaps the earliest reference is Herman Melville's *Moby Dick*, in which Ahab speaks of a "frigate earth" that "in her murderous hold ... is ballasted with bones of millions of the drowned" (249). In Henry George's *Progress and Poverty* (1879), where the "ship" is imagined as a sea-faring galleon:

It is a well-provisioned ship, this on which we sail through space. If the bread and beef above decks seem to grow scarce, we but open a hatch and there is a new supply, of which before we never dreamed. And very great command over the services of others comes to those who as the hatches are opened are permitted to say, "This is mine!" (243)

The best known reference today (outside Epcot) may be R. Buckminster Fuller's *Operating Manual for Spaceship Earth* (1968), which ecologically invites us to reimagine the spaceship/planet as "an integrally-designed machine which to be persistently successful must be comprehended and serviced in total" (52). (Contrast Fuller's biopolitical vision with James Lovelock's similarly totalizing Gaia hypothesis, in which the Earth is a machinic superorganism that homeostatically services *itself*.) For Fuller, as for George, the ship is well provisioned, designed as such so that human beings (originating in igno-

rance) could have sufficient time to learn its operations and proper maintenance:

I would say that designed into this Spaceship Earth's total wealth was a big safety factor which allowed man to be very ignorant for a long time until he had amassed enough experiences from which to extract progressively the system of generalized principles governing the increases of energy managing advantages over environment. ... Objective employment of those generalized principles in rearranging the physical resources of environment seems to be leading to humanity's eventually total success and readiness to cope with far vaster problems of the universe. (54)

[6.2] The quoted reference to the "total wealth" of Earth, however, is purely retrospective; against George's cornucopian nineteenth-century use, the Spaceship Earth metaphor tends in the twentieth century to be associated not with abundance but with scarcity, fragility, and limit. In the next chapter of *Operating Manual*, Fuller notes that

the abundance of immediately consumable, obviously desirable or utterly essential resources have been sufficient *until now* to allow us to carry on despite our ignorance. Being eventually exhaustible and spoilable, they have been adequate only up to this critical moment. (58, emphasis mine)

From this point forward, then, scarcity prevails, and humanity will require careful planners and holistic thinkers, rationally managing every aspect of shipboard operations, to keep the machine running smoothly.

[6.3] In his essay "The Economics of the Coming Spaceship Earth," published two years before Fuller's *Operating Manual* in 1966, Kenneth E. Boulding (the cofounder of the Society for the Advancement of General Systems Theory) characterizes this "critical moment" as the transition from a "cowboy economy" to a "spaceman economy":

For the sake of picturesqueness, I am tempted to call the open economy the "cowboy economy," the cowboy being symbolic of the illimitable plains and also associated with reckless,

exploitative, romantic, and violent behavior, which is characteristic of open societies. The closed economy of the future might similarly be called the "spaceman" economy, in which the earth has become a single spaceship, without unlimited reservoirs of anything, either for extraction or for pollution, and in which, therefore, man must find his place in a cyclical ecological system which is capable of continuous reproduction of material form even though it cannot escape having inputs of energy. (209)

The echo of Fredrick Jackson Turner's 1893 "frontier thesis" is unmistakable; a once-open, once-free frontier of expansive possibility, which previously drove American history, has now slammed forever shut.

[7] This central insight—an ecological one—makes visible certain contradictions that were programmatically obscured by the "space empire" fantasies so beloved by Golden Age writers of SF. In stark contrast to the untold riches they are imagined to provide, distant space colonies—whether on inhospitable moons or orbiting far-flung planets—are in fact necessarily markers of deep, abiding, and permanent *scarcity*, requiring careful management without any waste of resources for any hope of survival. From an earthbound perspective, the colonization of space appears wildly expansive, a "New Frontier" that opens up the entire universe to human experience and exploitation—but from a perspective *inside* one of these spaceships or colonies, life is a state of fragile and even hellish enclosure, at constant risk of either deadly shortages or deadly exposure to the void outside.

[7.1] Ecology today remains the unhappy visitor, or the poisonous supplement, to any number of familiar contemporary science fictional scenarios as well, but it is perhaps most radically destructive of this fantasy of extraplanetary colonization. The colonization of outer space has frequently presented itself as the perverse *solution* to the discovery that the environment of our planet is under threat from the unknown or unacknowledged by-products of human activity—the idea being that we might be able to bootstrap our civilization into orbit and out into the larger galaxy before the terrestrial environment crashes. But in contemporary works like Kim Stanley Robinson's recent far-reaching novel *Aurora* (2015), that logic reverses itself entirely: we now

know too much about ecology and evolutionary biology to take seriously the idea that we could ever simply go to another planet and just *live* there. Ecology becomes the despoiler of that greatest of science fiction dreams, the conquest of the stars; even if we decide to brave the centuries-long journey to another star, and even if we are lucky enough to find a habitable planet there, we are likely to find ourselves greeted by a counter-ecology with which we cannot biologically interact or co-exist, much less eat or interbreed with. In *Aurora* the toxic particle is as small as a tiny prion, but all the same it renders the new planet utterly uninhabitable to us, in effect dooming our dreams of space altogether.

[7.2] Other recent works about extraterrestrial travel end more happily, though typically with some sour ecological note. In *Interstellar*, the astronaut heroes take advantage of a wormhole and fifth-dimensional time-travel shenanigans to get a viable off-world colony started—but the last shot of the film reveals the settlement as a tiny encampment in an icy hellhole, over which a single American flag stands silent, miserable guard. More typically, however, the heroes' reward at the end of the narrative is to be allowed to return to Earth, to live *here* instead of *there*. *The Martian* sees its titular hero (barely) able to survive being stranded on Mars, hacking together a temporary ecology of oxygen, water, feces, and potatoes that is able to get him *just enough* food, for just long enough to be rescued. His happy ending is that he doesn't have to keep living on Mars, but gets to come home—as the characters do, to one extent or another, in other recent space operas like *Jupiter Ascending*, *Battlestar Galactica*, and *WALL-E*. Space, alas, is no longer the place. Even a nominally techno-optimistic novel like Neal Stephenson's recent *Seveneves* (2015)—ostensibly devoted to proving the indomitability of human ingenuity and creative potential even in the face of the end of the world—posits an incomprehensibly terrible nightmare future in horrid cramped, starvation-ridden satellites in its attempt to argue that we might realistically live anywhere else but Earth.

[7.3] Not that home is looking so great either. If the ecological poisons dreams of escape, it also poisons dreams of our continued survival down here, as witnessed both through the incipient mass extinctions of animal life in the present and, via the prolepsis of the suddenly ubiquitous "Anthropocene," the backwards-looking cognitive standpoint from an inevita-

ble future of human extinction. What the ecological promises in our context is not safe-in-God's-hands reliability or stability, but a world of rapid and radical flux to which life forms must either adapt themselves or die (and most die). In the archive of recent SF, Octavia E. Butler's various space colonization stories—*Xenogenesis* in the 1980s, the unfinished *Parables* series of the 1990s, "Amnesty" in the 2000s—may speak most directly to the depressive sense of incipient, irrevocable doom that permeates contemporary life, as well as offer grim visions of the sorts of biological and ecological transformations that (we hope) will be better than the species just dying out entirely. Her characters find a way to adapt, and live, and even grab for themselves tiny pieces of those older, better science-fictional futures that now seem to us to have fallen out of our civilization's grasp—albeit at very great cost.

[7.4] The alternative to the sort of vexed self-transformation we see in Butler, or in something like Margaret Atwood's *Oryx and Crake*, is rather the world of universal death posited by Atwood in her "Time Capsule Found on the Death Planet," written in 2009 alongside the Copenhagen climate talks. Human history, per "Time Capsule," is a progressive history that arrests itself in the final age through the industrious creation of a universal desert, characterized by spaces where nothing grows, until "at last all wells were poisoned, all rivers ran with filth, all seas were dead; there was no land left to grow food." At this point Atwood's unnamed narrator, implied to be the last human alive, turns to the person who will someday find her message:

You who have come here from some distant world, to this dry lakeshore and this cairn, and to this cylinder of brass, in which on the last day of all our recorded days I place our final words:
Pray for us, who once, too, thought we could fly.

Here again, as in Butler's and Robinson's later stories, the dream of outer space turns toxic, a narrative for some other, better version of the human race rather than ourselves; our species, we feel, seems somehow to have missed its chance, and fallen into the deep gravitational well of its doomed planetary ecology instead.

[8] Back in the real world, and real human history,

the human species seems at the dawn of the twenty-first century to be at a key inflection point: a moment in which technoindustrial modernity is struggling to even *acknowledge* the problems of climate change, ocean acidification, overfarming, antibiotic-resistant organisms, ubiquitous pollution, and megadrought, even as each of these crises seems to be crossing points-of-no-return. The findings of ecological science and related fields are, in our moment, incredibly urgent and unspeakably dire, and seem to augur a near-term future of deprivation and suffering if not out-and-out mass death and extinction. A five-alarm fire, all our ecological knowledge screams, is now raging on multiple fronts everywhere across the planet—and SF, like so many of our cultural institutions, is still struggling to catch up.

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Suggested Additional Reading

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- While a full list of SF novels and short stories dealing with the subject of "ecology" is of course much too overwhelmingly numerous to name here, I would suggest the list generated by Eric Otto in his "Environmentalism 101" piece as a very good starting point, as well as entries like ECOCATASTROPHE, ECOLOGY, and NATURE in Brian Stableford's *Science Fact and Science Fiction: An Encyclopedia* (Routledge, 2006) and the list of works "Of Further Interest" I compiled as an appendix to *Green Planets*. Of the novels that have appeared since that publication, I would especially recommend:
- Margaret Atwood's *MaddAddam* (2013);
Paolo Bacigalupi's *The Water Knife* (2015);
Liu Cixin's *The Dark Forest* (2015);
Karen Joy Fowler's *We Are All Completely Beside Ourselves* (2013);
William Gibson's *The Peripheral* (2014);
Emily St. John Mandel's *Station Eleven* (2014);
James Patterson's *Zoo* (2012);
Kim Stanley Robinson's *2312* (2012), *Shaman* (2013), and *Aurora* (2015);
Neal Stephenson's *Seveneves* (2015);
Claire Vaye Watkins's *Gold Fame Citrus* (2015); and
Andy Weir's *The Martian* (2011)
- as being of particular interest.

Neuroscience in Science Fiction Films

Jason W. Ellis

Packer, Sharon. *Neuroscience in Science Fiction Films*. Jefferson, NC: McFarland, 2015. Paperback, 300 pages, \$39.95, ISBN 978-0-7864-7234-5.

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SHARON PACKER'S *Neuroscience in Science Fiction Films* contributes important new ideas and analyses to the study of brain-centric, neuroscience-focused SF film. However, its attempt to appeal to a broad audience gives it an uneven execution that does not necessarily undermine her arguments but does create impediments to engaging them. Nevertheless, this book offers many interesting and insightful observations that might prove useful to scholars working on these topics and films.

Neuroscience in Science Fiction Films is a historical analysis of what Packer terms “neuroscience fiction” (Packer 5), but she neglects to give it an explicit definition or trace the term’s historical development. While Packer qualifies her book’s focus as “on the neuroscience aspects of science fiction film,” and the effect of “the parallel paths of psychodynamic psychiatry, psychoanalysis, behavioral conditioning, and, to a lesser extent, humanistic psychology” on SF film (Packer 11), she does not supply the reader with a formalized definition nor acknowledge the term’s origin and historical development. Hal Hall, in a comment to my blog [dynamicsubspace.net](#), tells us that an early appearance of the term appears in two book chapters by Joseph D. Miller: one in 1989 (“Neuroscience Fiction: The Roman à Synaptic Cleft.” *Mindscapes*. Eds. George E. Slusser and Eric S. Rabin. Carbondale: Southern Illinois University Press, 1989. 195-207. Print.), and another in 2009 (“Neuroscience Fiction Redux,” *Reading Science Fiction*. Eds. James E. Gunn, Marleen S. Barr, and Matthew. New York: Palgrave Macmillan, 2009. 199-211. Print.). While Miller focuses on SF literature, Annalee Newitz independently applies the term to SF film in 2004 (“Brain Damage: Neuroscience Fiction

Movies Are Colonizing Our Brains” *Other 5* (October 2004): n. pag. Web. 29 March 2015). Terms related to “neuroscience fiction” that can be repurposed for SF scholarship include Harvey Blume’s “neuro-narratives,” which appeared in 2000 (“Neuro-Narratives.” *The American Prospect* 11.13 (22 May 2000): n. pag. Web. 29 March 2015.), and later, Marco Roth’s ‘neuronovel,’ which appeared in 2009 (“Rise of the Neuronovel: A Specter is Haunting the Contemporary Novel.” *n+1 magazine* 8 (14 September 2009): n. pag. Web. 29 March 2015.). While none of these sources are cited in Packer’s book, they are indicative of the fact that there is an established and growing discourse around the intersection of the neurosciences, literature, and film that deserves further critical engagement and development.

