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Our journal provides an international forum for scholarly discussions on science-fiction and fantasy (SFF), including current debates within the field. We publish academic work on SFF literature, audiovisual art, games, and fan culture. Interdisciplinary perspectives are encouraged. In addition to peer-reviewed academic articles, _Fafnir_ invites texts ranging from short overviews, essays, interviews, conference reports, and opinion pieces as well as book and dissertation reviews on any suitable subject.

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Welcome to *Fafnir – Nordic Journal of Science Fiction and Fantasy Research*’s second issue of 2023! Together, we sail into the holiday season on the wings of fresh research in speculative fiction.

We would like to extend warm thanks to Pawel Frelik, the reigning president of International Association for the Fantastic in the Arts and a recent recipient of Science Fiction Research Association’s Innovative Research Award, for his prefatory “(Largely) Invisible Science Fictions,” which highlights various marginal forms of science fiction. Worth reading for the filmic additions to your watchlist alone, this engaging essay asks us to consider the sheer breadth of science fictional works, well beyond the Western traditions and longer narrative forms.

Then, soar into this issue’s selection of peer-reviewed articles with a Finnish language contribution from Finland’s leading Tolkien researcher, Jyrki Korpua. “Hautaamistavat J.R.R. Tolkienin fantasiafiktiossaa” explores the connections between the funerary traditions of various ancient cultures and those depicted in Tolkien’s fantasy fiction. Ian McLaughlin’s “Giving Wands Their Due: *Harry Potter*, Speculative Realism, and the Power of Objects” takes a similarly fresh angle into another massively popular series: the article mobilizes Object Oriented Ontology, Speculative Realism, and related branches of philosophy to explore the agency of wands in the wuxian world of Harry Potter. Eero Suoranta’s “‘I hope they really evolve into a different species from us’: Human–Nature Disconnection, Eeriness, and Social Class in Han Song’s ‘Submarines’” shifts this issue’s analytical gaze to Chinese science fiction, demonstrating how the short story “Submarines” challenges the widespread idea of a “return to nature” while also calling attention to the links between environmental problems and class politics. Grace Borland Sinclair’s “Grafting Symbiosis: Care, Empathy, and Scientific Reform in Naomi Mitchison’s *Memoirs of a Spacewoman*” demonstrates how Mitchison’s novel represents a feminist rethinking of the role of care and empathy in the scientific method through the lens of alternate forms of mothering. The final article of this issue, Jani Ylönen’s “A Created Adult and the Ideal Childhood: Genetic Technology, Childhood, and Class in Anne Charnock’s *A Calculated Life*,” continues the analysis of speculative forms of reproduction, by connecting questions of genetic technology to discourses on class and childhood.
Moreover, if you have ever pondered what the “speculativeness” of speculative fiction actually means, you will not want to miss our Editor-in-Chief, Essi Varis’ edited correspondence with her fellow postdoctoral researchers, Elise Kraatila, Hanna-Riikka Roine, and Sarah Bro Trasmundi. In “Conversation: What, How, Where, and Why is Speculation?” they discuss the possibilities of (re-)defining speculation as an epistemological practice that could bridge some methodological gaps, and – perhaps – even make us slightly cannier, freer, and more mindful readers, citizens, and human beings.

To round out the issue, our reviews editor Jari Käkelä brings us a brace of five book reviews, complemented by two dissertation reviews. Alicja Jakha reviews Gavin Miller’s Science Fiction and Psychology, a book exploring both how psychology impacts on science fiction and how science fiction portrays psychological theories. Fitting with the theme of our prefatory, José Manuel Ferrández Bru reviews Nólë Hyarmenillo. An Anthology of Iberian Scholarship on Tolkien, edited by Nuno Simões Rodrigues, Martin Simonson, and Angéllica Varandas. While Tolkien certainly isn’t obscure, Iberian scholarship on his work has been overlooked – a situation this anthology begins to remedy with nine chapters spanning semiotics, sociology, comparative mythology, and literary analysis from outside the Northern European and Anglophone sphere. B. L. King reviews Gary Westfahl’s The Rise and Fall of American Science Fiction, from the 1920s to the 1960s, in which Westfahl analyzes many aspects of American Pulp and Golden Age science fiction, including authors, well-known texts, subgenres, art, and trends. Soni Wadhwa reviews Sideways in Time: Critical Essays on Alternate History Fiction, edited by Glyn Morgan and C. Palmer-Patel, an anthology that identifies the contours of an understudied subgenre and applies critical inquiry to contextualize alternate history’s critical discussion, generic history, and defining features. Daniel A. Rabuzzi reviews Carolyne Larrington’s The Norse Myths That Shape the Way We Think, a work with appeal for both academics and the broader public, which puts current literary, ludic, and cinematic adaptations of Norse mythology into a nuanced historical framework. Continuing to explore the enduring appeal of Norse myths and lifeways, Elise Kraatila reviews Anna Bark Persson’s dissertation Steel as the Answer? Viking Bodies, Power, and Masculinity in Anglophone Fantasy Literature 2006–2016, which examines the various ideas of masculinity that the Viking motif embodies in contemporary fantasy fiction through the lens of gender studies. Anna Bark Persson then turns the tables and reviews Elise Kraatila’s dissertation, The Crisis of Representation and Speculative Mimesis: Rethinking Relations Between Fiction and Reality in 21st-century Fantasy Storytelling. It contributes to the fields of narratology and fantasy studies by asking what the speculative use of fantasy is – and why fantasy is growing in popularity at the very same moment as “the real world” is understood to be increasingly ungraspable.

We hope this issue adds spice your holiday reading. If it inspires you to contribute your own thoughts on topics in speculative fiction, we welcome articles (or essays, interviews, and other texts) for 1/2024 until the end of the year. Best sparkly, jingly, fragrant wishes for the season from all of us at Fafnir!

Essi Varis, Elizabeth Oakes, and Merve Tabur, Editors-in-Chief
Jari Käkelä, Reviews Editor
Fafnir – Nordic Journal of Science Fiction and Fantasy Research
(Largely) Invisible Science Fictions

Paweł Frelik

In 2023, science fiction seems to be everywhere. Regardless of the estimates – rather optimistic and self-congratulatory – that in the 1960s almost 10% of all English-language fiction published counted as SF, the borders of the genre have expanded dramatically in the last few decades, even if similar numerical estimates have now become impossible for reasons explained below.

This expansion has happened along two principal axes. The first is geographical and cultural. Afroturism (including adjacent terms, such as Africanfuturism) has blazed trails as its artists and commentators have designed the blueprints for how to talk about traditions of speculation that emerged outside the Global North and do not replicate western viewpoints and narrative grooves. Indigenous Futurisms, Sinofuturism, and Gulf Futurism have followed in its wake. The monumental Routledge Handbook of CoFuturisms (2023) is an excellent starting point for mapping out these and many more facets of this expansion, but it hardly exhausts the critical mass of articles, books, chapters, and online posts focused on non-western production in the genre. The other vector of expansion has been temporally-oriented and encompasses a gradual recuperation of forgotten names, texts, and phenomena, especially where they have tied to groups deemed minority from the perspective of the original science fiction fandoms and studies: women, artists of color, and creators from outside the Anglo- and Francophone cultural zones.

Privileged in these expansions have been narrative media: literature, film, television, and comics as well as, more recently, video games and a range of analog games, including pen-and-paper RPG, board games, and card games. This is understandable for two distinct, albeit intimately related, reasons. These media readily lend themselves to long-form narratives, a privileged format of cultural entertainment since at least the second half of the 19th century. (Short story tradition may seem an exception here but the detail that science-fictional worldbuilding can conjure makes relatively short texts seem very dense compared to their crime or romance counterparts, SF’s fellow travelers during
Prefatory

the heyday of the Culture Previously Known as ‘Popular’.) This long form, in turn, enables not only a solid dose of entertainment, but also allows for the development of multi-layered plotting structures, complex characters, and formal experimentation. Within the Western storytelling traditions, these qualities have long been cherished as markers of mainstream prose, but they also became important following what Mark Bould has called “the Suvin event” (18), a gradual project of science fiction’s cultural and academic legitimization, which is ongoing (and doing great). That, in 2023, science fiction is a discourse best suited to frame the experience of 21st-century techno-modernity is unquestionable, but it is no coincidence that the best examples of that framing are extended narratives: N. K. Jemisin’s *Broken Earth* trilogy, *The Expanse* television series, and franchise storyworlds spanning multiple media channels.

This bias is hardly unique to science fiction and parallels the general trend in academic and high-cultural writing, as James Elkins elegantly summarizes:

> The majority of essays in the humanities have as their primary methodological orientation an interest in complexity and ambiguity. A plurality of texts describe cultural locations, practices, identities, and objects as hybrid, mixed, impure, marginal, dislocated, disoriented, Creole, Pidgin, transcultural, liminal, meta-, para-, quasi-, or otherwise complex and ambiguous. The pleasure of the text is produced by the very focus on hybridity, mixture, and other kinds of irreducible complexity as much as by whatever other insights are gained into the cultural locations, practices, and so forth, that are the texts’ nominal subjects. (11)

The aforementioned science fiction media are perfectly suited for these kinds of approaches and SF texts have rightfully accrued the cultural capital they deserve, partly due to their capacity to engage planetary structures, networks, and exchanges.

And yet, these media do not represent the majority of science fiction texts that surround us. On a daily basis, we are exposed to many more texts belonging to what I call minor media than to those belonging to one of the major medial forms. These include but are not limited to interactive environments that barely register as games (assuming one uses the latter term to denote texts that set some rudimentary win/lose conditions and/or a system of achievements); short film and its adjacent constellation of music videos, commercials, VFX, and game engine demos; digital graphics and illustrations across a range of techniques, hosted both on larger platforms such as DeviantArt or Behance and individual Instagram accounts; maps linked to franchise worlds across media and platforms; all kinds of cybertexts from Twine to multi-part stories on the platform-formerly-known-as-Twitter and standalone app-like texts; GIFs and nano-films; laser and light installations and performances; architectural designs and visualizations for unbuilt architecture; and software assets, whether visual or audial, including building models, landscape textures, and objects.

The sheer diversity of these forms is stunning. Some, like short film, have been around for a while, but have received a new lease of life in the wake of digital revolution; others, like GIFs, are entirely new. Some of them are visible to relatively narrow demographics, like speculative architectural blueprints, others, like digital graphics, are exposed to broad audiences. Many function as paratexts of larger textual objects, while others are entirely standalone.
 Needless to say, it would be a mistake to conflate the complex institutional and technological properties of these different classes of texts, and their sheer diversity in this respect extends beyond the frames of this prefatory. For all their disparate cultural, economic, and functional differences, these science fictions share a number of characteristics.

They usually support at least some narrative structures, but, judged by the standards of long-form storytelling, their stories may seem flimsy, fragmentary, and inconsequential. They are ephemeral and fleeting, partly due to the obsolescence of platforms and systems on which they have been built: this is certainly the case with Twitter bots, which the company blocked a while ago, and complex apps like Steve Tomasula’s TOC (2009), which now requires an emulator of a pre-2015 Mac system. They often lack centralized sites of audiencing and distribution, which makes their circulations unpredictable. The fact that many are created outside what is known as genre science fiction and do not openly identify as SF only compounds their lack of recognition. This decentralization partly results from their globalization – in fact, one could argue that these new digital science fictions are far more diversely global than any of the genre’s older medial forms. This is most readily visible in short film, whose geographical spread is nothing short of stunning. There are shorts made in Costa Rica (Tierra Ajena 2018), Egypt (Ori-Sight 2013), India (Everything is Possible 2022), Kenya (Pumzi 2009), the Philippines (Aliens Ata 2017), Thailand (True Skin, 2013), Taiwan (The Controller 2013, which was directed by the Iranian director Saman Keshavarz), and Uruguay (Ataque de Pánico! 2009) – and many of these countries are home to more than a few titles. (To be fair, feature productions have also been made outside the Global North. Nuoc (2014) from Vietnam, La Jaula (2017) from Venezuela, Serpentário (2019) from Angola, and Gundala (2019) from Indonesia are all cases in point, but these are often difficult to see in western countries due to the lack of distribution, while SF shorts enjoy unfettered global audiencership courtesy of YouTube and similar streaming services.) Last but not least, for scholars and researchers these texts spell a need to look for interpretative frameworks different from the familiar tools of literary or film analysis.

Texts representing these – and more – media forms are as ubiquitous as they are functionally invisible to the audiences attuned to sprawling and aggressively-promoted big-budget productions. By virtue of their brevity and ephemerality, they barely register. Individually, each of them seems almost negligible, but their collective emanation should not be underestimated. Their sheer numbers – practically impossible to gauge – saturate media flows and translate into a collective exposure that can rival box-office hits. These digital texts immerse us in the low-burn, everyday science-fictionality, which can be aesthetically pleasing, but which can also be a delivery vector of powerful ideologies, often embedded in the tools used in their production and distribution. This in itself makes them deserving of our critical attention, but this skepticism should not pre-empt our aesthetic wonder.

**Biography:** Pawel Frelik is Associate Professor and the Leader of Speculative Texts and Media Research Group at the American Studies Center, University of Warsaw. His past appointments include University of California, Riverside, Florida Atlantic University, and Oregon State University. His teaching and research revolve around cultures of speculation, science fiction, video games,
and fantastic audiovisualities. He has published widely in these fields, serves on the boards of Science Fiction Studies, Extrapolation, and Journal of Gaming and Virtual Worlds, and is the co-editor of the New Dimensions in Science Fiction book series at the University of Wales Press.

In 2017, he was the first non-Anglophone recipient of the Thomas D. Clareson Award for Distinguished Service presented for outstanding service to the field of science fiction studies and in 2023 he received SFRA’s Innovative Research Award. He now serves as President of the International Association for the Fantastic in the Arts.

Works Cited


Hautaamistavat J.R.R. Tolkienin fantasiafiktiossa

Jyrki Korpua


Avainsanat: J.R.R. Tolkien, fantasia, hautaaminen, Hobitti, Taru sormusten herrasta
1. Johdanto


Tolkien oli uskovainen roomalaiskatolinen ja häntä on kutsuttu osaksi 1900-luvun niin sanottua “Oxfordin kristittyjen” ryhmästä, eli Oxfordin yliopistossa vaikuttaneita akateemisia kirjailijoita, joiden teksteissä uskonnollisuus näkyy selkeästi (Esty 118). Tämän vuoksi etenkin artikkeliessani yhtälaissyksiköistä kristityksistä tunnettuun teokseen, alskeettinen luovuus näkyy selkeästi, että oikealta käyttöönotosta on huolimatta keskeinen Tolkienin tutkija professori Verlyn Flieger on huomauttanut, että teoksissa on mahdollisesti lainkaan tekoista uskonnollisuutta (36–7). Tolkien on itse huomauttanut, että teoksissa on muun muassa virallisen elämäkerturi Humphrey Carpenterin huomioimaa – että Tolkien oli harrasta kristitystä, jonka asukkaiden ja kirjallisuudessa uskonnollisuus näkyy selkeästi (39, 41, 150–1). Tolkien on itse huomauttanut, että teoksissa on mahdollisesti lainkaan uskonnollisuutta (36–7).