Packer uses scenes from Shane Black’s *Iron Man 3* (2013) to frame her overall argument about the development of neuroscience fiction as driven by the tension between “the ‘two minds’ of psychiatry: biological psychiatry, now known as ‘neuropsychiatry,’ and the proverbial ‘couch cure’ of psychoanalytic lore” (Packer 5). In key passages peppered throughout the book, she guides the reader through the evolution of brain studies—the neurological, psychological, behavioral, and back to the neurological, including among others, anatomical studies, psychopharmacology, neurosurgery, brain imaging, and endocrinology. After providing an overview and background information in the first two chapters, Packer establishes in chapter three the lasting influence of proto-SF literature on neuroscience fiction film, including discussions of Mary Shelley’s *Frankenstein* (1818), Robert Louis Stevenson’s *Strange Case of Dr. Jekyll and Mr. Hyde* (1886), and H.G. Wells’ *The Island of Dr. Moreau* (1896). There are chapters devoted to exploring biological affinities between ape and human brains, mid-century emphases on the physicality of the brain, using examples including *The Brain from Planet Arous* (1957) and *The Brain Eaters* (1958). In chapter seven, she discusses how “social problem films,” including *Change of Mind* (1969), *Hauser’s Memory* (1970), and to some extent, *Planet of the Apes* (1968), use neuroscience fiction to expose “social problem films” hinging on the neurosciences. Other chapters focus on neuro-technological interventions, including memory erasure and recall, in films such as *Cyborg 2087* (1966), *The Mind Snatchers* (1972), *Videodrome* (1983), *Johnny Mnemonic* (1995), and *The Manchurian Can-*

didate (2004). Chapter nine explores memory erasure and recall; increasing intelligence; and simulating phenomenological experience and dreams. The final chapters focus on the influence of video games, and the effects of drugs. Through these chapters, she discusses a tremendous number of films, including this brief chronological sampling: *A Blind Bargain* (1922), *The Ape Man* (1943), *The Brain from Planet Arous* (1957), *Change of Mind* (1969), *The Mind Snatchers* (1972), *Brainstorm* (1983), *Total Recall* (1990), *Johnny Mnemonic* (1995), *Eternal Sunshine of the Spotless Mind* (2004), *Limitless* (2011), and *Transcendence* (2014).

While *Neuroscience in Science Fiction Films* has many valuable insights on a range of popular and less-well-known films, it exhibits some issues that might give an audience of SF scholars pause. One of these is its repetition of previously discussed material. While Packer attempts to account for this when she writes, "Naturally, there is some overlap between the different sections, as we show how many (if not most) NSF tropes repeat themselves over and over again over the decades" (Packer 12), there are numerous repetitions of plot, background, and analysis that distract more than focus her arguments. Coupled to this are interjections of tangential film trivia that unnecessarily bisect the flow of her discussion. Some of these might even confuse novice readers. For example, she writes, "I mention William Gibson, who earned the epithet, 'father of cyberpunk' (although he was not the first to use the term 'cyberpunk')" (Packer 63). While she goes on to explain that Bruce Bethke published a short story titled "Cyberpunk" in 1983, she neglects to explain how the term began to circulate as a descriptor of Gibson and his cohort, or that it was not a term appropriated or embraced by Gibson.

Despite these issues, I recommend Packer's *Neuroscience in Science Fiction Films* for scholars working at the intersection of the neurohumanities and SF, and for libraries to stock in their SF or film studies collections. It is a book brimming with insights on the history of the neurosciences and SF film that addresses a range of audiences and fulfills different needs, including surveying the relationship between the neurosciences and SF film, providing close readings of brain-focused SF films, and categorizing neuroscience fiction films into manageable groups. It can be equally useful in scholarship as in teaching. It is a milestone in the growing field of neuroscience

fiction.

Germany: A Science Fiction

Donald M. Hassler

Rickels, Laurence A. *Germany: A Science Fiction*. Fort Wayne, IN: Anti-Oedipus Press, 2015. Paperback, 265 pages, \$19.95, ISBN 978-0-9905733-3-3 Kindle \$9.95, ASIN B00YBGVGD0

Order option(s): [Kindle](#)

IN HIS MARCH 1940 REVIEW of *Mein Kampf*, George Orwell acknowledges that the ambitious Hitler somehow manages always to cast himself as underdog. Honest Orwell feels a bit sorry for him. I find this strangely analogous to Milton's rhetorical ploy of giving Satan his great speeches. Later, in the satire *1984* (1948), as this study points out, Orwell omits any explicit reference to the Holocaust at the same time that he captures well the feel of the Nazi goose-stepping and robotic Newspeak. Laurence A. Rickels pulls no punches in the use of rhetorical trickiness, however, in this complex academic study of our terribly warlike 20th century. I must be very clear on the solemn, almost depressing, thesis of *Germany: A Science Fiction*. Sin and death, loss in war, hellfire, immolation, and mourning are the key ideas. Rickels ranges as far back as Homer and Vergil to establish this thesis. Troy and Dido must burn in order for Rome to rise from *their* holocaust. Two instances of modern burnings are important to the thesis: Ray Bradbury's burning in *Fahrenheit 451* (1953) and Thomas Pynchon's rockets that return and burn their makers in *V* (1963) and *Gravity's Rainbow* (1973). It is a sad and purging thesis, indeed, that Rickels dresses up as well with a particular 20th-century trajectory or timeline that includes *our* wars and *our* SF. The trajectory is, also, a therapy that cleanses as it burns away at sin and death. Rickels argues that "hard" SF for twenty years or so after the Nazi holocaust allowed our culture to hide from itself any involvement with sin and death, to move onward and upward like a discovery rocket. But in order for a cure to take place, inevitably, he argues, there had to be a return of the fire from the rocket, a

purging. It is that literature of the purge that Rickels finds so complex and fascinating and that he works to explicate in this explosion of a book that follows earlier work of his in which he hinted at the thesis.

The problem, as I see it, with this set of ideas and with the effects in Rickels is that nearly every distinct part gets burned to a crisp. To borrow the central image from his celebration of Bradbury here, it is almost as though the very book that Rickels sets out to write for us is destroyed in the fire of the idea. He mixes genres. He mixes time periods. He mixes practical psychiatric therapy case studies with the thrilling SF of discovery and time travel. He tells us a lot about sculpture and a lot about media and movies. The book includes a few interesting pictures of sculpture. Rickels analyzes two SF novels written by the NASA leader Wernher von Braun. He spends much time on a fine discussion of the American Civil War and the fact that it was our “lost war” and served to divide our history right in the middle. In fact, doubleness and return (I suppose “eternal return”) are haunts throughout the book. Rickels is never limited either by any sense of genre limits, even though his entire argument has to do with a defining of SF. The work of the American writer Julian Green, for example, who is a Southerner at heart through his mother and who was born in Paris and published mostly in French (in French his Christian name is spelled “Julien”), is well-used by Rickels to make both therapeutic and literary points about the power of what is called “ambivalent introspect” in Green’s case. But in no way is Green meant to be seen as an SF writer. So not only is there continually a conceptual blurring in the book, but also there is no Index and not a very clear Table of Contents. All seems to get consumed in the flame of vision and insight, and one has trouble finding one’s way in the text. I think I believe the fundamental thesis, but I am not sure. That doubleness or continuous ambivalence, of course, is fundamental to Rickels’s argument.

I think that Rickels fully redeems himself, however, of any weaknesses in argument by means of his linguistic wit. Of one of his favorite writers, P.K. Dick, Rickels observes that after Dick wrote *The Man in the High Castle* (1962) he could speak only German for a time. The German that Rickels knows well is loaded with amusing ambivalence—a kind of twinkling solemnity like Santa or Kris Kringle, that softens the impact of all heavy meaning. For example, the opening paragraph of the book took me much

work with my German dictionary as Rickels turns on a massive compound word in German that, eventually, we decipher as a technical term for balancing radio frequency. Our clever machines and our philosophy must be in balance. But still, there is sin and death. Rickels favors not only the German but also outrageous puns in English. On the paradox in the story about the burning of Troy, he writes, “...the Trojan horse—a lost object of identification, reversal, and preservation carried out defeat first” (73). Finally on rockets and *lebensraum* or “territory” that Hitler could never have enough of, Rickels ends well and with his typical word thickness. He refers to the brave wave at the end of the movie *Dr. Strangelove* (1964) that builds on Pynchon’s rocket fictions: “In Pynchon’s novel, the rocket [...] opens up a technological horizon of auto-development before which the prosthetic or humanist [SF] reach of our following falls short” (245). So now that this review has reached its own word limit, I can honestly say that I find Rickels both penetrating and playful, or even a little silly. But of course, I try not to be a Romantic visionary but rather a practical and humanist liberal.

Religion in Science Fiction: The Evolution of an Idea and the Extinction of a Genre

Edward F. Higgins

Hrotic, Steven. *Religion in Science Fiction: The Evolution of an Idea and the Extinction of a Genre*. London, New York: Bloomsbury Academic (an imprint of Bloomsbury Publishing), 2014. Hardback, 240 pages, \$112, ISBN-9781472533555; Kindle, \$59.11, Page Numbers Source ISBN 1472533550

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HROTIC’S OVERVIEW AND ANALYSIS would likely be of interest and of some use to anyone teaching or researching religious, philosophical, or mytho-poetic structures in science fiction. The volume provides a full set of chapter notes and an extensive bibliography of items (actually, 15 pages of seeming overkill) related to other studies of academic religio-cultural analysis. There’s a good general index to specific au-

thors, novels, or stories discussed, providing quick reference and a narrowing for looking back to find something remembered or to select some focused-on need again. This study seems to perform its asserted task of offering “a cognitive anthropology of narratives” (14) focused on religious elements and spirituality in a wide-ranging overview of selected SF works from the Gernsback/Campbell eras up to and through such late 20th century authors as Octavia Butler and Mary Doria Russell. Alongside a handful of other scholar-critics’ various published essays and a few book-length studies of the topic of religion in SF, Hrotic’s examination brings a welcome perspective to an oft overlooked exploration of science fiction’s sometimes assumed presumptive lack of sacred ground, or sacred grounding.

Hrotic’s approach is basically an historical overview informing his critical rationale and applying the cognitive anthropological apparatus he lays out in the first chapter, “The Rules.” Religion for the purposes of his study devolves to specific social behaviors resting on the acceptance of certain culturally-embedded claims of supernatural authority—this of course as applied to Hrotic’s given body of illustrative science fiction literature. This particular “thought world” gives rise to a range of SF authors’ use of as well as change to any given religion’s schema “across many stories over several generations creates a story in its own right” (16), as is the case in science fiction.

As to science fiction itself as a literary genre, Hrotic—like everyone else—chafes a bit at a definition. The observations and problems of this considerable definition chaffing regarding the genre are familiar “but still flawed” (19), claims Hrotic. Nevertheless, his solution is to opt for a few at-hand normative assumptions—including Norman Spinrad’s amusing dictum that SF is “anything published as science fiction,” and/or most anything else found in the Clute/Nicholls *Encyclopedia’s* definition entry for science fiction. For anyone even passingly familiar with the much-rehearsed, ever-ongoing quandary, this definition chapter in Hrotic could be either glanced at knowingly or just ho-hum glazed over. What comes next is a chapter of early redacting and placing of Mary Shelley-to-Poe-to-Wells-to-Stapledon, etc. in their various portrayals of religion. This short nine-page chapter may perhaps be best skipped except for the half-page conclusion at its end.

Where Hrotic better shines, I think, and deserves

some attentive reading is when he gets past the first half of his book to Part Two: starting off with a couple of chapters on the Gernsback-to-Campbell eras (including trudges through brief analyses of several “trash” 30s-40s stories) followed by two more engaging chapters in this section, “The Rise of the Novel,” and “Poli-Sci-Fi.” The three Gernsback 20s-30s *Amazing Stories* Hrotic takes note of in quick succession illustrate early SF religion as “typically only a supportive thread to the main plot and was not yet a major theme” (64). But with Campbell’s major influence through *Astounding* and the publishing and discovery of such writers as Asimov, Heinlein, Sturgeon, van Vogt and others, more “normative views of religion” (67) arose. Hrotic goes on to examine individual stories by Asimov, Heinlein, de Camp, and del Rey that present religion as “based on misunderstanding about the world, about history, even about basic facts; religion and science are contrasting opposites, even if not necessarily mutually antagonistic” (79).

Readers of Hrotic’s “The Rise of the Novel” and “Poli-Sci-Fi” chapters will obviously recognize such classic religion-oriented novels as Arthur C. Clark’s *Childhood’s End* (1953), Walter Miller’s *A Canticle for Leibowitz* (1960), Leigh Brackett’s *The Long Tomorrow* (1955), George Stewart’s *Earth Abides* (1949), and, of course, James Blish’s *A Case of Conscience* (1958), Robert Heinlein’s *Stranger in a Strange Land* (1961), and Frank Herbert’s *Dune* (1965). Additionally, there are two religio-centric short stories he discusses: Fritz Leiber’s probably lesser known “When the Change-Winds Blow” (1964), and Roger Zelazny’s highly regarded “A Rose for Ecclesiastes” (1963). Such novels and stories have shifted the view of religion to one of “self-reflection” and “represent thought experiments, positing new variants” (101), according to Hrotic’s framework analysis—although given his two-to-three pages for each work these are given short shrift, yet nonetheless are treated with crucial insights.

Part Three moves through selected 1970s to 2000s SF, with three chapters considering religious-oriented examples from such authors as Ray Bradbury, Michael Moorcock, James Morrow, Orson Scott Card, Octavia Butler, Mary Doria Russell, Neil Gaiman, and a few others. With all of these writers, Hrotic’s main focal point is that unlike earlier mainly negative treatments of religious themes, in their work there appears a “lessening of negative valences in the schemas for religion, and a corresponding lessening

of positive valences in the schemas for science and in particular technological progress” (170). Which is not to say writers like Piers Anthony and James Morrow can’t be found seriously lampooning or satirizing aspects of Western religion. Again, while Hrotic’s analyses of various authors’ works seems slight, there are interesting conclusions such as his comment on *The Sparrow*’s treatment of “faith as a powerful, sustaining, fascinating force . . . but a dangerous one” (164), or on *Parable of the Sower*’s strategy wherein “the needs religion fills are real, and religion is a particularly memorable and effective way” of sustaining the novel’s plot and themes (161).