¹ “This is a story of long ago” (Tolkien, *The Hobbit* 28).

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2. Hautajaiset ja niiden rituaalisuus


Toinen keskeinen ihmisryhmä on Númenorin korkeahmisten jälkeläiset, jotka myöhemmin asuttavat Keski-Maan Gondorin ja Arnorin valtakuntia. Tarun sormusten herrasta osassa ”Kuninkaalla pelät” pohjoisen jo

3 “A ritual is a stereotyped sequence of activities involving gestures, words, and objects, performed in a sequestered place, and designed to influence preter-natural entities or forces on behalf of the actors’ goals and interests” (Turner 1100).


3. Kääpiöiden hautajaiset ja haudat

Alun perin lapsille suunnattu ja suurelta osin kevyen satumaisessa teoksessa *Hobitti* on vain yhdeksi hautajaiset. Kääpiöiden ryhmä hautaa johtajansa ja myöhemmän (lyhytaikaisen) Ereborin valtiaan Thorin Tammikilven tänään kuoltua Viiden armeijan taistelussa sankarillisesti, vihollistensa surmaamana. Teologisesti huomioitava tapahtuma sijoittuu kertomukseen juuri ennen...
Thorinin kuolemaa ja hautajaisia, kun hän ehtii tavata vielä kertaalleen teoksen päähenkilön, hobitti Bilbo Reppulin, ja katua menneitä tekojaan. Vaikuttavassa kohtauksessa näkyy selvästi kristillisen teologian näkökulma katumukseen (lat. contritio) ja sen mahdollistamaan armon käsitteen (lat. gratia), sillä Bilbo antaa Thorinille anteeksi tämän teot ja sanat ennen tämän kuolemaa. Lisäksi läsnä on Thorinin usko kuolemanjäljiseen elämään (teologiassa kr. zoē aïônios, “ikuinen elämä”):

Teltassasi makasi Thorin Tammikilpi monesta paikasta haavoittuneena, ja maassa hän fiss tekee lojui nyt sotisopa ja tylsynyt kirves. Hän katsoi ylös kun Bilbo tuli hänen vierensä.

“Hyvästi, hyvä voro”, hän sanoi. “Minä menen nyt odotuksen saleihin ja sitä kautta saadun armon missä sillä ei ole arvoa, tahdon erota sinusta ystävänä ja otan takaisin sanani ja tekoni Vuoren portilla.” (Tolkien, Hobitti 292)4


Thorinin kuolemaa seuraavat hautajaiset. Tolkienin kääpiöt ovat kansaa, joka asuu vuorten alla, kaivaa kivestä esiin metalleja sekä valmistaa ja arvostaa hienojaa aseita. Näin ollen Thorinin hautapaikassa näkyy valittujen aarteiden kautta hänen asemansa sekä hänen kansansa rakkaus vuoreen ja kiveen:

He hautasivat Thorinin syvälle Vuoren alle ja Bard asetti Arkkikiven hänen rinnalleen.

4 “There indeed lay Thorin Oakenshield, wounded with many wounds, and his rent armour and notched axe were cast upon the floor. He looked up as Bilbo came beside him. “Farewell, good thief,” he said. “I go now to halls of waiting to sit beside my fathers, until the world renewed. Since I leave now all gold and silver, and go where it is of little worth, I wish to part in friendship from you, and I would take back my words and deeds at the Gate.” (Tolkien, The Hobbit 235)

Hänen haualleen heltiakuningas laski Orkristin, haltiamiekan . . .

Laulussa kerrotaan että se hohti pimeässä aina milloin vihollinen lähestyi ja että kääpiöiden linnoitukseen ei voinut kukaan ylälläten hyökätä. (Tolkien, *Hobitti* 294)\(^5\)

Thorinin ruumis on kohtauksessa haudattu sijaintiin, jolla on merkitystä hänen kansalleen, sillä hänen hautansa varoittaa (tarinan mukaan) mahdollisesta uhasta. Tärkeän sijainnin valitseminen oli tyyppillistä esimerkiksi vanhoissa Brittein saarten hautajaistavoissa, joiden mukaan rikkaat haudattiin yksilö- tai perhehautoihin keskeiselle ja mahtipontisille sijoituspaikoille ja köyhältä yhteishautoihin (ks. Litten).


Thorinin fyysinen ruumis on nyt symbolisesti palautettu hänen ammooiseen kotiinsa Ereboriin, mutta hänen oman ajatuskulkunsa mukaan hänen (aineeton) sielunsa on siirtynyt Odotuksen saleihin. Tämä jälkimmäinen siirtymä heijastaa yhtäältä kristittyjen uskon usko koolemanjälkeiseen, mutta mahdollisesti myös kelttiläisten mytologiassa “toiseen maailmaan” (“Otherworld”) siirtymistä. Verlyn Flieger on todennut kelttiläisen mytologian “toisen maailman” toistuvan Tolkienin teoksissa sekä meidän ulottumattomimme olevana kuolleiden maana että etäisenä lumottuna valtakuntana (123). Toisaalta Thorinin mainitsemattomat Odotuksen salit voivat viittata myös skandinaavisen mytologian jumalten maassa Asgardisssa sijaitsevaan Valhallaan (Valholl), ”kaatuneiden soturien saliin”, jossa sankkarivainajat saavat asua koolemanansa jälkeen. Tolkien ottaa Hobitin kääpiöiden ja Gandalfin nimet skandinaavien *Edda*-runoelman kääpiöiden nimistä, joten tämäkin etäinen viittaus Valhallaan olisi täysin mahdollinen.

Thorinin hautaamisessa on muitakin yhteyksiä sekä tunnettuun historiaan että uskonnoillisiin traditioihimme. Myös meidän maailmamme varhaisissa hautaamississa on ollut tyyppillistä sijoittaa hautaan tai sen lähetyville objekteja, esimerkiksi kypärä, miekkoja, haarniskoja, ja muita sotavaruksia (Daniell 188). Tällaiset sotavaruksien sijoitukset ovat tunnettuja eri puolilla maailmaa, laajalti juuri Pohjoismaissa ja Brittein saarilla

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\(^5\) “They buried Thorin deep beneath the Mountain, and Bard laid the Arkenstone upon his breast. “There let it lie till the Mountain falls!” he said. “May it bring good fortune to all his folk that dwell here after! Upon his tomb the Elvenking laid Orcrist, the elvish sword that had been taken from Thorin in captivity. It is said in songs that it gleamed ever in the dark if foes approached, and the fortress of the dwarves could not be taken by surprise.” (Tolkien, *The Hobbit* 237)

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Hautaan lasketut arvoesineet – Thorinin tapauksessa suuri jalokivi Arkkikivi sekä miekkansa Orkrist – ovat siirtymäobjekteja (transitional objects), joilla on symbolinen arvo siirtymässä menneen ja tulevan maailman välillä. Tällaisia esineitä on sijoitettu hautoihin joko muistoesineinä tai ne on tarkoitettu edesmenneen käytettävikkä hänien kuolemanjälkeisessä uudessa elämässään. Siirtymäobjekteina hautaan lasketut esineet muuttuvat kansalle pyhiksi, sillä rituaalin myötä niihin manifestoituu pyhyyden vaikutusta ja merkittävyyttä (ks. Eliade 14).