Finally, in Part Four Hrotic delivers a couple of final chapters highlighting conclusions about his overview journey through science fiction’s religion-themed history, leaving us with the pronouncement that culture generally and SF as a storytelling mode with an “allegiance to myth and ritual and recurring examples of mysticism and the sacred” (199) will likely continue with an ongoing legacy of (at least occasional) religious exploration. Indeed, “The multiplicity, not just of planets, but of worldviews—religious *and* scientific” (199) will continue to find their way into genre SF. I doubt anyone’s going to argue with that.

Revolutionary Experiments: The Quest for Immortality in Bolshevik Science and Fiction

Artem Zubov

Krementsov, Nikolai. *Revolutionary Experiments: The Quest for Immortality in Bolshevik Science and Fiction*. Oxford, New York: Oxford University Press, 2014. Hardback, 288 pages, £50.00, ISBN 978-0-19-999298-0.

Order option(s): [Hard](#) | [Kindle](#)

NIKOLAI KREMENTSOV has authored several books and multiple articles that explore the interaction between politics and science. In his earlier works, *Stalinist Science* (1996), *The Cure: A Story of Cancer and Politics* (2002), and *A Martian Stranded on Earth*

(2010), he investigated political and ideological contexts as they affect scientific ideas and discoveries. In his latest book, *Revolutionary Experiments* (2014), Kremmentsov addresses the lack of contact, or interchange, between the political history of Russia and the history of Russian science; he focuses his attention on the mechanisms that make that interaction possible (3). He postulates his approach as an antidote to previous attempts to describe this interaction, which he regards as mono-disciplinary, a kind of “‘cross-gazing’ over artificially erected borders.” (7) Mono-disciplinary approaches, he argues, prevent scholars from seeing the social characteristics of the highly complicated process of intercommunication between scientific and cultural discourses.

As a student of the USSR Academy of Sciences in the 1980s, Kremmentsov noticed that many of the scientific discoveries of the early 20th century Russia were represented in works of fiction, particularly in the “scientific-fantastic” stories, the same kind of stories that in the late 1920s were called ‘science fiction’ in the USA. Scientific discourse, he argues, is distinguished by an elaborate and very specific language that cannot be easily understood by non-professional readers. Thus, as Kremmentsov claims, there should have been an independent agent responsible for the transposition of scientific knowledge (that is genuinely non-public) to the public domain. Kremmentsov found that agent in the media—in popular magazines, documentary films, radio programs, daily newspapers, etc.

To illustrate the migration of scientific knowledge into the public sphere, Kremmentsov replaces the technique of ‘cross-gazing’ with that of ‘reading in parallel’ articles on scientific experiments and works of literature of the same period (8). He chooses four cases, each of which exemplifies sensational scientific experiments of the early twentieth century: experiments with isolated organs, anabiosis, hormones, and rejuvenation. For instance, Kremmentsov demonstrates how the popularization of anabiosis by scientists Porfirii Bakhmet’ev and Petr Shmidt provided writers of fiction with the vocabulary to build their own artistic speculations. Subsequently, many prominent Russian writers such as Alexander Blyayev, Aleksey Tolstoy, Vladimir Mayakovsky, and Boris Pilnyak used experiments with anabiosis as a narrative technique in their works.

Further, Kremmentsov shows that the plots of Mikhail Bulgakov’s novellas “The Fateful Eggs” (1924) and

“The Dog’s Heart” (1925) are literary reflections of experiments with rejuvenation. Both novellas narrate how scientists experimented with the possibility of eternal youth and conquering death. While the writer gives fictitious scientific explanations, e.g., “the ray of life” that accelerates life processes, he derives them from real experiments that were widely covered in the Russian popular media in the 1920s.

Alexander Beliaev’s ‘scientific-fantastic story’ “Professor Dowell’s Head” (1925) is usually studied as an author’s self-reflective biographic work. From 1922 to 1925, Beliaev was literally chained to a bed, and he himself described this period as “life of the head without the body.” Kremmentsov shows how this seemingly ‘fantastic’ idea – the possibility of keeping a severed head alive in a laboratory – was pursued by many scientists and widely discussed in popular media. For instance, Sergei Briukhonenko’s apparatus, called the *autojector*, which helped keep the severed heads of animals “alive,” was sensationalized in more than a dozen Russian and Western scientific and popular magazines (an account of his invention was even placed in *Science and Invention*, edited by the “godfather” of science fiction: Hugo Gernsback) (48). At the same time, Kremmentsov states, “neither the scientist nor the writer could claim the priority on originating this idea.” (52) Both Beliaev and Briukhonenko are part of long scientific and literary traditions of speculating on such experiments. But what is of more importance is how the “living head” discourse emerged, and how it was utilized by scientists and writers (52).

The author shows how the study of internal secretions and hormones played a major role in one of the largest “scientific experiments” that took place in early 20th century – the process of the institutionalization of science. Although writers of literature were very sensitive to current scientific discoveries and technological progress, Kremmentsov posits that they skipped the emergence of “big science” and how it became a mass profession (100). “Dirty” dealings of “big science” did not correspond with the romantic image of the “lonely genius” obsessed with the pursuit of knowledge, and thus, it could hardly inspire the literary imagination (126).

His analysis of the interaction between ‘real’ and ‘fictional’ sciences allows Kremmentsov to explore how scientific knowledge became an influential ‘cultural resource’ in Bolshevik Russia (161). Popular media and the popularizers of science created a new

rhetoric of popular science that established a correspondence between scientists, their patrons, and the public. Put another way, Kremmentsov describes the emergence of popular science discourse understood as a socio-rhetoric action (Dijk 193). In this case, the science fiction genre should be studied as a part of a discursive campaign directed at popularizing science, bringing “science to the masses,” and giving “knowledge to everyone,” as common Soviet-era slogans would have it.

This book can be of great interest and value for everyone interested in Russian studies and the history of science in Russia. *Revolutionary Experiments* is not a study specifically of science fiction, but it offers many theoretical observations on the nature of the genre “as [an] historical and mutable” formation that consists not of “a set of texts, but rather a way of using texts and drawing relationships among them.” (Rieder 193) The author demonstrates the emergence of what may be called “popular science discourse,” which implicitly had the potential to influence literary evolution and to give birth to the genre of ‘scientific-fantastic stories’ in early 20th century Russia.

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Oy Feminist Planets: A Fake Memoir

Andrew M. Gordon

Oy Feminist Planets: A Fake Memoir by Marleen S. Barr. Seattle, WA: NeoPoesis Press, 2015. 240 pp. pb. \$18.95. ISBN 978-0-9892018-6-5.

Order option(s): [Paper](#)

IN *OY PIONEER!*, the feminist SF critic Marleen Barr invented her own genre: comic autobiography crossed with academic satire and leavened with sudden flights of fancy, and infusions of elements of science fiction and fantasy. *Oy Pioneer!* introduced the narrator and protagonist, Sondra Lear, an ambitious academic intellectual and SF critic who is also, paradoxically, a husband-hunting feminist. Sondra, a caricatured version of the author, is a female schlemiel in flight from the oppressive southern “Blackhole” University, globe-trotting to conferences and Fulbright lectureships and even leaving earth on a starship. Goaded by her monomaniacal mother “Herbert,” an omnipresent voice on the phone whom Sondra has internalized and can never escape, she is always chasing the elusive quarry, a man who will marry her. But as she criss-crosses the world and even launches into outer space on her comic misadventures, Sondra, a Jew from Forest Hills, Queens, is never really comfortable outside of the Big Apple. Apart from its affinities with SF and fantasy, *Oy, Pioneer!* is also a comic Jewish-American novel in the vein of Erica Jong’s *Fear of Flying*.

Oy Feminist Planets continues the zany, episodic misadventures of Sondra Lear. As the narrator notes in the opening, just like you don’t need to have read *Tom Sawyer* to follow *Huckleberry Finn*, you don’t need to have read *Oy, Pioneer!* to enjoy this second volume, which begins with Sondra in full flight from reality, married to her cat and with a talking horse as daughter (both transformed to human form), aboard a spaceship bound for a feminist planet near Alpha Centauri. Assisted by a ship full of Sondra clones and her vampire lover, who is also her fairy godfather, she is about to embark on the first Fulbright to

outer space. But of course, Sondra grows lonesome for home and quickly returns to Forest Hills via supernatural intervention (don’t ask).

Sondra’s wacky adventures in this volume include visiting lectureships in South Africa, where she has close encounters with wildebeest and Afrikaner men; Austria, where she is romanced by a German who wants this quintessential Forest Hills feminist to stay home and cook him *Apfelstrudel* and *Leberknödelsuppe*; a stint in exile in the American midwest at the dubious “Meshuconsinois State University”; and a gig as feminist scholar-in-residence and “academic whore” at “Brand-X University.” In other ludicrous episodes, she masquerades as black and then as a lesbian to find a tenured position. Along the way, she wins the SFRA Pilgrim Award, manages to snag a husband, a French-Canadian she dubs “Pepe Le Pew,” visits his large family in Canada, and goes on her honeymoon on a risky mule trek into the Grand Canyon. In a sad interlude, she witnesses the fall of the towers on 9-11 in Manhattan. But the irrepressible Sondra ends as she began, once again launched into outer space, this time accompanied by her new husband.

The novel will appeal to those who enjoy Jewish-American humor, academic satire, and feminism. It is also peppered with references to American pop culture: tons of allusions to movies, TV, Broadway show tunes, and especially science-fiction and fantasy. Those in the know about SF authors and criticism will get a special frisson from this *roman à clef* by trying to spot the real-life identities of the many figures she lampoons. I smiled often and sometimes laughed out loud, as at the mention of a dinosaur called a “tsorisaurus.”

I look forward to the further adventures of the inimitable Sondra Lear, the feminist science-fiction critic and schlemiel from Forest Hills. *Oy Feminist Planets* is a true *jeu d’esprit*.

The Self-Propelled Island

John J. Pierce

The Self-Propelled Island by Jules Verne, translated by Marie-Thérèse Noiset, introduction by Volker Dehs. Lincoln, NB, University of Nebraska Press/

Bison Books, 2015. Hardcover, 323 pages, \$29.95, ISBN 978-0-8032-4582-2.

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JULES VERNE went through a number of changes in his life, and has gone through even more since his death. There have been revisionist accounts of not only his works but his life. Far from being the father of science fiction, he is now regarded by some as having never written any sf at all.

William Butcher famously asserted that Verne was “thrust, screaming and kicking, into a genre invented after his death.”¹ In introductory notes to his translation of *Mysterious Island* (1873), Butcher argues (supported by quotes from Verne’s own introductions) that Verne’s first love was, rather, the *robinsonade* – indeed, *Mysterious Island* began life as a manuscript called *Uncle Robinson* that had nothing to do with science, or with Captain Nemo.

Arthur B. Evans, an eminent authority on Verne, had already argued in a 1988 essay, that Verne was the father of the “scientific novel” rather than what we know as science fiction, and that the former was distinguishable from the latter by a number of factors – including its pedagogical agenda and consequent attention to the kind of technical details (fans today call them “information dumps”) that later sf writers dispensed with (In a 2014 afterword, however, Evans had second thoughts, saying that Verne’s tales that mixed adventure and science “were the first to popularize this new, hybrid genre and paved the way ... for the rise and popularity of sf in the twentieth century.”)²

Long before either Butcher or Evans, Jean Chesneaux had offered a revisionist interpretation of Verne’s fiction in *The Political and Social Ideas of Jules Verne* (1971). A Maoist at the time,³ he saw Verne as a sort of closet Marxist (Butcher would later see him as possibly a closet homosexual.), whose works take on the evils of American imperialism and capitalism. In particular, *The Self-Propelled Island* (1895,

then titled *Propeller Island*) can be seen as showing how “Verne makes capitalist society destroy itself by its own contradictions.”⁴ In that and other late works, Chesneaux continues, “Verne becomes more and more aware of the expansionist and dominating character of American policy.”⁵

Butcher is rather skeptical of “postcolonial critics” claiming Verne for their cause:

While it is true that Verne occasionally noted the negative effects of late nineteenth century colonialism, he also ascribed benefits to French, British and American presence abroad, Very rarely did he suggest as a solution the independence of a third world colony. With the general exception of “the only God-given country” [France], his mocking attacks on overbearing or ridiculous individuals encompassed all nationalities.⁶

As for *The Self-Propelled Island*, we can now see and judge for ourselves on the basis of the first *authentic* English translation; the first, published as *The Floating Island* (1896), was presumably one of those “with the passages offensive to the British or Americans modified or omitted,” according to Volker Dehs in his introduction.⁷

For all the interest it has inspired among critics, *The Self-Propelled Island* is not a great novel. Butcher praised it as “the first novel ever in the third person and present tense”⁸ (Could he really have known for sure?), and Dehs admires it for its use of metaphors that make it a “very modern novel.”⁹ But it is mostly a travelogue loaded with information dumps, and while it is a “futuristic novel”¹⁰ as Dehs calls it, the huge floating city called ‘Standard Island’ is the only futuristic element.

4 Chesneaux, Jean, *The Political and Social Ideas of Jules Verne*, trans. Thomas Wikeley, London, Thames and Hudson, 1972, p. 161.

5 Ibid.

6 Butcher, op. cit., p. 301.

7 Verne, Jules, *The Self-Propelled Island*, translated by Marie-Thérèse Noiset, introduction by Volker Dehs. Lincoln, NB, University of Nebraska Press/Bison Books, 2015. P. xv.

8 Butcher, op cit., p. 218.

9 Verne, op cit., p. xix.

10 Ibid., p. xiv.

1 Butcher, William, *Jules Verne: The Definitive Biography* (Acadian, 2008), p. 182.

2 Evans, Arthur B., “Science Fiction vs. Scientific Fiction in France,” *Science Fiction Studies*, March 1988; reprinted, with an afterword, in Evans, ed., *Vintage Visions* (Wesleyan University Press, 2014), pp. 82-95.