*Tarussa sormusten herrasta* hautajaisia ja kuolemanjälkeisiä ruumiiden sijoitukset on useampia. Teoksen ainoa kääpiöhauta, ryhmänsä johtajan Balinin hauta, osoittaa Thorinin haudan tavoin yksilön merkitystä. Se kohdataan Moriassa, joka on kääpiöiden tuolloin jäljellä vuoren sisällä. Kuten kuoleman korkea asema vaatii myös Balinin hauta on mahtipontinen. Se sisältää hänen omassa salissaan ja on omistettu symboliseksi tilaksi jälkeen jääville sukupolville:

Kammiota valaisi avara kanava, joka sijaitsi korkealla itäseinämässä; se vei viistosti ylös pään ja kaukana yläpuolellaan he näkivät pienempi neliömuodoin täplän sinistä taivasta. Kanavan valo osui suoraan huoneen keskellä olevaan pöytään: se oli yksi ainoa pitkänomainen möhkäle, noin kynänärän korkuneen, ja sen päälle oli asetettu suuri valkoinen kivilaatta. . . . Laattaan oli kaiverrettu syvät riimut: . . . ”Tähän on kirjoitettu ihmisten ja kääpiöiden kiellällä: BALIN FUNDININ POIKA MORIAN RUHTINAS.” (Tolkien, *Taru sormusten herrasta* 284)


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6 ”The chamber was lit by a wide shaft high in the further eastern wall; it slanted upwards and, far above, a small square patch of blue sky could be seen. The light of the shaft fell directly on a table in the middle of the room: a single oblong block, about two feet high, upon which was laid a great slab of white stone. . . . On the slab runes were deeply graven: . . . ‘Here is written in tongues of Men and Dwarves: Balin Son of Fundin Lord of Moria.” (Tolkien, *The Lord of the Rings* 311–2)


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4. Hobittien hautaaminen

Kuten reaalimaailmassa, hautaaminen on Tolkienin fantasiafiktiossa siis sekä siirtymä elämääntä kuolemaan että toimi joka tekee haudan sijainnista merkityksellisen jälkipolville. Osoituksena tästä teoksissa esiintyy hautakumpuja, kuoleiden saleja ja hautapaaseja, jotka osoittavat merkityksellisyyttä. Christopher Daniell on huomioinut, että Englannissa – Tolkienin omassa kotimaassa – hautakummut olivat tyypillisiä ruumiiden sijoituspaikkoja jo keskiajalla ja tätäkin aiemmin (144–6). Ne ovat siis Tolkienille tuttuja menneisyyden hautamuodostelmia. Ensimmäinen hautakumputen kuvaus Tarussa sormusten herrasta sijoittuu jo teoksen alkupuolelle, kun hobittien joukko – Frodo, Sam, Pippin ja Merri – kulkevat ihmisten vanhojen hautakumujen ohitse:

”Hän [Frodo] käänsi katseensa itään ja huomasi että sillä puolella kukkulat olivat korkeampia; ne katsoivat alas heihin; jokaista kruunasi vihreä kumpu ja toisten huipulla oli kiviä jotka sojottivat ilmaan kuin rosoiset hampaat vihreistä ikenistä” (129). Halki teoksen käy selväksi, että tietystä vetäytyvyydestä ja eristäytyneistä huolimatta hobitit tuntevat hyvin muiden kansojen tapoja ja kulttuureja, joten niiden hautamuistomerkit ovat heille tuntuja. Kumpuhauta on tyypillinen hautaustapa useille Tolkienin roduille, ainakin hobiteille ja ihmisille, ja kenties myös haltoille. Silmarillionissa haltiakuningas Fingolfin nimittäin haudataan poikansa Turgonin toimesta kumpuun suuren kiviröykkiön alle, jonka yli yksikään vihollinen ei aikoinaan uskaltanut kulkea (192).

Tarussa sormusten herrasta hobittien näkemät hautakummut ovat vuosituhansien takaisia, ja ajan myötä ne ovat muuttuneet pahoiksi. Yhdessä houdassa elää hirviömäinen olento, Haudanhaamu, joka kaappaa hobitit vangikseen ja pyrkii hautaamaan heidät rituaaliensa mukaisesti aarteiden ja asenidpäätönä, kuten Thorinin käpiöhaudan tapauksessa. Itse rituaali viittaa Tolkienin maailman vanhojen korkeahimisten eli nümenorilaisten ja gondorilaisten hautajaisiin, mutta sitä ei ole alun perin tarkoitettu tehtäväksi eläville:

8 “. . . he turned his glance eastwards, and he saw that on that side the hills were higher and looked down upon them; and all those hills were crowned with green mounds, and on some were standing stones, pointing upwards like jagged teeth out of green gums.” (Tolkien, The Lord of the Rings 134)

9 Tarussa sormusten herrasta (6) mainitaan, että hobitit olivat vierantuneet ihmisiä ja elivät hiljakseen Keski-Maassa kauan ennen kuin muut edes huomasivat heitä. Toisaalta esimerkiksi Briissä hobitit ja (isot) ihmiset elävät rauhanomaista yhteiseloa teoksen tapahtumien aikaan.

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Lopulta kuitenkin paljastuu, että Frodo ei ole kuollut, vaan tajuton, jolloin hautaaminen ei konkreettisesti toteudu. *Tarussa sormusten herrasta* puhutaan yleisemmin myös hobittien hautaamistavoista, sillä Konnun viimeisessä taistelussa kuolee 19 hobittia ja 70 ”roistoa” eli heidän ihmishvihollistaa. Hobitit laskevat viholliset lähistöllä olevaan hiekakakkuoppaan, jota myöhemmin kutsutaan hobittien historiassa Sotamontuksi (865). Kaatuneet hobitit vuorostaan haudataan yhteiseen hautaan mäen rinteeseen, johon myöhemmin pystytetään suuri kivi ja

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10 “They were on their backs, and their faces looked deathly pale; and they were clad in white. About them lay many treasures, of gold maybe, though in that light they looked cold and unlovely. On their heads were circlets, gold chains were about their waists, and on their fingers were many rings. Swords lay by their sides, and shields were at their feet.” (Tolkien, *The Lord of the Rings* 137)

11 “Not leave Mr. Frodo dead, unburied on the top of the mountains, and go home” (Tolkien, *The Lord of the Rings* 714).

12 “I’ll put this one to lie by you, as it lay by the old king in barrow; and you’ve got your beautiful mithril coat from old Mr. Bilbo” (Tolkien, *The Lord of the Rings* 714).
istutetaan puisto (865). Paikan symbolinen arvo kantaa selvästi myös tuleville sukupolville. Yhteishauta on tyyppillinen reaalimaailmamme varhaisemmissa kulttuureissa, esimerkiksi taisteluissa kaatuneille mutta ei niin merkittäville henkilöille (Litten).


5. Gondorin ihmisten hautajaiset


Boromirin hautajaiset ovat konkreettisimmat ja herkkimätt Tarun sormusten herrasta hautajaisista. Boromir, Gondorin käskynhaltijan Denethorin poika, on aiemmin yrittänyt vieä Suurimman sormuksen Frodoelta ja siten langennut ja pettänyt koko seurueensa, mutta juuri ennen kuolemaansa

13 “It is said that the beds of Meriadoc and Peregrin were set beside the bed of the great king” (Tolkien, The Lord of the Rings 1072).

Boromir haudataan muinaisten viikinkien venehautaamista muistuttavassa rituaalissa, jossa saattoväki huolehtii kuoleellesta:

He asettivat Boromirin keskelle venettä, jonka oli määrä kuljettaa hänet pois. Harmaan hupun ja haltiaviitan he laskostivat ja panivat hänen päänsä alle. He kampaivat hänet pitkät tumman hiuksensa ja järjestivät ne hänen hartioilleen. Lörienin kultainen vyö hohti hänen vyötäisillään. Kypärän he asettivat hänen viereensä, ja hänen sylinsä he panivat haljenneen torven sekä miekan jalkoihinsa. Hänen syliinsä he panivat haljenneen torven sekä miekan jalkoihinsa. (Tolkien, *Taru sormusten herrasta* 355)15

Viikinkihautajaisten tavoin Boromir haudataan omien ja vihollisten aseiden kanssa, joskin hänen omaan asettaan ei taitettu, kuten vanhoissa viikinkisoturien hautaamistavoissa oli tyyppillä (Aannestaad 148-9). Hautajaivesen päätetään kulkemaan vapaasti, kunnes se lopultakaatoa Raurosin putoukseen:

Murhemielin he laskivat irti hautaveneen; siinä makasi Boromir levollisena ja rauhallisena ja lipui eteenpäin virran povella. Virta otti hänet ja eli pitivät omaa venettään paikallaan melojen avulla. Hän ajelehti heidän ohitseen ja hitaasti hänen veneensä erkani heistä ja pitukseen tammaksi pisteeksi kultaista valoa vasten ja sitten se äkkiä katosi. (Tolkien, *Taru sormusten herrasta* 356)16

Näissä hautajaivisissa korostuu rauha, sillä Boromirin kasvot ovat levolliset ja rauhalliset. Aiemmin pitkään rauhatommuudesta ja tuskasta kansansa Gondorin ihmisten puolesta kärinsicoturi on nyt saanut levon. Hänen

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14 "‘No!’ said Aragorn, taking his hand and kissing his brow. ‘You have conquered. Few have gained such a victory. Be at peace!’" (Tolkien, *The Lord of the Rings* 404)

15 "Now they laid Boromir in the middle of the boat that was to bear him away. The grey hood and elven-cloak they folded and placed beneath his head. They combed his long dark hair and arrayed it upon his shoulders. The golden belt of Lórien gleamed about his waist. His helm they set beside him, and across his lap they laid the cloven horn and the hilts and shards of his sword; beneath his feet they put the swords of his enemies.” (Tolkien, *The Lord of the Rings* 406)

16 “Sorrowfully they cast loose the funeral boat: there Boromir lay, restful, peaceful, gliding upon the bosom of the flowering water. The stream took him while they held their own boat back with paddles. He floated by them, and slowly his boat departed, waning to a dark spot against the golden light; and then suddenly it vanished.” (Tolkien, *The Lord of the Rings* 407)
“uhrautuvainen kuolemansa” on suonut hänelle armon, jota elämä ei ollut näyttänyt hänelle suovan (Rutledge 145).

Hautajaisissa tapahtuu vielä seuraava erityinen vaihe, jossa surijat osallistuvat tilaisuuteen. Tässä on kyse muistoritualista, joka on yleinen myös kristillisissä hautajaisissa. Kyseessä on hautajaisiin usein kuuluva symbolinen osa, jossa surijat haluavat osoittaa kunnioitustaan kuolleelle (Grimes 20).

Ensin Aragorn lausuu: “Valkoisessa tornissa häntä kaivataan. .. Mutta hän ei palaa, ei vuorilta eikä itäisen (Tolkien, Taru sormusten herrasta 357).”


Tolkienin fantasiamaailmassa lännen vapaat kansat taistelevat idän Mordorin pahaa valtakuntaa vastaan, joten he suhtautuvat negatiivisesti itäiseen tuuleen. Tämän jälkeen hautajaiset päätyvät hiljaisuuteen.

Vastaavanlaista kunniakasta loppua ei suoda Boromirin isälle, eli Minas Tirithin ja Gondorin ihmisten valtiaalle Denethorille, sillä hän on mieleetään järkkynyt ja päättää surmata joitakin ”kuin pakakanukuningas” (Tolkien, Taru sormusten herrasta 702).

Enskin tariurseita vanhoista hautajaistavoista voidaan nähdä, että polttohautaamista pidettiin varhaisempana ja pakanallisena, mutta Englannissa harrastettiin jo varhain myös pamointia, mikä oli tyyppisempää myös Tolkienin fiktiivisen maailman gondorilaisille (Daniell 74–6, Litten). Polttohautaaminen oli kremaatio pitkään�� PANEL 9 VERTIKALI 50 YLITYÖ

Kuten Pippin

“Better to burn sooner than late, for burn we must. Go back to your bonfire. . . . I will go now to my pyre. To my pyre! No tomb for Denethor and Faramir. No tomb! No long slow sleep of death embalmed. We will burn like heathen kings. . . .” (Tolkien, Taru sormusten herrasta 702).


Silloin Denethor hyppäsi pöydälle ja seisoo siinä savukiemuroiden keskellä ja otti jalokansa juuresta käsikynhaltijasavuansa ja taitoi sen polveaan vasten. Hän heitti kappaleet tuleen, kumartui, asettui selälleen pöydän molemmin käsin rintaansa vasten. (Tolkien, *Taru sormusten herrasta* 729)

Käsikynhaltijasavun rikkominen voidaan samaistaa englantilaisten kuninkaallisten hautajaisten tapaan käsikynsävän rikkomisesta, jossa hallintasuhde katkeaa lopullisesti sauvan katkaisemiseen (“breaking of the wand”). Rituali nähtiin viimeksi kuningatar Elisabet II:n hautajaisissa vuonna 2022 (Belam).

Tämän jälkeen Gandalf sulkee Denethorin roviovuoneen, ikään kuin hänen haukaisekseen:


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20 “they are to to make a pyre and burn him on it, and Faramir as well” (Tolkien, *The Lord of the Rings* 832).
21 “And only the heathen kings, under the domination of the Dark Power, did thus, slaying themselves in pride and despair, murdering their kin to ease their own death” (Tolkien, *The Lord of the Rings* 835).
22 “Then Denethor leaped upon the table, and standing there wreathed in fire and smoke he took up the staff of his stewardship that lay at his feet and broke it on his knee. Casting the pieces into the blaze he bowed and laid himself on the table, clasping the *palantír* with both hands upon his breast.” (Tolkien, *The Lord of the Rings* 836)
23 “Gandalf in grief and horror turned his face away and closed the door. . . . while those outside heard the greedy roaring of the fire within. And then Denethor gave a great cry, and afterwords spoke no more, nor was ever again seen by mortal me. ‘So passes Denethor, son of Ecthelion,’ said Gandalf.” (Tolkien, *The Lord of the Rings* 836)
Denethorin kuolema on kurja ja hänen polittoitsemurhansa on enemmänkin kopi pakanakuninkaiden epätoivoisista itsemurhista. Sen sijaan Gondorin seuraava valtias, myös pohjoisen Arnorin valtakunnan kuninkuuden saavuttanut Aragorn, saa kuninkaiseen paljon herkemmän kuoleman ja kauniimman lopun. Tolkien kuvaa kuoleman tarkemmin teoksen loppuvuoteissa, jo ennen mainintaa siitä, että hänen hautansa sijoitetaan Merrin ja Pippinin kuolinvuoteiden väliin. Tarun sormusten herrasta lopussa kruunatun Aragornin kuolema on peräti 122 hallintavuoden jälkeen sopuisa ja armollinen. Hän suutelee vaimonsa Arwenin kättä viimeistä kertaa ja ”vaipuu uneen” (905). Kuoleman jälkeen kuninkaankaan asema ja menneisyys ovat symbolisia, sillä hän on toivon henkilöitymä ja pahuudesta voiton saavuttanut hahmo. Hänen haudestaan tulee kansalaisten pyhiinvaelluspaikka:

Silloin [kuolemassa] paljastui kuninkaassa suuri kauneus, niin että kaikki, jotka jälkeenpäin tulivat sinne, katsoivat häntä ihmeissään; sillä he näkivät että hänen nuoruutensa sulon, miehuuden uljuus ja iän viisaus ja kuninkaallisuus olivat sekoituneet toisiinsa. Ja siinä hän makasi käsin ja heijasti ihmisten kuninkaiden himmentymätöntä loistoa ajalta ennen maailman särkymistä. (Tolkien, *Taru sormusten herrasta* 905–6)


Kuninkaan puoliso, kuningatar Arwen sen sijaan vaeltaa miehensä kuoleman jälkeen pois ihmisten kuningaskunnasta ja asettuu ilmeisesti vapaaehtoisesti (ikuisen) hautaansa Lórieniin, sukunsa haltiamaahan:

Siellä hän [Arwen] viimein mallornin lehtien varistessa kevään aattona asettui levolle Cerin Amrothin; ja siellä kohooa hänen vihreä hautansa aina maailman muuttumiseen saakka, kun kaikki hänen elämänsä päivät ovat unohtuneet tulevien mielestä, eivätka elanor ja niphredil enää kuki Meren itäpuolella. (Tolkien, *Taru sormusten herrasta* 919)

Arwenin kuolemassa on länä menetyksen tunne, sillä Tolkienin maailmassa Haltiloiten aika on ohi ja kuolevaisten ihmisten maailmanväkeä on kiitottanut. Hänen jälkeläisiensä ovat tulevia Gondorin ja Arnorin kuninkaita, mutta kuningattaren oma muisto unohtuu ja hän vaipuu tuntemattomaan hautaansa ilman merkittäviä muistamisia tai siirtymäritäuleja. Toki “maahan

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24 “Then a great beauty was revealed in him, so that all who after came there looked on him in wonder; for they saw that the grace of his youth, and the valour of his manhood, and the wisdom and majesty of his age were blended together. And long there he lay, an image of the splendour of the Kings of Men in glory undimmed before the breaking of the world.” (Tolkien, *The Lord of the Rings* 1038)

25 “she laid herself to rest upon Cerin Amroth; and there is her green grave, until the world is changed, and all the days of her life are utterly forgotten by men that come after, and elanor and niphredil bloom no more east of the Sea.” (Tolkien, *The Lord of the Rings* 835)
meneminen” ja yhtyminen Terra Materiin, Äiti Maahan, kuten Mircea Eliade tapahtumaa kutsuu, on läsnä myös Arwenin kuolemassa (138–40). Hän asettuu levolle maahan ja hänen hautansa on vihreä kuin vehreä nurmi, jollaista vaikutelmaa nykypäivän Englannin kristillisissä maahaudoissakin usein tavoitellaan.

6. Rohanin ihmisten haudat ja hautajaiset

Gondorin ihmisten lisäksi ihmisyhdistä nousevat esiin Rohanin ihmiset ja heidän hautajapitansa. Hautajaisitutkimuksen sekä hautaanpanemistien lisäksi Tarussa sormusten herrasta on myös vainajien ruumiinkäsittelyyn kuvaavia, jotka tulevat esiin juuri rohanilaisen hautaamistoimia tarkasteltaessa.


Tämän kaltainen kumpuun hautaaminen on tyypillistä rohanilaisille, kuten paljastuu Rohanin kuninkaan Théodenin kuolleen taistelussa. Ensinnäkin kannetaan pois rintamalta kunniasattueessa ja hautataan vasta myöhemmin. Hänen hevoselleen Lumiharjalle rohanilaiset kuitenkin välittömästi ”kaivoivat haudan ja pystyttivät kiven, johon oli kirjoitettu Gondorin ja Markin kielillä” (Tolkien, Taru sormusten herrasta 720).29

Théodenin kohtaloksi koituneen suuren siivekkään pedon ruumiin he sen sijaan polttavat tapansa mukaan roviolla kuin minkä tahansa vihollisen (ibid).

26 “. . . we piled the carcases and burned them, as is our custom” (Tolkien, The Lord of the Rings 424).
27 “. . . they found the place of the great burning: the ashes were still hot and smoking. Beside it was a great pile of helms and mail, cloven shields, and broken swords, bows and darts and other gear of war. Upon the stake in the middle was set a great goblin head . . .” (Tolkien, The Lord of the Rings 430)
28 “Further away, not far from the river, where it came streaming out from the edge of the wood, there was a mound. It was newly raised: the raw earth was covered with fresh-cut turves: about it were planted fifteen spears.” (Tolkien, The Lord of the Rings 430)
29 “. . . but for Snowmane they dug a grave and set up a stone upon which was carved in tongues of Gondor and the Mark . . .” (Tolkien, The Lord of the Rings 826)
Myöhemmin kuningas saa ansaitsemansa suureelliset, majesteettiset hautajaiset:

Silloin Gondorin kuningas ja Rohanin kuningas menivät Pyhättöön ja Rath Dínenin hautaholveihin, ja kantoivat kuningas Théodenin kultaisilla paareilla ulos ja astelivat hiljaisuudessa Kaupungin halki. Sitten he laskivat paarit suuriin vaunuuihin, joiden ympärillä oli Rohanin Ratsastajia ja joiden edellä kannettiin hänen lippuaan, ja Merri, Théodenin aseenkantaja, ajoi vaunuissa ja vartioi kuninkaan aseita. (Tolkien, *Taru sormusten herrasta* 831)30

Koko monumentaalinen tapahtumaketju muistuttaa meidän maailmamme kuninkaiden suureellisia rituaaleja, esimerkiksi Henrik V:n 1400-luvun mahtipontista hautajaissaattuetta, jossa ruumista kuljettiin vaunuissa, joita lukuisat hevoset vetivät (Daniell 188–9). Théodenin hautajaiset ovat massiivinen tapahtuma. Hautajaissaattueen matka Minas Tirithista, Gondorin maasta kuninkaan kotiin Rohaniin kestää lopulta 15 päivää ja lopullisen hautajaistapahtuman valmistelu vielä kolme päivää lisää:


30 “Then the kings of Gondor and Rohan went to the Hallows and they came to the tombs in Rath Dínen, and they bore away King Théoden upon a golden bier, and passed through the City in silence. Then they laid the bier upon a great wain with Riders of Rohan all about it and his banner borne before; and Merry being Théoden’s esquire rode upon the wain and kept the arms of the king.” (Tolkien, *The Lord of the Rings* 953)

31 “The Golden Hall was arrayed with fair hangings and it was filled with light, and there was held the highest feast that it had known since the days of its building. . . . the Men of Mark prepared the funeral of Théoden; and he was laid in a house of stone with his arms and many other fair things that he had possessed, and over him was raised a great mound, covered with green turves of grass and of white evermind. And now there were eight mounds on the east-side of the Barrowfield.” (Tolkien, *The Lord of the Rings* 954)

32 “Théoden King, Théoden King! Farewell! As a father you were to me, for little while. Farewell!” (Tolkien, *The Lord of the Rings* 955)
Kun hautajaiset olivat ohi ja naisten nyhkytys vaimennut ja Théoden oli jättetty yksin hautansa, kokontunti kansa Kultaiseen kartanoon suureen juhlaa heittäen syrjään surun, sillä Théoden oli elänyt täyteen ikään ja kuollut kuniassa, joka veti vertoja hänen suurimpien esi-isiensä urotöille.