3 https://fr.wikipedia.org/wiki/Jean_Chesneaux.

Much has been made by critics of the fact that in the novel the United States has annexed Mexico and Central America, but the novel itself does little with this – as if Verne just wanted to use that one element of future history as a marker. Aboard the Standard Island, we learn of the telautograph (a prototype of fax machines) and the kinetograph (a movie camera); but both were already in existence when the novel was written (Thomas Edison had named and patented the kinoscope in 1889). Electric power and light, electric carriages and the use of aluminum as a construction material weren't exactly new ideas in sf. They are new only to Verne's viewpoint characters, members of a French string quartet touring America (of which we see next to nothing, and nothing at all futuristic – the Wild West is still the Wild West), tricked into an involuntary sojourn on the island.

Perhaps the most imaginative element to modern readers is the idea of music as a form of therapy – but that is credited by Verne to “J. Harford” (actually Frederick Kill Harford) of Westminster Abbey, who sponsored sessions at hospitals late in the 19th Century but was later almost forgotten.¹¹ It is the character Munbar who sings the praises of musical therapy to the quartet, which leads Pinchinat, the alto violinist, to complain: “And you simply saw us as some sort of musical medical men or apothecaries...?”¹² At least the music they favor – Beethoven, Haydn, Mozart – seems to be just what the doctor ordered.

But there is an invisible elephant in the room here: Albert Robida, the author and illustrator of *The Twentieth Century* (1882), a comic (but with serious undertones) vision of everyday life in 1952. Robida was obviously inspired by Verne, having previously published a parody of the *Voyages Extraordinaires: The Adventures of Saturnin Farandoul* (1879). But Verne himself was uninspired to do likewise; two stories set in the future, “An Express of the Future” (1888) and “In the Year 2889” (1889) are generally attributed to his son Michel¹³ – and seem to recycle Robida's ideas, including express tubes, without adding anything truly novel. In light of his then-unpublished *Paris in the Twentieth Century*, and previ-

ous satirical works like Emile Souvestre's *The World As It Shall Be* (1846) as well as Robida's later works, scholars might well address the question of why the elder Verne avoided the truly futuristic novel.

Standard Island itself is ruled by two wealthy families, the Tankerdons and the Coverleys. They are compared to the likes of the Astors, but more often to the Montagues and the Capulets, and there is even a replay of *Romeo and Juliet* (The two families are also divided by religion – Calvinist Protestant versus Catholic.). Verne's social criticism of American ways is hardly Marxist; more in the vein of Charles Dickens in *Martin Chuzzlewit*; indeed, Deh notes that the name of one of the officers, Munbar, is a play on ‘Barnum’, and that of another character, Barthelemy Ruge, alludes to Dickens' *Barnaby Rudge*. Members of the ruling families are self-absorbed, and pay little attention to what is going on in the wider world. Yet at the same time there is a sympathetically-portrayed governor, Cyrus Bikerstaff (based on Cyrus W. Field, who had befriended Verne while both were aboard the *Great Eastern* in 1867).

The travelogue takes the Standard Island, and the string quartet, around the Pacific, calling at a number of islands and offering touristy impressions of the natives – also now-obscure histories of some of their ruling families. Along the way, the British Navy gives the Americans grief, and Pinchinat is captured and nearly killed on Fiji – a British possession. But while most of the Polynesians are appealing, Verne has it in for the Malays and the New Hebrideans – “treacherous and cowardly people”¹⁴ who are recruited by a Malay named Sarol to stage an attack on Standard Island – an attack barely thwarted in a battle that takes the life of Bikerstaff.

That bit of racism sets up the denouement: the Tankerdons and Coverleys fail to agree on a new governor, and end up trying to steer their respective halves of Standard Island on different courses, causing it to break down and later founder. But what seemed to Chesneaux a socialist critique of the capitalist elite is seen by Dehs rather as an expression of Verne's own distrust of democratic government, quoting him as saying that “there is more freedom for citizens in the monarchy than in the republic.”¹⁵ Deh also notes the parallels to *Paris in the Twentieth Century*, which had been rejected in 1863 by his edi-

11 <http://mtp.oxfordjournals.org/content/7/1/17.abstract>, retrieved Aug. 26, 2015.

12 Verne, Op. cit., p. 67.

13 https://en.wikipedia.org/wiki/Michel_Verne, retrieved Aug. 9, 2015.

14 Ibid., p. 180.

15 Ibid., p. xviii.

tor Pierre Jules Hetzel. There too, there seems to be a 'gosh-wow' attitude towards technological wonders as such, yet also a feeling that overdependence on technology in everyday life can be dehumanizing.

But Verne has yet another message at the very end of *The Self-Propelled Island*, harking back to the message of gothic science fiction in the vein of Mary Shelley and some of his own earlier ("Master Zacharias," 1864) and later (*Master of the World*, 1904) works. His final word is that Standard Island's doom was ordained by the hubris of its creators: had they "not been forbidden to usurp so recklessly the power of the Creator...?"¹⁶

Livid

Fernando Porta

Livid by Francesco Verso. Xoum Pty Ltd., 2014. Paperback, 256 pages, \$ 19.99. ISBN 192-1-13430-5.

Order option(s): [Paper](#) | [Kindle](#)

FRANCESCO VERSO is one of the best representatives of modern and critically mature Italian science fiction. He has won several prizes with his stories, and *Livid* also won the national Odyssey Prize in 2013 and the Premio Italia for Best Novel for 2014. *Livid* is also his first novel to be translated into English, by the Australian publisher Xoum for the "Fantastica" series. The book has been well-translated by Sally McCorry in collaboration with the author himself. The final result is a good example of careful collaboration and refinement between author, translator and editors.

As Verso has admitted in a radio interview on [SBS radio](#), *Livid* can be read as a sort of *bildungsroman* of the narrator, Peter Pains, who is in love with Alba, an artificial being with the conscience and memory of a woman already dead (a *nexhuman*, as these rather fortunate citizens of the future are called in the novel). The story is centred on the painful life's journey of Peter – who is literally at "pain"(s) to reassemble the dispersed body parts of the girl he has spied inside a local travel agency, but whom he never

dared to approach in person for over fifteen years. Alba has been killed and dismembered by a band of sadistic thugs (headed by Charlie, Peter's brother) who are interested in collecting and selling the reusable parts and technological components found in the huge areas of waste surrounding the megalopolis where the story is set. In this wasteland of desire and despair Verso builds the account of Peter's own thoughts and comments throughout the narrative; Peter himself has also been a member of the band of *trashformers*, scavengers who scour the polluted urban areas of the planet, so he feels responsible for what has happened.

But of course the novel can also be interpreted as a typical science-fictional admonitory tale of a dystopian future where science has finally defeated death and eternity has been conquered by separating the body from the mind. If the body decays it can be supplemented by prosthetic limbs and artificial organs; the human mind itself can be electronically stored and downloaded in "new" synthetic bodies, but only for the lucky citizens who can afford this expensive treatment. In this way, Verso seems to depict a very cynical future for mankind whereby scientific progress has made eternal the recorded memories and the lives of the lucky few, whereas the large majority of the population is left to its mortal destiny, poisoned by the smog and the industrial waste which, like a new artificial desert, surround the cities. Peter belongs to this second category: his love for Alba might well symbolize a kind of hopeful dawn he wants to achieve in spite of the derelict existence he is condemned to live (in fact, the word "*alba*" means 'dawn').

Either as a subjective tale or as a paradigmatic example, what Verso has staged is a very sophisticated narrative, where literary references and quotations abound: Edgar Allan Poe, T.S. Eliot and above all Philip K. Dick. The last is made clear when one realizes that the sea of waste is referred to, in both the original Italian text ("*palta*") and in its English translation ("*kipple*"), with the same term that was coined in *Do Androids Dream of Electric Sheep?*.

This is a complex drama interrogating the dilemma of life and death in the year 2040, when existence has turned either into an empty game of survival – as for the *trashformers* – or into personal addiction to videogames that dominate televisions and computers: this is the virtual *gamesphere* of those who want to forget the tragedy of the present to pursue

¹⁶ Ibid., p. 323.

their electronic victories. In this degraded context everything is hybrid, a mixed compound of what is – or what used to be – human and what has become a material thing, thus consumable and re-usable. The protagonist is hybrid too - he is made up of both flesh and metal after a terrible accident in his childhood, and when he wears his artificial glasses he has merely to scan the horizon to locate the right RFID tag that identifies the missing body parts of Alba. Only in this way can he win his own game of survival and move quickly among the junk to find the parts that belong to the body of his beloved humanoid.

Following these same dramatic premises the *finale* of the novel is even more meaningful for the reader. The author demonstrates again his narrative skill and imaginative power when the reader is finally confronted with the existential dilemmas of living a life as a *nexhuman*. Bravo Francesco Verso!

Hannu Rajaniemi: Collected Fiction

Jerome Winter

Hannu Rajaniemi: Collected Fiction by Hannu Rajaniemi. San Francisco, CA: Tachyon Publications, 2015. 238 pages. \$25.95, hardcover. ISBN 978-1-61696-192-3.

Order option(s): [Hard](#)

IT IS OBLIGATORY in all discussions of Hannu Rajaniemi to mention his impressive bona fides: put simply, the author received a PhD in string theory and works as an entrepreneur in the commercial applications of advanced math and sciences. In these new stories that exhibit his patently distinctive voice now familiar to readers of the “Jean le Flambeur” trilogy (2011-2014), Rajaniemi’s work of short fiction collected here blends the hardest science fiction imaginable with surreal, mythopoeic flights of fantasy reminiscent of Roger Zelazny or Neil Gaiman. Even though the fantastic elements in his fiction are often quite pronounced - more than most science fiction loosely labelled “hard” today - Rajaniemi’s work closely follows in the spirit of “radical hard science fiction,” that subgenre both politically radical and

aesthetically hard, and first influentially advocated by *Interzone* magazine in the 1980s. “The Server and the Dragon,” for example, recounts a far-future creation-myth fable in which a server node shot into deep space by a “darkship” fends off existential loneliness by replicating a so-called “dragon,” which may result not so much in the yearningly desired companionship as in utter destruction for the server. With giddy abandon, Rajaniemi steeps this basic story template in defiantly unglossed allusions to “N-body chaos,” “gauge field knots,” “Shkadov necklaces,” and “supersymmetric vacuums.” Likewise, “Invisible Planets” riffs on Italo Calvino’s *Invisible Cities* by following the travelogue of another darkship that commands fleets of networked minds in six dispatches labelled “Planets and Death,” “Planets and Money,” and so on. These dispatches speculate on alien civilizations whose gradual techno-scientific progress can slowly chip away at problems of longevity, economics, communication, or laws of physics. Yet beyond its meditation on the epistemic limits of cross-cultural encounters, what really distinguishes the story as unique are its casual references to “xenocatabolic enzymes,” “tetroxide fuel,” and “quantum cryptocurrencies,” which suggest a fascinating density behind an otherwise straightforward narrative set-up.

The baffled reader may be forgiven for assuming some of these terms are newly coined neologisms, given some of Rajaniemi’s notorious science-fictional strategies in the “Jean le Flambeur” series; yet even a cursory web search will pull up reams of relevant scientific data and theory that Rajaniemi makes an artistic choice to omit, much less digest narratively. The effect for the reader of intricately lacing some of his more complex stories with these dream-like traces of real-world hard science can at best be exhilarating and hypnotic, at worst inexplicably confusing and dizzying. Regardless, Rajaniemi’s bold science-fictional technique undergirds his remarkable gift for lyrical and imagistic prose with a resonance and verisimilitude to our own global singularity of vertiginously rapid technocultural acceleration of which we are doubtless deep in the throes. Even if most of the allusions dart over the heads of uninterested readers like so many neutralinos in empty space, readers cannot help but recognize the contours of their own world in these vividly rendered scenes of hyper-advanced societies saturated in cutting-edge quantum mechanics, nanotechnology, genetic engineering, and artificial intelligence.

The novelette "Skywalker of Earth" indeed includes heady references to "Alcubierre warps" and "icosahedral symmetry orbitals," but the most pivotal formal allusions are to E.E. "Doc" Smith's *The Skylark of Space* (1928) - often considered the first veritable space opera - and *Star Wars* (1977), which as everyone knows transformed that moribund subgenre into kitschy pop. Clearly influenced by New-Wave and Cyberpunk renovations on the pulp-magazine origins of the genre, this story, moreover, self-consciously marks itself as the latest entry to the still evolving canon of New Space Opera. The entertaining space-opera pastiche both flirts with and subverts its plaintive nostalgia for space-opera cliché, gadget fetishism, and superscience. By the close of the adrenaline-soaked, hyperkinetic plot, the bygone heroic exploits of the plucky amateur tinkerer Marc Dupres have barely defeated the genocidal bigotry of the myopic technocrat and eugenic proto-fascist, Richard Soane. Moreover, the omnicompetent protagonist, federal agent Kathryn Leroy, summarily disproves the sexist assumptions routinely spouted off by the aging paterfamilias Soane. These dated American male engineer heroes and villains are faintly lampooned as throwbacks of a vanished era, as they pepper their dialogue, for instance, with gauche 1930s idioms that overtly parody "Doc" Smith. In the outrageous climax, involving the Large Hadron Collider at CERN and a kind of open-source Kickstarter campaign to save the planet from imminent destruction, Rajaniemi even reclaims a modicum of the exuberant optimism of traditional space opera while also maintaining a savvy critical distance.

In "Tyche and the Ants," Rajaniemi takes the opposite affective tack and puts a near-miserabilist twist on moon colony and alien-invasion tropes in a story that reads like a Heinlein juvenile rewritten by Charles Stross. In the story, an infestation of communication robots called Ants plagues the private moonbase sanctuary of the young child Tyche after she is deserted there. Tyche nonetheless populates her colony with an elaborate virtual-reality fantasyland independent of her parents who originally flew to the moon as a weigh-station in a cosmic hegira for a persecuted sect of bioengineered diaspora. To begin her journey to the utopian Right Place, Tyche must not only fend off the invasion of Ants but also retake control over an artificially-intelligent nanny called Brain, who makes her submit to amnesia-

inducing treatments to shelter her from the traumatic knowledge that her parents might have died. Beneath the buoyant techno-scientific futurism that gives this story a young-adult feel, in other words, rests a scepticism of blind reverence to the imperatives of Big Science, which, it must be said, space-exploration narratives too frequently endorse. Another story that challenges such dictates of Big Science more historiographically is "The Haunting of Apollo A7LB," which shows an unusual sensitivity to the unjustly marginalized contributions of women in science; the clever story concerns the exorcising of a haunted spacesuit and the female NASA designers and seamstresses who stitched and threaded while the hypermasculine astronauts hogged the glory.

Despite Rajaniemi's critical reservations over the misuse of even the purest and most theoretical science by overweening corporate and governmental interests, his stories consistently maintain an underlying utopian conviction. "The Jugaad Cathedral," for instance, extrapolates on the vexing technocultural problems of data mining, social networks, high-tech prosthetics for the differently abled, and gold farming. Following a near-future governmental crackdown on the internet referred to as "the Assangecalypse," Kev, a graphic designer, overcomes a superficial obsession with the cool-hunting social networking site F+ and decides instead to help Rajia, a disabled hacktivist, build the algorithm for artificial hands and legs through the construction of a Cathedral in a role-playing game called Dwarvcraft. Instead of solely highlighting the horrifyingly exploitative sweat-shop conditions of videogame currency farming by low-wage workers in underdeveloped countries for purchase in First-World countries, Rajaniemi uses the story to also draw attention to volunteer computing and citizen-science research. A relevant real-world example of this phenomena (that Rajaniemi discusses elsewhere in a TED Talk) is called Foldit, an online puzzle video game in which users fold proteins to assist disease research.

Along the line of Rajaniemi's interest in hard science fiction, this collection contains intriguing evidence of Rajaniemi's experiments with neurofiction as well. The rationale for this story is explained more fully in a Google Talk by Rajaniemi (available online). While reading the story "Snow White is Dead," a reader would ideally wear an electrode headset that measures brain waves as a program Rajaniemi and a collaborator coded and then open-sourced,

which directs readers through a combinatorial array of potential story paths based on their neural reactions to life-and-death imagery in a primal fairy-tale template. Rajaniemi orders the section according to the most popular story structure for this collection, but gives the URL of the coded story program for readers who would like to recreate the experiment. Given these experimental parameters and these standard cognitive responses, the story as reprinted here seesaws with bipolar affect section by section and concludes rather ambiguously; but the story overall, complete with self-conscious allusions to the interactive experimental scenario, amounts to an interesting contemporary retelling of the Snow White fairy tale, with Snow White as a suicidal cosplay celebrant, the huntsman as a guilt-ridden paparazzi, the seven dwarves as a clutch of Dungeons and Dragons gamers, and a jealous, aging heiress as the obligatory wicked stepmother. A more conventional technology-driven experiment is additionally included: namely, "Unused Tomorrows and Other Stories," a collection of Twitter-esque 140-character pieces of microfiction that due to Rajaniemi's accustomed prose velocity and compression does not seem altogether distinct from the habitual style of his other regular-length stories and novels.

Perhaps the most resonant meditations on the unintended fallout and collateral damage of military-industrial Big Science derives from Rajaniemi's deep-seated interest in artificial-intelligence research. "Deus Ex Homine," for instance, extrapolates on the experience of military veterans following the wars in Iraq and Afghanistan. Aileen joins the armed forces and becomes a transhuman cyborg — rendered on this edition visually with the astonishing cover art by Lius Lasahido — to fight the "godplague," a Singularity-like virus, after she gives birth to killer artificially intelligent babies with her boyfriend, Jukka, whose own quantum hacking has made him merge with the godplague — the revelation of which, told in confessional flashbacks that detail the aftermath of the birth of a godplague baby, drives Aileen to the military. This virus effectively gives the narrator Jukka high-functioning Asperger's and because of which he needs a symbiote implanted in his brain to cue appropriate emotional responses. As an investigation into the human costs of our recent and doubtless future bouts of high-tech warfare, the story is quite insightful. Other stories collected here that effectively breathe fresh life into the often tired trope

of artificial intelligence are "Elegy for a Young Elk" and "His Master's Voice."

Interweaving complex allusions from cultures as diverse as Arabic to Chinese ones, Rajaniemi's fiction generally assumes global dimensions, and this collection is no exception. The entirely non-science-fictional "Fisher of Men," for instance, revisits Finnish neo-pagan myths from Rajaniemi's native homeland. Clearly drawing on sources such as the famous Finnish epic poem, *The Kalevala*, as well as works from Finnish oral traditions, the story involves a struggling entrepreneur Jaakko Rissanen who narrowly evades betrothal to the sea goddess, Ahti, who wishes to carry Jaakko down to Tuonella, the land of the dead. One of Ahti's other enslaved husbands, Iku-Turso, son of the sky-god Äijö, is the secret enforcer who wishes to bind Jaakko to such hellish nuptials, and Jaakko must outsmart him as well as overcome the seductions of Ahti to stay alive. Both the mythopoeic and geocultural aspects of this finely crafted story make for a rich, compelling read. Similarly sheer fantasy as opposed to his hard science fiction, "The Viper Blanket" wrestles with the Finnish pagan legend of Hallow Eve cults sacrificing the unbaptized to the queen of the underworld Tuonettar, vividly depicted as living under church floorboards with claws, wild hair filled worms and branches, and suckling her children, the red-haired clan of Hurmes. One of this clan, the unnamed first person narrator, grieving over his deceased wife, decides to end this barbaric ritual and, to the condemnation of the ghosts of his ancestors, feeds Tuonettar to the titular blanket of vipers. Other stories in the collection complexly evoke their settings of Scotland ("The Jugaad Cathedral"), America ("Skywalker of Earth"), France ("Paris in Love"), Egypt ("Imhotep Austin in the Atomic Deathtrap!"), and Japan as well as all the more inventive extra-terrestrial and far future spaces. In the much-reprinted "Shibuya no Love," Rajaniemi's first published story, for instance, he shows a fascination with the contemporary ephemera of Japanese youth fashion, language, and milieu with the novum of a twenty-minutes-into-the-future, ubiquitous-computer dating device that rapidly accelerates romantic relationships in the vein of R.A. Lafferty's "Slow Tuesday Night."

All in all, Hannu Rajaniemi's latest collection of short stories definitively establish that a promising new voice has arrived on the scene. The stories showcase the estimable powers of a gifted young

writer, one who is uniquely qualified to help resuscitate the foundational modus operandi of science fiction as a genre, namely, to express our sublime thrill and terror of living in technoculturally dominated societies.

Star Trek Continues

Tania Darlington

Star Trek Continues. Prod. Vic Mignogna. Trek Continues, Inc., 2013 Star Trek Continues. Web. 1 July 2015.

Order option(s): <http://www.startrekcontinues.com/>

THE PHENOMENON of fan creation is nothing new to the *Star Trek* universe. Fans have been largely responsible for the series' longevity, campaigning successfully for a third season of the original series (*TOS*) and *Star Trek: The Motion Picture* (1979) and running increasingly well-attended conventions that kept *Star Trek* alive in the cultural imagination while the series was neither on the air nor in the box office. Since the advent of the first *Star Trek* fanzine, *Spokanalia* in 1967, fan created writing and art (and eventually videos) have created a community among fans and allowed them to share their appreciation of the series and its characters.

Given the role of fan creation in *Star Trek* history, it is little surprise that in this era where user-created online content proliferates, *Star Trek* web series have become a somewhat common occurrence. From the long-running fan-produced *Star Trek Hidden Frontier* (2000-2007) and its many spin-offs, with their lower production values but groundbreaking stories and themes, to the forthcoming, star-studded *Star Trek: Renegades* (2015), produced by *Star Trek: Voyager* alum Tim Russ (Tuvok), *Star Trek* web series run the gamut of ambition, quality, and content. One of the most acclaimed of these series is *Star Trek Continues*.

Produced by and starring veteran voice actor Vic Mignogna (*Fullmetal Alchemist*, *Bleach*), *Star Trek Continues* aims to complete the last two (unproduced) years of the starship *Enterprise's* five year mission. Picking up with a vignette based on *Star Trek: The Original Series' (TOS)* final episode, "Turnabout Intruder," *Star Trek Continues* explicitly ties itself to *TOS* episodes and extends the most popular themes and missions of that series. Since its debut

in May 2013, four episodes have been released and another is completed and scheduled for release in late 2015. In its short production history, it has been nominated for and received several awards, including Best Fan Film for the episode "Pilgrim of Eternity" at World Con/Lone Star Con 3 in 2013 and Best New Media – Drama for the episode "Fairest of Them All" at the 2014 Burbank International Film Festival.

In terms of production quality and design, *Star Trek Continues* comes closest to *TOS* of all of the *Star Trek* fan productions online, using exact replicas of the *TOS* set and similar costumes, color schemes, and lighting techniques to the original episodes. It also calls back to the original by casting Chris Doohan, son of *Star Trek* veteran James Doohan in the role his father made famous – Chief Engineer Montgomery Scott. Like *TOS*, its episodic nature eliminates strong story arcs; however, its offerings are connected through consistent themes of peace, tolerance, and personal freedom. Though its most acclaimed episodes, "Pilgrim of Eternity" and "Fairest of Them All," are direct continuations of *TOS* offerings ("Who Mourns for Adonais" and "Mirror, Mirror," respectively), *Star Trek Continues* is at its best when it generates original content. Its two standalone works, "Lolani" and "The White Iris," feature its strongest storytelling and most compelling themes. "Lolani" uses the figure of an escaped Orion slave girl to revisit some of *TOS* creator Gene Roddenberry's favorite themes, racial and gender equality and political neutrality in the face of injustice, while providing new insights into the history and biology of the Orion species. Through its eponymous heroine, it takes a stand on gender equality and critiques political noninvolvement policies in a very similar manner to Roddenberry's earlier critiques on race and oppression in *TOS* episodes like "Let That Be Your Last Battlefield" and "A Private Little War." Meanwhile, "The White Iris," possibly the strongest episode of the series thus far, features a well-crafted script that foreshadows the themes of grief, guilt, and loss that are an integral part of the early *Star Trek* films.

Star Trek Continues' appeal is likely limited to fans of the original series. While the characters are well portrayed and the dialog well written, the writing and acting maintain many of the quirks that some viewers find off-putting in the original series. Line delivery is frequently stilted, bad puns abound, and speeches are often overly-optimistic. For *Star Trek* fans, these elements can be endearing carry-overs

to the production values, humor, and hopefulness of *TOS*. For casual viewers, though, they may be annoyances.

Star Trek Continues lends itself to many scholarly uses. Its retro optimism compared to most contemporary science fiction media and even other *Star Trek* series such as *Deep Space Nine* illuminates changes in the genre over the last half century. Its prominence and acclaim as full-length, episodic web series also make it a good candidate for the study of emerging screens and how they change the ways we watch and produce television. Given its place in the history of fan-produced *Star Trek* content, however, *Star Trek Continues* will find its greatest use in discussions of fandom history and practices and the role of transmedia in spreading fan engagement in media franchises. It is also ideally suited for studies of the changing face of adaptation in the wake of internet fan culture. While it is not for everyone, *Star Trek Continues* is an intriguing example of fans' roles in the longevity of cherished media properties.

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The 100

Tania Darlington

The 100. Created by Jason Rothenberg. Perf. Eliza Taylor, Bob Morley, Paige Turco, Henry Ian Cusick. The CW Network. WCJB, Gainesville, FL. 2014-2015. Television.

Order option(s): [Netflix](#)

ONE OF THE DARKEST SHOWS currently on televi-

sion is not on HBO or AMC, but on teen romance and superhero adventure giant CW. Like its predecessor *Hannibal*, the teen dystopian thriller *The 100* proves that network TV is ready and able to go nearly as dark as its pay cable counterparts. Based loosely on a young adult novel (now series) of the same name by Kass Morgan, *The 100* takes place 97 years after Earth has been decimated by nuclear war on a space station housing surviving generations that is running out of oxygen. The station's leaders send 100 teenage criminals back to the surface 100 years earlier than anticipated to see whether Earth's atmosphere is survivable and to build a new civilization on the seemingly uninhabited planet. While it might initially appear to be just another one of the many post-apocalyptic young adult offerings proliferating in the wake of *The Hunger Games*, *The 100* quickly moves past a weak and derivative first half-season to become a deeply intriguing study of what it means to be human and the lengths humans will go to in order to survive.

The 100 has roots in a number of other science fiction properties, and viewers will quickly note the many cast members, both primary and secondary, it shares with *Lost* (Henry Ian Cusick) and *Battlestar Galactica* (Kate Vernon, Alessandro Juliani). As stated, its initial episodes are quite derivative, playing like a hybrid of *Battlestar Galactica*, *Lost*, and *Lord of the Flies*, with political intrigue and the failure of aging machinery taking its toll on the space station and survivors dealing with hostile others, dangerous fog, and battles for supremacy on the ground. This derivativeness, paired with often mediocre acting, makes the first four episodes of the series difficult to get through at times, yet the payoff for doing so is considerable, and the fourth episode foreshadows how dark the show will become by its second season.