(Tolkien, *Taru sormusten herrasta* 832)


7. Lopuksi

Artikkelini keskeinen huomio on, että Tolkienin fantaisian hautaamistavat tuovat fantasiaamaailmaa lähemmäksi meidän reaalimaailmamme ja ovat tuttuja myös teoksen oletetuun lukijan näkökulmaan. Tolkienin tunnetuimpia teosten hautajiensa sekä kuoleiden ruumiiden käsittelyyn kuvauksissa näkyy fantastisten piirteiden rinnalla meidän maailmamme menneiden kansojen perinteen ja yhä nykyään olemassa olevat tavat. Tutvat tavat ja uskottavat kulttuurilliset rituaalit tekevät teokset meille lukijoille helpommin omaksuttaviksi ja vieraat fantastiset kulttuurit siten ymmärrettäväämiksi.


Yhteisöllisyyden merkitys näkyy hautajaisissa yhteisöläsluuna ja kulkuine. Uskontotieteelliset ja teologit ovat meidän arkimaisemassamme huomioineet juuri tallalaisia toimia, jollaisia Tolkien vuorostaan kuvaa teostensa

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33 “When the burial was over and the weeping of women was stilled, and Théoden was left at last alone in his barrow, then folk gathered to the Golden Hall for the great feast and put away sorrow; for Théoden had lived to full years and ended in honour no less than the greatest of his sires.” (Tolkien, *The Lord of the Rings* 955)

34 “The funeral feast of Théoden the King” (Tolkien, *The Lord of the Rings* 955).
omalakisessa fantasiamailmassa. Rituaali, joka liittyy muutokseen tai siirtymään, ei ole vain yksilön siirtymä elävästä kuolleeksi, vaan myös yhteisön siirtymä johtajansa poismenon jälkeen tilasta A tilaan B.

Suremisen muodollisuudet ja kulttuuriset, symboliset eleet näkyvät myös Tolkienin teosten kuvaamissa hautajaisissa selvästi. Fiktiivisen maailman koulleiden käsittely osoittaa läheisen yhteyden meidän maailmamme hautaamisiin. Tämä on ehdottomasti yksi Tolkienin fantasian vahvuudesta, sillä hänen mielikuvituksellisen maailmansa ei ole koskaan liian kaukana meidän maailmamme ja edes tällaisten tapojen tasolla. Me ymmärrämme hänen kuvaamiaan tapahtumia, koska ne voisivat todellakin olla meidän maailmamme "myyttisestä menneisyydestä", kuten Tolkien tahtoi teoksissaan väittää.

**Biography:** Doctor Jyrki Korpua is a University Lecturer in Literature at the University of Oulu. He has edited and published books and articles for twenty years, including three non-fiction books in Finnish on *The Bible*, *Kalevala*, and J. R. R. Tolkien’s fiction. He has co-edited the anthology *New Perspectives to Dystopian Fiction* (Cambridge Scholars Publishers 2020) with Saija Isomaa and Jouni Teittinen, and is the author of *The Mythopoeic Code of Tolkien: A Christian Platonic Reading of the Legendarium* (McFarland 2021). Korpua was one of the founders of *Fafnir* and served as the journal’s editor-in-chief in 2014–2017.

**Lähteet**


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Giving Wands Their Due: *Harry Potter*, Speculative Realism, and the Power of Objects

*Ian McLaughlin*

**Abstract:** Magical objects are legion in *Harry Potter*. Among them, wands are the most magical and the most taken for granted. Wands are usually seen as tools, but no tool is only a tool. Speculative Realisms provide the means to look past the mere usefulness of wands and explore their nature via a flattened ontology. Recognizing that wands are not passive screens but ontologically equal to all other objects, including humans, bypasses the problems of Kantian epistemology and gives wands room to be what they are qua themselves. Focusing on ontology rather than epistemology enables wands to reveal their power, supplies a framework for studying the natures of nonfictional objects, and—ironically—allows for a more categorical application of Kant’s ethical imperative.

**Keywords:** *Harry Potter*, Wands, Speculative Realism (SR), Flat Ontology, Object-Oriented Ontology (OOO), Vital Materialism

1. Introduction

Magical objects are legion in *Harry Potter*. There are magical quills, broomsticks, mirrors, paintings, candy, books, cloaks, rooms, plants, cars, suits of armor, and more. Some objects are even sentient. The Sorting Hat, for instance, can read its wearer’s mind, hold conversations, and compose songs. Of all the objects in *Harry Potter*, wands are the most magical and yet the most taken for granted. Wands are tools: “series of fixed parts organized from without that serves an external purpose”; they are “mere means” (Bennet, *Vibrant* 24; Kant 36). As such, studying them educates us on how tools relate
to the world around them. However, as wands show us, no tool is only a tool; no means are mere means; every object is more than any combination of labels can communicate.¹ Wands and wandlore are mentioned 1985 times throughout *Harry Potter;²* more often than all but five characters, and yet, wixes refuse to perceive wands as more than tools (kaleb3303).³ Ubiquitous as they may be, wands refuse the role of mere equipment, not because they do not play it, but because, as Speculative Realists would tell you, wands cannot be reduced to playing it. For, though “the wand chooses the wizard,” “these connections are complex” — indeed, “the whole power of wands is all about...the specialness of this uniquely created object and the relation an individual has with that object by virtue of its uniqueness” (SS⁴ 5;⁵DH 24; McGregor and Kosman 1:18:50–1:19:04).

2. Speculative Realisms (SR)

Why dwell on wands, especially when other, more assertive real-world tools — e.g., cars, paintbrushes, and tubas — exist? Why attend to fictional objects — of which fantastic objects, such as wands, are a subset — when material objects more obviously matter? There are two reasons to do this. First, fiction, especially speculative fiction, takes reality and reflects it in a funhouse mirror, exaggerating and highlighting certain aspects so it can “demonstrate [SR’s] claims in ways nonfiction itself cannot” (Loos 136). In this case, wands have an exaggerated sense of agency and interiority compared to their nonfictional counterparts. While I do not hold that objects, fictional or nonfictional, have minds or mind-like aspects, objects do behave as actors in the Latourian sense. Because of this similarity between fictional wands and nonfictional objects, examining wixen wands’ most fantastic, most vibrant attributes elucidates how to examine real-world objects’ behavior. Thus, I “give [wands] their due,” flattening ontology by recognizing presumed “tools” and their “users” “equally