In addition to its strong storylines and challenging material, *The 100* boasts one of the most multicultural casts on contemporary television, roundly critiques colonization and treatment of indigenous cultures, and depicts a future where attitudes toward gender and sexuality are so open that the reveal of a protagonist's bisexuality warrants no surprise. *The 100*'s placement on teen romance giant CW may give some viewers pause. However, CW has been home to other innovative genre series such as *Buffy the Vampire Slayer* and *Angel*, and *The 100* has the potential to serve as a worthy successor to those series.

Like many dystopian works, *The 100* considers the positive and negative extremes of human potential. Despite its shaky beginning, as it matures, it grows beyond its imitative beginnings to offer a darker study of human nature and the lengths humans will go to in order to ensure their own survival and the survival of their loved ones than those found in most of today's young adult dystopian works. Early in *The 100*'s first season, a character notes that "one decision does not define a man," and the series returns to that theme again and again. Viewers see good people, especially good leaders, do terrible things. No character, no matter how likeable, is innocent of atrocities, be they murder, torture, or even genocide. The show's willingness to travel the darkest recesses of the human psyche and human behavior is its greatest asset, and producers prove on multiple occasions that they are willing to sacrifice the goodwill and even the lives of their most central characters to illustrate the dreadful potential unleashed when human survival is at stake. The show consistently interrogates what humanity is and whether the misery we willingly inflict on others makes us more human or less so. Further complicating the question, many of the distasteful acts on the show are driven by fear and desire rather than necessity, illustrating how terror can corrupt even the strongest and love can drive some to unspeakable deeds. *The 100* asks both how far we are willing to go and how much we are willing to forgive.

Given its young adult dystopian pedigree, *The 100* is of interest to those working with or teaching children's and young adult science fiction as well as those with an interest in trends in contemporary media and cross-media adaptation. Its dark turn and cable-like tone also warrants consideration for studies of the current challenges and changes in network genre television. Finally, its engagement with issues of indigenous cultures and colonization and the mistreatment of indigenous societies through technological means make it a worthy addition to studies of media interpretations of imperialism and postcolonialism.

While *The 100* is off the air until early 2016, Season One is available and Season Two forthcoming on Netflix.

Works Cited

The 100. Created by Jason Rothenberg. Perf. Eliza

Taylor, Bob Morley, Paige Turco, Henry Ian Cusick. The CW Network. WCJB, Gainesville, FL. 2014-2015. Television.

The Martian

Kanta Dihal

The Martian. Dir. Ridley Scott. Perf. Matt Damon. 20th Century Fox. 2015.

The bluntest description of this film might be the most accurate. Take *Castaway*, *Apollo 13* and *Saving Private Ryan*, blend the three together and set the result on Mars. Thanks to its relentless, youthful humour, the story of Mark Watney, an astronaut stranded alone on the planet after being presumed dead, made Andy Weir's novel *The Martian* one of the most popular science fiction works of 2014.

20th Century Fox was very quick to jump on the bandwagon. Their rapid adaptation disturbed fans and critics alike as the casting choices were announced and many jumped at the parallels with *Interstellar* (2014). After the success of *Interstellar*, these critical voices found it difficult to imagine how well an audience would cope with another 'hard' science fiction film starring Matt Damon and Jessica Chastain.

Damon proves to be an excellent Mark Watney as he manages to perfectly pitch the jocular tone of Watney's soliloquies while maintaining the audience's respect for him as an extremely accomplished scientist. This balance between humour and scientific knowledge, which avoids the pitfall of simply barraging the viewer with nerd jokes, is all too uncommon, both in science fiction and in fiction about science – Larry Niven's *Ringworld* is one well-known example.

Yet, for one important aspect of this film, a comparison between *The Martian* and *Interstellar* must be made. Both films extrapolate contemporary scientific knowledge in order to excite the viewer about science's current possibilities. The films, then, stand in a long tradition of science fiction created explicitly to promote science, which can be traced back to Hugo Gernsback's 1926 launch of the magazine *Amazing Stories*. Both films rely heavily on scientific advisors:

the idea for *Interstellar* came from Kip Thorne, one of the world's most influential theoretical physicists, who wrote the companion book *The Science of Interstellar*; and for *The Martian* NASA generously provided copious amounts of free consultation. Science communication is central to both films, and it is in this aspect that *The Martian* outshines even the success of *Interstellar*.

Where *Interstellar* is a film about scientific results, *The Martian* is a film about the scientific process. The one scene from *Interstellar* which shows this difference the best is the epiphanic blackboard scene. Blackboard epiphanies are a trope in countless science fiction and regular science films (for instance, the two films about Stephen Hawking, *Hawking* and *The Theory of Everything*). In *Interstellar*, this epiphany leads to an embarrassingly dramatic scene: Murph (Jessica Chastain) has suddenly solved the scientific problem that has been haunting her career, and celebrates by showering her stacks of notes on her colleagues downstairs. In *The Martian*, there is a brief epiphany when Rich Purnell (Donald Glover) realises how to send Watney's colleagues back to Mars to save him, but the emphasis throughout the film is on the processes that underlie science. Watney uses his stock of knowledge to experiment, fail, learn from this, and try again. He has no epiphanies; he is doing science to save his life. *The Martian* is honest about science in the most positive way imaginable. Interestingly enough, many claims were made about *Interstellar*'s potential in the classroom, but *The Martian* would be a much better choice as its lessons about science can be extrapolated to all sciences, whereas *Interstellar*'s usefulness is limited to upper-year science classes on relativity. *Interstellar* might awe its viewers, but *The Martian* will inspire children to become scientists in all shapes and forms; most strikingly, this includes botanists.

However, the film is also a very successful example of NASA propaganda. It is the plausibility of the mission to Mars in which Watney partakes that makes this film both a cinematic and a propaganda success. On Earth, there is no noticeable evidence that this film is set in 2035 rather than 2015, linking the viewer's excitement over space missions seamlessly with the excitement previously felt over the deployment of the Curiosity rover, the landing of the Philae on the Rosetta comet, and the Pluto flyby. The film tries its hardest to not emphasise that it is science fiction, and instead attempts to be science *possibility*.

An important part of the ending of Weir's novel, which is left out at the end of the movie, is Mark Watney's reflection on the innate altruism of people, which motivated the world to save him. The omission of these musings was a wise decision on the filmmakers' part as it is one of the weakest points of the novel. Watney's reflections sound self-centred and are not adequately justified, especially as he at no point during his stay on Mars voices the altruistic opinion that Earth should not bother spending a billion dollars trying to save him. The film solves this issue by simply showing the motivations that made the world decide to save Watney: it would be a PR disaster for NASA *not* to give it their utmost to save this handsome, charismatic young white (in the film) male who is stranded in full view of the thrill-seeking, reality-TV-addicted world. The science fiction prizes of 2014 all went to Ann Leckie's *Ancillary Justice* rather than to *The Martian*, and one reason might be that Weir's story is better off without any deep existentialist reflections.

Finally, the ending is also changed to provide, yet again, a PR opportunity for NASA. The book ends with the reunited crew homeward bound on board the space ship *Hermes*. The film, on the other hand, shows Watney back on earth, educating a new generation of astronauts. The book's ending is particularly interesting because it leaves one option open that must cross the minds of everyone who is familiar with the 2003 Columbia disaster: after all this work, it could still have been possible for them to not survive their trip home. Instead, the film must show its audience not only that the crew have been brought back safely, but also that space flight has not suffered from this event. Humans are unstoppable, and most importantly, NASA is unstoppable.

It seems to have become a trend to depict both science and space travel in a more realist fashion in fiction. *The Martian* provides new opportunities for education and academic research through its combination of box-office success and accurate science communication. While its scientific message is likely to already be very effective in the leisure context of the cinema, the film could also provide an excellent educational opportunity within formal schooling as it touches upon themes that apply to all science subjects: the film manages to explain the scientific method as a whole, and the importance of both theoretical and practical sciences. In an age of interdisciplinarity, it emphasises similarities, rather

than differences, between fields. Furthermore, this film makes an important benchmark for academic research in both science fiction and science communication, particularly for those academics investigating the borders between the two fields. We should look forward to seeing critical engagement with this aspect of the film in particular, as its positive message about science stands in stark contrast to what seems to be a deluge of science criticism in dystopian fiction.

Parks and Recreation: Season 7

Chris Pak

Parks and Recreation: Season 7. Created by Greg Daniels and Michael Schur. Perf. Amy Poehler, Rashida Jones, Paul Schneider, Aziz Ansari, Nick Offerman, Aubrey Plaza, Chris Pratt, Adam Scott, Rob Lowe, Jim O’Heir, Retta, Billy Eichner. Deedle-Dee Productions, Fremulon, 3 Arts Entertainment, Universal Television. 2015. Television.

Order option(s): [DVD](#) | [Amazon](#)

The final season of *Parks and Recreation* is an unusual conclusion to a light-hearted comedy set in the small town of Pawnee, Idaho. Season seven continues to follow the lives of several members of Pawnee’s Department of *Parks and Recreation* but, unlike the previous six seasons, it is set in the near future in 2017. This time span is used to emphasise the changes that the characters and the town itself has undergone throughout the course of the life of the show. It also uses science-fictional clichés to poke fun at the ways in which technology interpenetrates our lives and becomes deceptively quotidian as it is folded into our everyday experience.

The most salient examples of the science-fictional elements that *Parks and Recreation* uses in this near future are ushered in by the tech-company Gryzzl. This analogue for the start-up companies of Silicon Valley (such as Google and Microsoft) brings a flood of technological services and innovations, from free internet (won for the town in the Season 6 finale in a game of the Cones of Dunshire, which involved Gryzzl’s CEO Mike Bean (Blake Anderson) and the

board-game’s inventor, Ben Wyatt (Adam Scott)), to advanced phones and tablets that resemble the glass-based technologies imagined by the Corning company (and which humorously double as mini-skateboards), and delivery drones that closely resemble Amazon’s proposed drone service.

These overt technological innovations clearly signal a science-fictional futurity. Especially sinister is one scene in which Leslie Knope (Amy Poehler), the series’ main character and a bureaucrat at the Department of *Parks and Recreation*, learns from the vice-president of Gryzzl, Roscoe Santangelo (Jorma Taccone), that the company is monitoring the town’s population through their phones, tablets and internet activity. These irruptions of the present in the imagined 2017 of *Parks and Recreation* are framed by these science-fictional sequences in ways that bring the sinister and comedic into tension with each other. *Parks and Recreation* shows how persistence, charm and persuasion against often unreasonable opposition can result – at the local level – in mutually advantageous compromise. Yet the pace of change remains unaffected as corporate forces – such as Gryzzl and the local Sweetums Candy Company – continue to shape the world of Pawnee.

In the concluding two-part episode, “One Last Ride,” we see a fragment of a dystopian future in Donna Meagle’s (Marietta “Retta” Sirleaf) flash-forward to a Pawnee with a severely neglected education system. Meagle establishes a foundation to fund the ailing school system in support of her husband, the school principal Joe (Keegan-Michael Key). Moments such as these allow *Parks and Recreation* to amplify the satiric gaze it casts on society and politics. It also underscores how change and adversity are inevitable, yet the series’ overriding message is that with the support of friends and an openness to unlikely alliances, the individual can intervene and contribute to shape the unfolding future.

The science-fictional elements of *Parks and Recreation*’s seventh season are fascinating for the way they scaffold the lives of the characters as the viewer is confronted with the changes that are instituted in their future. It brings to the surface surprisingly sinister moments that the series does not completely laugh away. I find this interesting for several reasons: as an indicator of the ways science-fiction permeates popular culture, providing other modes with resources for satire and comedy; as an example of how a long running TV-series can, with a simple

shift into the near-future, provide the context for a satisfying resolution to the show; and as a way to grapple with what Alvin Toffler describes as future-shock. The episodes discussed above are helpful for teaching as they provide accessible examples of science-fictional tropes and narrative strategies. As a contrast to earlier seasons of the show, they can also prompt students to reflect on what it is that these tropes are doing in the series and what these forays into science-fiction can tell us about the distinctive traits of the mode.

Predestination

Artem Zubov

Predestination. Dir. Michael Spierig, Peter Spierig (as the Spierig Brothers.) Perf. Ethan Hawke, Sarah Snook, Noah Taylor. Screen Australia. 2014.

Order option(s): [Amazon](#) | [Blu-Ray](#) | [DVD](#)

PREDESTINATION is the latest movie by the Spierig Brothers following the zombie-movie *Undead* (2003) and the post-apocalyptic vampire thriller *Daybreakers* (2009). The movie is an adaptation of SF grandmaster Robert Heinlein's acclaimed short story "All You Zombies..." (1959). Heinlein's text is usually read as an ultimate time-travel story that addresses such philosophic themes as predestination and solipsism. The narrative structure of the story is highly complicated and multilayered in its attempt to portray the inevitability of a 'natural' course of history. The plot proves the 'butterfly effect', so eloquently referenced by Ray Bradbury in his famous short story 'A Sound of Thunder' (1952), wrong several years earlier.

The plot starts in 1970 (the future from Heinlein's perspective) in a bar with two men having an idle chat. A bartender (Ethan Hawke) and a confession-story writer known under the pen name "The Unmarried Mother" (Sarah Snook) bet on a bottle of whiskey that the latter could not tell a story that would surprise the bartender. From this moment on, the narrative moves back to 1945 to Jane's (the Unmarried Mother's female name) lonely childhood, hardships of adulthood, seduction, abandonment, and sex change. Coming home after an evening class,

Jane meets a man, who later seduces and then abandons her expecting a child. After the birth, the doctor informs Jane that her body contained two set of organs – male and female. Unfortunately, after giving birth to the child, her female set was severely damaged and was removed from her body making her a complete male. The bartender – who reveals himself to be a temporal agent – offers to take the Unmarried Mother to his seducer so he can have his revenge.

Travel to the Unmarried Mother's past is the turning point of the plot when the actual time-travel narrative begins. The characters go to 1963 where they meet the Unmarried Mother's former female-self, then to 1945, 1985 (according to the movie, this is four years after the invention of time-travel machine), 1970, 1975, etc. While travelling, the characters actively interact with surroundings but these interventions do not disturb history. On the contrary, they trigger the 'correct' course of things. The Unmarried Mother goes to the past to avenge himself of his seducer, but ends up becoming a father to herself, subsequently making her own existence possible. Later on, the bartender recruits the Unmarried Mother as a temporal agent, i.e. he recruits himself, and thus finishes the circle.

The story is a one-character play. The bartender, the seducer, and Jane, the Unmarried Mother, interact only with each other. They are the same consciousness wearing various forced or voluntarily-taken masks. Moreover, like an Ouroboros, the eternal serpent eating in own tail, the characters participate in their own emergence and thus know where they come from. 'But where do all you zombies come from,' asks the temporal agent implying to that he is the only living human in this world. Others are 'zombies,' plain shadows and intangible reflections of his mind.

With *Predestination*, the Spierig Brothers address the same themes as Heinlein did in the short story, but they do it with a shift in nuances and details. These changes are strongly bound to the medium of cinema itself. Literary narratives are a perfect medium by which to demonstrate an entire universe confined in one person's mind simply by excluding others from the narrative. The Spierig Brothers perfectly understand that cinema, as a visual medium, does not work quite the same way. Unless we are watching a piece of surrealist or avant-garde experiment, a person on a screen is always recognized and identified by viewers through his or her interaction

with (again) visually recognizable surroundings. Nevertheless, the directors managed to explore the characters' solipsistic and predestined existence, though with a different scope. While in the original story Jane is more or less a regular human being, whose only difference from others is her two sets of sex organs, in the movie the character is portrayed as a super being – she is stronger, faster, and more intelligent than others are. Such qualities make her a perfect candidate to become a temporal agent, but they also make her feel as a deviation, an alien among humans, and subsequently limit an entire world to her solipsistic selfness.

While the original text was a story of recruitment of a new temporal agent, the movie tells about the fight between the Temporal Bureau and a terrorist from the future. In the movie, the directors add an extra active character – the “Fizzle Bomber,” who performed a horrible act of violence in 1970. This act became a *raison d'être* for the Time Bureau to emerge. Still, even though temporal agents have succeeded in preventing crimes in time, they always fail to stop the “Fizzle Bomber.” In other words, the movie that initially starts as a narrative about the terraforming of timescapes turns into a philosophic speculation on the nature of inevitability and – as the title informs us – predestination.

The Spierig Brothers' *Predestination* is an eloquent statement in the time-travel discourse, both in literature and cinema, and it can be of great interest to scholars of science fiction and the time-travel sub-genre. The movie is a vivid example of a contemporary moderately low-budget science fiction movie tradition that in many ways proves to be more inventive and innovative than the usually less-daring expensive blockbusters. The movie would make valuable material for courses on philosophy of time and the possible mechanics of time-travel. While in mainstream time-travel movies (Roberts Zemeckis' *Back to the Future* or Doug Liman's *Edge of Tomorrow* are fine examples here), time usually yields to manipulation and can easily be reversed, the Spierig Brothers show time as a dense and solid substance that refuses to be controlled. It is also worth mentioning that *Predestination* would make inspiring material for anybody studying cinematic adaptations, since it can offer multiple observations on the mechanics of translation of a work of literature into the 'language' of cinema.



UNIVERSITY OF
LIVERPOOL

SFRA 2016

Theme: "Systems and Knowledge"

Date: June 27-30, 2016

Location: The University of Liverpool, Liverpool, UK. <http://bit.ly/1zYQvGO>.
Home of the Science Fiction Foundation Collection, the largest speculative fiction archive in Europe.

Guests of Honour

Dr Joan Haran (Cardiff University)

Professor Emeritus Andrew Milner (Monash University)

Andy Sawyer (Science Fiction Foundation Librarian, University of Liverpool)

SFRA 2016 will be a joint event in association with Current Research in Speculative Fictions, an annual post-graduate conference held at the University of Liverpool. CRSF will take place on the **27th June** and SFRA 2016 from the **28th - 30th June, 2016**. Andy Sawyer will be curating an exhibition on science fiction as part of SFRA 2016



From computers, robots, cyborgs and androids to ecological systems, management practices and industry (including the production of goods, agriculture or meat production), to the social and hard sciences, art, language and communication, right through to the systematisation and dissemination of knowledge, the theme of this year's conference – "Systems and Knowledge" – reaches across a wide range of areas in science fiction scholarship. As a genre inherently replete with a multitude of systems and ideas of knowledge generation and systematisation, science fiction is ideally suited to scientific, linguistic, cultural, sociological, political or philosophical studies.

We invite submissions on any theme and especially encourage proposals that address the thematic, formal, conceptual or theoretical engagement of sf with the conference theme, "Systems and Knowledge". We welcome submissions from SFRA members on a range of sf productions and sf media, including those that might not typically be associated with the mode. This includes but is not limited to literature, film and TV, performance and theatre, music, games, art and sculpture, advertising, architecture, popular science and research in the social sciences.

Areas of engagement might include:

- Cybernetic Fiction and Cyberpunk
- Information Systems and Technologies
- Climate Change, Sustainability and Ecology
- Carbon and Energy Systems
- Genetics and Genetic Engineering
- (Cognitive) Mapping, Cartography and Modelling
- World Systems Theory
- Alternative Systems of Knowledge
- Myth and Storytelling
- Indigenous Knowledge
- Society and Politics
- Scientific Paradigms
- Disciplinary Knowledge and the "Two Cultures"
- Trans-, Multi- and Interdisciplinary Knowledge
- Translation
- Publishing, Scholarship, Libraries and Archives

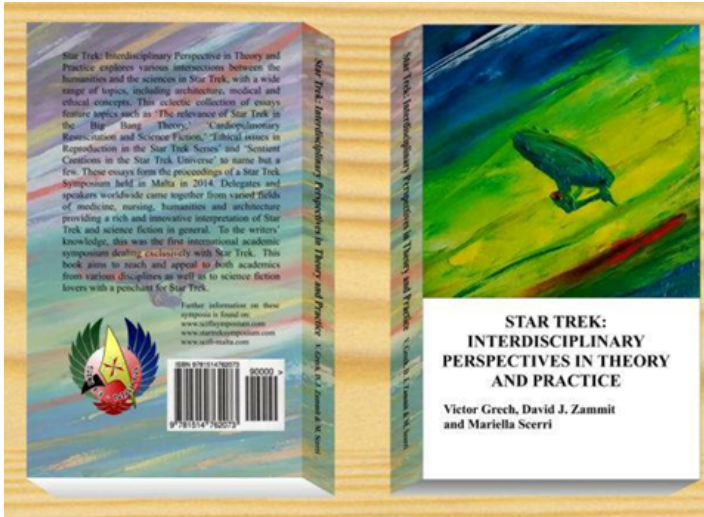
The deadline for proposals is the 31st March 2016. Please send 250-400 word abstracts and a 100 word biography to sfraliv@liv.ac.uk. Panel proposals are welcome, as are suggestions for alternative presentational forms. All presenters must be members of the SFRA.

<http://www.sfra.org/> | <http://currentresearchinspeculativefiction.blogspot.co.uk/>

Books and Events

Star Trek: Interdisciplinary Perspectives in Theory and Practice

Mariella Scerri and Victor Grech



STAR TREK: Interdisciplinary Perspectives in Theory and Practice is a wonderful illustration of the well-known declamation ‘To boldly go where no man has gone before.’ This anthology explores various intersections between the Humanities and the Sciences within *Star Trek*, with a wide range of topics that include architecture, medical and ethical concepts, among others. The essays feature topics such as ‘The Relevance of Star Trek in the Big Bang Theory,’ ‘Cardiopulmonary Resuscitation and Science Fiction,’ ‘Ethical Issues in Reproduction in the Star Trek Series,’ ‘Sentient Creatures in the Star Trek Universe to name but a few. These essays form the proceedings of the *Star Trek Symposium* held in Malta in 2014. Delegates and speakers worldwide came together from varied fields of medicine, nursing, humanities and architecture, providing a rich and innovative interpretation of *Star Trek* and science fiction in general. To our knowledge, this was the first international academic symposium devoted exclusively to *Star Trek*. This book aims to reach and appeal not only to academics from various disciplines but also to science fiction lovers with a penchant for *Star Trek*.

The organizing team will not stop here. With a Science Fiction Symposium held in 2015 after the very successful *Star Trek* symposium, the organizers intend to publish the proceedings of this symposium

as well. Submitted abstracts were encouraged to explore and present contemporary issues in medicine, science and technology as well as philosophical and sociological issues relating to the Humanities, with a specific focus and a direct correlation to science fiction.

2016 also marks the 50th anniversary from the launch of *Star Trek: The Original Series*, thus creating the need to prepare for another *Star Trek* event which will be held on the 15th and 16th July, 2016. The organizers are inviting academics to send in their abstracts. The proceedings of these events, when published, will yield an interesting book series.

This first book in this series is available on Amazon. A copy can also be directly ordered from <https://www.facebook.com/groups/MaltaSciFi/> or send an email on info@scifi-malta.com.

Further information on these symposia can be found at: www.scifisymposium.com, www.startreksymposium.com and www.scifimalta.com.

Call for Papers—Conference

Title: Philip K. Dick Conference 2016: Philip K. Dick, Here and Now

Deadline: 1 December 2015

Conference Date: April 29-30, 2016
California State University, Fullerton

Contact: dsandner@fullerton.edu

Confirmed Special Guests: Dr. Ursula Heise, Jonathan Lethem, Tim Powers and James Blaylock.

Topic: Philip K. Dick’s visionary works often occur in places he lived, set in a dystopic present just around the corner, the day after tomorrow. The conference calls for papers on Philip K. Dick’s works, and on his attention to setting (or undermining of setting?) in terms of both place and time. But we want much more besides. We call for papers on PKD’s presence and influence in sf literature and visionary literature. We want papers that explore how writers and film-makers have produced work influenced by his ideas. How does sf today, how does literature today, reflect his concerns, his style, his visions? How have his themes, such as a dis-ease with our surveil-

lance society, our precarious hold on our identity, our uneasy relationship with power, technology and progress, continued to resonate? What other writers explore the intersection of time, place and identity? Why does PKD's work still feel so urgent to the problem of being human today? What does it mean that we continue to experience PKD, here and now? Write papers that tell us what PKD's presence has meant and means to our culture and its conversation about itself.

The conference will be held at CSUF's Titan Student Union and Pollak Library. We encourage work from institutionally affiliated scholars, independent scholars, graduate students and advanced undergraduates. Acacia is the Graduate Student Group of the English Department at Cal State Fullerton.

Submission: Interested individuals should submit a titled, 250-word abstract and complete contact information—name, institutional affiliation (if applicable), mail and email addresses, and telephone number—by December 1st, 2015. Submission email: dsandner@fullerton.edu.

Title: The Fantastic Now: Research in the Fantastic in the 21st Century

Deadline: 11 January 2016

Conference Date: September 22-24, 2016
University of Münster

Contact: gff2016@wwu.de

Keynote speakers: Professor Fred Botting

Topic: There is hardly any subject in contemporary literary, cultural, and media studies that is discussed and researched with as much controversy as "the fantastic". Since theoretical debate on the subject was initiated in the second half of the 20th century, largely by Tzvetan Todorov and Roger Callois, research on the fantastic has become a globally relevant, interdisciplinary, and rapidly developing field of scholarship. The field's significance is reflected in numerous scholarly journals, associations, organizations, research projects and institutions which have focused on the fantastic.

Yet, ever since the formation of the field, there has been active disagreement on how to define and delineate the subject of research, an issue which has become ever more important not least due to the current breadth and diversity of the research. The

central question, "What is the fantastic?", evokes a broad spectrum of answers. They range from outright dismissal of the subject as trivial, to narrow, minimalist definitions in the tradition of Todorov, and then to extremely broad and inclusive definitions that understand and conceptualize the fantastic as any kind of cultural product which juxtaposes an empirically verifiable world to another, fantastic one, and which thereby becomes formative for genres such as fairy tales, legends, science fiction, magical realism, and gothic. Both recent and long-term developments in cultural and literary theory (such as transnational, transcultural and transmedial approaches) contribute to the field's growing heterogeneity, revealing clearly how significant a place the fantastic has in contemporary culture. At the same time, this proliferation and diversification of "the fantastic" necessitates a survey and a taking stock of the contemporary landscape of research in the fantastic, of its approaches, its interests, its foci, and its findings.

The seventh annual conference of the Association for Research in the Fantastic aims to take on this task under the title *The Fantastic Now: Research in the Fantastic in the 21st Century*. It is our goal to include the greatest possible number of diverse voices and perspectives in this endeavor, in order to do justice to the multiplicity and interdisciplinarity of the field, and to discuss its societal and cultural implications. Possible topics and leading questions in the fields of literary and cultural studies, sociology, philosophy and political science could include, but are not limited to:

- What is "the fantastic"?
- What are/should be the aims of research in the fantastic today?
- Genres of the fantastic (and their theoretical implications): horror and gothic, utopias and dystopias, science fiction, fantasy, magical realism, speculative fiction, fairy tales, fables, myths, etc.
- Fantastic media (and their theoretical implications): The fantastic in literature, art, theatre, film, comics, computer games, Web 2.0, etc.
- The transmedial fantastic
- The neo-fantastic
- Gender, race, class, disability in/and the fantastic
- Aesthetics of the fantastic
- Individual motifs, groups of motifs, or histories of motifs

We are honored that Professor Fred Botting, internationally renowned scholar in gothic fiction and cultural theory, has accepted our invitation as a keynote speaker. In addition to the inclusion of further voices of distinguished scholars, it is our explicit goal to encourage academic exchange among already established as well as younger scholars, authors, and artists in the field.

Submission: Please send your proposals of no more than 350 words (for 20 minute presentations) in German or English, together with your contact information and a short biography to gff2016@wwu.de by January 11, 2016. Proposals for panels of three papers are also welcome before January 11, 2015.

The GFF offers two bursaries for exceptional proposals by students (BA, MA, MEd, PhD). If you are interested in applying for one of them, please make sure to mention this when sending in your abstract.

In addition to the traditional presentations and panel discussions, we plan to hold a roundtable discussion on the topic, "What can/should research in the fantastic strive for and accomplish in the 21st century?" If you are interested, you can also specifically apply to be a participant in this roundtable discussion by sending in a short abstract outlining your ideas/position.

We also welcome creative contributions such as readings, performances, and exhibitions. Proposals for such contributions should likewise be sent by January 11, 2016 via email (gff2016@wwu.de) in a format appropriate to the contribution (images, descriptions, video excerpts, etc.).

We are looking forward to your proposals!

Title: Reframing Science Fiction: A One Day Conference on the Art of Science Fiction

Deadline: 15 January 2016

Conference Date: March 21, 2016

Canterbury Christ Church University, Canterbury, Kent, CT1 1QU

Contact: andrewmbutler42@gmail.com

Keynote speakers: Dr Jeannette Baxter (Anglia Ruskin University) and Dr Paul March-Russell (University of Kent)

Topic: From William Blake and John Martin to Glenn Brown and The Otolith Group, artists have been producing works of art that are science fiction. And

artists and their works have been incorporated into many works of sf.

Meanwhile, on countless book covers and in magazine illustrations, a visual language of science fiction has evolved: bug-eyed monsters; spaceships; robots and so on.

Art in the comic strip and the graphic novel has been the means of telling stories in visual form – whilst artists such as Roy Lichtenstein have made comic panels into art.

We invite 300 word proposals for twenty minute papers on the intersection of art and sf across the media – painting, sculpture, drawing, collage, photography, film, performance, prose, dance, architecture and so on – on topics such as:

- individual artists or groups of artists;
- surrealism;
- pop art;
- representations of sex, gender, class, ethnicity etc.;
- specific techniques or materials;
- book and magazine covers;
- illustrations;
- comic books/graphic novels;
- art film;
- art direction.

Submission: Send proposals or queries to: Dr Andrew M Butler, School of Media, Art and Design, Canterbury Christ Church University, Canterbury, CT1 1QU, UK or to andrewmbutler42@gmail.com by 15 January 2016.

Title: Anticipations: H. G. Wells, Science Fiction and Radical Visions

Deadline: 15 April 2016

Conference Date: July 8-10, 2016

H. G. Wells Conference Centre, Woking, UK

Contact: anticipations2016@gmail.com

Organised by the H. G. Wells Society

Topic: H. G. Wells was a novelist, social commentator and utopianist, and is regarded as one of the fathers of science fiction. His early scientific romances featured time travel, mad scientists, alien invasion, space travel, invisibility, utopia, future war and histories of the future: his mappings of the shape of things to come was an overture to over a century of

science fiction.

We wish to mark the 150th and 70th anniversaries of Wells's birth and death respectively by exploring his science fiction, his precursors and successors and his lasting influence upon the genre in print, on film, on television, on radio, online and elsewhere. This is especially appropriate because the event will be held at the H. G. Wells Conference centre in Woking, the town where Wells wrote *The War of the Worlds*. Many of his ideas on politics, science, sociology and the direction in which he feared humanity was going were contained in his early science fiction and ran through his later influential work.

Topics might include, but are not limited to:

- specific individual or groups of novels/stories;
- the connections between Wells's fiction and non-fiction, including his political, utopian and scientific writings;
- utopia/dystopia;
- histories of the future;
- precursors to Wells's sf;
- sf writers influenced by Wells;
- sequels by other hands;
- adaptations into other media.

Submission: Please send a brief biography and an abstract of 400 words for a twenty minute paper by 15 April 2016 to anticipations2016@gmail.com.

Further details will be available from <http://anticipations2016.wordpress.com>.

Call for Papers—Articles

Title: Monographic Issue: "The Fantastic in the New Golden Age of Television (1999-2015)" (Alfonso Cuadrado and Rubén Sánchez Trigos, Coords.)

Manuscript Deadline: 15 January 2016

Contact: Register as author on *Brumal* webpage: <http://revistes.uab.cat/brumal/user/register>.

The call for papers for articles for the sections "Monograph" and "Miscellaneous" for the Vol. III n.º2 issue of *Brumal: Revista de Investigación sobre lo Fantástico* / *Brumal: Research Journal on the Fantastic* is now open.

Scholars who wish to contribute to either of these

two sections should send us their articles by January 15, 2016, registering as authors on our web page. The Guidelines for Submissions may be found on the Submissions section of the web page.

The fantastic has carved out a place for itself in the new golden age that television (in particular, in the U.S.A, although not only there) seems to be experiencing since the end of the 90s. Thus, in addition to the characteristics normally attributed to the series of this new television (greater complexity of plot and character, generic hybridization, treatment of themes seldom or never dealt with by the media, production values of more cinematic quality than normal for television), others emerge that are inherent to the fantastic, such as the new visions of monsters being offered, the questioning of reality and identity through the genre, and its relation to more traditional themes and characters, among others. The objective of this monographic issue is to offer a series of essays, panoramic or focused on a particular work, that analyze in depth the fantastic in series produced around the world during this period. The monograph will only consider works of a fantastic nature as this narrative form has been theoretically defined, only accepting papers on other non-mimetic genres such as the marvellous or science fiction if and when they are related to fantastic narrative.

Some possible areas of research include:

- Remakes, revisions and reinterpretations of classics of the genre.
- Identity and reality in the 21st century.
- Hybridization with/relationship to other genres and/or narrative forms.
- The fantastic in new Spanish television.
- New representations of the monster in television.

The Miscellaneous section is open to any type of article on any of the diverse artistic manifestations of the fantastic (narrative, theater, film, comics, painting, photography, video games), whether theoretical, critical, historical or comparative in nature, concerning the fantastic in any language or from any country, from the nineteenth century to the present.

Title: Science Fiction and the Medical Humanities

Manuscript Deadline: 1 March 2016

Contact: Register on website: <https://mc.manuscriptcentral.com/mh>.

The BMJ Group journal *Medical Humanities* will be publishing a special issue: 'Science Fiction and the Medical Humanities'.

We invite papers of broad interest to an international readership of medical humanities scholars and practising clinicians on the topic 'Science Fiction and the Medical Humanities'.

Science fiction is a fertile ground for the imagining of biomedical advances. Technologies such as cloning, prosthetics, and rejuvenation are frequently encountered in science-fiction stories. Science fiction also offers alternative ideals of health and wellbeing, and imagines new forms of disease and suffering. The special issue seeks papers that explore issues of health, illness, and medicine in science-fiction narratives within a variety of media (written word, graphic novel, theatre, dance, film and television, etc.).

We are also particularly interested in articles that explore the biomedical 'technoscientific imaginary': the culturally-embedded imagining of futures enabled by technoscientific innovation. We especially welcome papers that explore science-fiction tropes, motifs, and narratives within medical and health-related discourses, practices, and institutions. The question – how does the biomedical technoscientific imaginary permeate the everyday and expert worlds of modern medicine and healthcare? – may be a useful prompt for potential authors.

Subject areas might include but are not limited to:

- clinicians as science-fiction writers
- representations of medicine, health, disability, and illness in science-fiction literature, cinema, and other media
- the use and misuse of science fiction in public engagement with biomedical science and technology
- utopian narratives of miraculous biomedical progress (and their counter-narratives)
- socio-political critique in medical science fiction (via cognitive estrangement, critical utopias, etc.)
- science fiction as stimulus to biomedical research and technology (e.g. science-fiction prototyping)
- science-fiction tropes, motifs and narratives in medical publicity, research announcements, promotional material, etc.
- the visual and material aesthetic of science fiction in medicine and healthcare settings

Up to 10 articles will be published in *Medical Humanities* in 2016.

All articles will be blind peer-reviewed according to the journal's editorial policies. Final publication decisions will rest with the Editor-in-Chief, Professor Deborah Bowman.

Please submit your article no later than 1 March 2016

Articles for *Medical Humanities* should be a maximum of 5,000 words, and submitted via [the journal's website](http://mh.bmj.com/) <<http://mh.bmj.com/>>. Please choose the special issue 'Science Fiction and the Medical Humanities' during the submission process.

If you would like to discuss any aspect of your submission, including possible topics, or the possibility of presenting your work under the auspices of the Wellcome Trust funded project 'Science Fiction and the Medical Humanities', please contact the Guest Editor in the first instance: Dr Gavin Miller (gavin.miller@glasgow.ac.uk)

Title: Museum of Science Fiction Call for Submissions

for New Triannual Journal of Science Fiction

Manuscript Deadline: Ongoing

Contact: Register on website: <http://publish.lib.umd.edu/scifi/about/submissions#authorGuidelines>.

The Museum of Science Fiction, the world's first comprehensive science fiction museum, will publish an academic journal of science fiction using the University of Maryland's journal management system. The first issue of the Museum's new *Journal of Science Fiction* will be launched in January of 2016 and will serve as a forum for scientists and academics from around the world to discuss science fiction, including recent trends in the genre, its influence on the modern world, and its prognostications of the future.

Greg Bear, member of Museum of Science Fiction's Board of Advisors and Hugo award-winning science fiction author said, "Science fiction as literature has real staying power and has been a huge influence on our modern world. It's only fitting that we attempt to understand the cultural and mythic roots of our need for anticipation, adventure, and imagination."

"We want readers everywhere to consider the science fiction genre they love from new angles. We

want them to ask questions and to have fun doing so," said Monica Louzon, managing editor of the Museum's new *Journal of Science Fiction*. "We're encouraging anyone who considers themselves a science fiction scholar to send us their original articles, essays or book reviews for our first issue."

The *Journal of Science Fiction* will be published online and freely accessible to everyone -- no subscription or submission fees are required. The Museum's *Journal of Science Fiction* welcomes original work from writers around the world, with an emphasis on the interdisciplinary and innovative aspects of science fiction. Issues will be published three times a year and each will feature between eight and twelve peer-reviewed academic articles as well as several book reviews and essays.

Submission information for the *Journal of Science Fiction* can be found on the Journal's homepage at the University of Maryland: <http://publish.lib.umd.edu/scifi/index>.

Submissions for the *Journal of Science Fiction* can be sent to: <http://publish.lib.umd.edu/scifi/about/submissions#authorGuidelines>.

Any Journal-related questions can emailed to Monica Louzon, Managing Editor: journal@museumofsciencefiction.org.

More information about other activities are available on the Museum's website: www.museumofsciencefiction.org.

About the Museum of Science Fiction

The nonprofit Museum of Science Fiction will be the world's first comprehensive science fiction museum, covering the history of the genre across the arts and providing a narrative on its relationship to the real world. The Museum will show how science fiction continually inspires individuals, influences cultures, and impacts societies. Also serving as an educational catalyst to expand interest in the science, technology, engineering, art, and math (STEAM) areas. The Museum uses tools such as mobile applications and wifi-enabled display objects to educate and entertain. For a full press packet on the Museum of Science Fiction's vision and other information, please visit: www.museumofsciencefiction.org/presspacket.

Science Fiction Research Association

www.sfra.org

The Science Fiction Research Association is the oldest professional organization for the study of science fiction and fantasy literature and film. Founded in 1970, the SFRA was organized to improve classroom teaching; to encourage and assist scholarship; and to evaluate and publicize new books and magazines dealing with fantastic literature and film, teaching methods and materials, and allied media performances. Among the membership are people from many countries—students, teachers, professors, librarians, futurologists, readers, authors, booksellers, editors, publishers, archivists, and scholars in many disciplines. Academic affiliation is not a requirement for membership. Visit the SFRA Website at www.sfra.org. For a membership application, contact the SFRA Treasurer or see the Website.

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SFRA Standard Membership Benefits

SFRA Review

Four issues per year. This newsletter/journal surveys the field of science fiction scholarship, including extensive reviews of fiction and nonfiction books and media, review articles, and listings of new and forthcoming books. The *Review* also posts news about SFRA internal affairs, calls for papers, and updates on works in progress.

SFRA Annual Directory

One issue per year. Members' names, contact information, and areas of interest.

SFRA Listserv

Ongoing. The SFRA listserv allows members to discuss topics and news of interest to the SF community, and to query the collective knowledge of the membership. To join the listserv or obtain further information, visit wiz.cath.vt.edu/mailman/listinfo/sfra-l.

Extrapolation

Three issues per year. The oldest scholarly journal in the field, with critical, historical, and bibliographical articles, book reviews, letters, occasional special topic issues, and annual index.

Science Fiction Studies

Three issues per year. This scholarly journal includes critical, historical, and bibliographical articles, review articles, reviews, notes, letters, international coverage, and annual index.

SFRA Optional Membership Benefits

Foundation

(Discounted subscription rates for members)
Three issues per year. British scholarly journal, with critical, historical, and bibliographical articles, reviews, and letters. Add to dues: \$36 (seamail); \$43 (airmail).

Science Fiction Film and Television

Three issues per year. Critical works and reviews. Add to dues: \$59 (e-issue only); \$73 (airmail).

Journal of the Fantastic in the Arts

Four issues per year. Scholarly journal, with critical and bibliographical articles and reviews. Add to dues: \$40/1 year (US); \$50/1 year (international); \$100/3 years.

Femspec

Critical and creative works. Add to dues: \$50 (US); \$95 (US institutional); \$60 (international); \$105 (international institutional).