¹ Note the difference between “object” and “thing”. While many people use the terms interchangeably, they are “two distinct ontological kinds: “there exists a thing iff (sic) either there exists a simple particular [in the Russellian sense], or there exists a fusion of some simple particulars,” whereas “there exists an object if...there exists something that is posited by our folk ontology or best science.” In this way, “things are ontologically innocent, objects are not” (Miller 69).
² This count was conducted using a search function on the ebooks, including chapter titles but not Tables of Contents.
³ While this paper is not on explicitly queer or feminist themes, I prefer to use the gender-neutral “wix” (pl. “wixes”) rather than the gendered “wizard” and “witch” to refer to a person with magical abilities and “wixen” to refer to their society in order to subvert the Dederian “stain” that the author’s 2020 transphobic “Educational Decrees” have placed upon me as a queer “half-blood fan” (“Wix”; Satterly).
⁴ As is standard in Potter scholarship, I use abbreviated, title-only citations for *Harry Potter* books in text — *Sorcerer’s Stone* is SS, *Goblet of Fire* is GoF, etc.
⁵ Because there have been so many editions of the *Harry Potter* books — 12 in the UK, and another 9 in the US — and each of them are paginated differently, I decided to cite copies from a single edition, the Pottermore ebooks. The benefit of this edition is that it is the most widely and freely available forms of the books, as they can be procured through most ebook lending apps and public libraries. Using an ebook edition also means that rather than having paginated in-text citations that are unique to one edition, I use chapter numbers for in-text citations, so while it will be harder to locate exact quotations, the citations will be accurate to all editions.
exist” in a non-instrumental, ontologically “democratic,” and non-
anthropocentric universe (Marback 52, 54; Bogost 11; Bryant, Democracy 19).
By focusing on ontology rather than epistemology, I shine a light on wands in
Harry Potter, explain their massive importance in the series’s climax, compare
them to nonfictional objects, and provide an anticorrelationist understanding
of object/human relationships. To achieve this, I draw on a bricolage of
linguistics, literary criticism, history, positive psychology, religious studies, and
SR via Graham Harman, Ian Bogost, Levi R. Bryant, and Jane Bennett.

When drawing on such a broad range of disciplines, conflict is to be
expected. Even within SR, there are significant disagreements. For instance,
Vital Materialism seems incompatible with Object-Oriented Ontology’s (OOO)
immaterialism. The former says materiality and affectivity flatten ontology; the
latter is a “unified theory of objects at a level that precedes any distinction into
mental and non-mental zones,” so that object becomes “any entity that cannot
be paraphrased in terms of either its components or effects” (Bennett, Vibrant
92, xiii; Harman, Speculative 167; Immaterialism 8). OOO does not exclude
material objects. Instead, it “endow[s] ontology” equally on all objects whether
physical or non-physical, that is “sensual,”– of which fictional objects are
 subsets – rather than upholds a hierarchy in which fiction has a “second-order
relation” to the “real world,” since “a general theory of objects must include
fictional entities” (Meijer and Prinz 280; Walsh 13; Orensanz 49). Therefore,
the conflict is resolved by viewing Vital Materialism as a way objects relate
within OOO’s framework, flattening material/immaterial, nonfictional/fictional, human/object, and human/human relationships
(Harman, Speculative 94).

All Speculative Realists agree on the need for a flattened ontology. Flattened ontologies oppose the Great Chain of Being (GCB), a cosmology
originating with Plotinus, which organizes existence hierarchically, with the
divine at the top and elements at the bottom (“Great Chain of Being”).
Humanists have removed the divine and positioned humanity at the top of this
hierarchy, superior to everything else (Bennett, Vibrant 87). SRs reject this

For more on wands as political objects see Tracy Bealer’s “Consider the Dementor: Discipline, Punishment, and Magical Citizenship” and her guest appearance on Potterversity (formerly Reading, Writing, Rowling) “Tracy Bealer: Oppression and Subversion in Harry Potter.”

Bennett separates her Vital (or New) Materialism from SR, citing a difference between
materialism and realism (Bennett “Systems”). However, her materialism is a realism and one
need not eschew materialism to be a Speculative Realist, as evidenced by Meillassoux’s
Speculative Materialism (Cox et al. 25; Harman Speculative). Further, Bryant lists Bennett
among the “heroes of [OOO] and onticology,” and she and Harman have repeatedly responded
to each other’s works (Bryant, Democracy, 27, 67, 248; Bennett “Systems”; Harman, Immaterialism 16, 47). Also, Bennett’s work agrees with SR in the most important way: it is
contra-Kantian correlationism and acknowledging nonhuman existence beyond phenomena,
though each SR arrives there differently. OOO, for instance, is derived from “an interpretation
of Heidegger” (Harman Speculative 106). Bennett comes to her anti-correlationism from
Latour’s Actor Network Theory, which rather than focusing on subjects, as most
phenomenology does, focuses on actants, which may be human or nonhuman (Bennett, Vibrant
9).

Recognizing fictional/fantastic objects as ontologically equal to nonfictional objects opens
scholarship that is outside, though directly adjacent to, the scope of this paper (e.g., using media
studies via Marshall McLuhan to study the societal implications of the wand as a staple resource
in wixen society, or how hypermediacy affects wixen understandings of wandless magic as both
lesser and greater than wanded magic).
anthropocentrism. In this way, flattened ontologies are about humility, or “right-sizedness,” understood by Daryl Van Tongren as an Aristotelian virtue situated at the mean of “narcissistic arrogance” and “servility” (Aristotle II.6 1106b–1107a; Zoltan and Potts, “Intellectual Humility” 4:01–43, 8:05–11). “Humble” comes from the Latin humus, meaning “earthliness” (Zoltan and Potts, “Humility” 30:48–57). Indeed, Bennett calls us to “live as earth” rather than on it (Vibrant 111). Within the GCB, understanding humanity as earthly was a way of right-sizing humanity between the divine and the elemental. When the divine is removed from this cosmology, humans are the new top of the hierarchy, superior to everything else—a “wrong-sized,” narcissistically arrogant, anthropocentric claim (Zoltan and Potts, “Humility” 25:42–26:10, 31:05–27). Further, a hierarchical cosmology undermines the goals of humanism, as it “easily transitions into a political hierarchy of social classes” (Bennett, Vibrant 84). Notably, SRs subvert anthropocentric ideals by right-sizing humanity within a universe of things, as they posit that all objects exist for their own sake (Shaviro). Such flat ontologies easily transition into a politics of equity and equality. Saying that all objects—including the human object—exist as earth flattens hierarchies such as race, gender, sexual orientation, and social or economic class (Orensanz 55).

However, flattening ontology is just something SRs do; it is not why they were created. The need for SRs arises from the split between realism and idealism (Harman, Speculative 3). Realists believe in a world outside the mind. Idealists deny the existence of such a world. Kant’s epistemological solution, or correlationism, “holds that being exists only as a correlate between mind and world” (Bogost 4). Therefore, we can never know noumena, or objects qua—i.e., to, for, and by themselves, as they exist outside our mind’s influence. Only the phenomenon of the object is knowable (Harman, Immaterialism 20; Bryant, “Correlationism”; Meillassoux qt. Harman, Speculative 4). Correlationism abandons what is in favor of what we can know and states that “if things exist, they do so only for us” (Bogost 4). This approach places the human mind at the pinnacle of existence. It denies ontology to things qua themselves, concluding that if the human mind cannot access a thing directly, it is not worth accounting for. Kant was only willing to endow ontology onto epistemically useful objects. Asking what the point of any object is reveals an understanding of the world where “the rest of the world around us exists [solely] for our use,” an understanding of objects as mere tools or resources, which is philosophical antimateriality (Zoltan and Potts, “Rage” 33:22–40; Bennett, Vibrant 5). Thus, the GCB, correlationism, and extractivist economic materialism share a perspective centered around usefulness.

Rather than “solve” the realist/idealist divide, Speculative Realists occupy a “middle ground beyond realism and idealism” (Harman, Speculative 3). They embrace the unpredictable and surprising nature of objects qua themselves. The revelation of the “counterintuitive or even downright strange” is what makes SR speculative (ibid 5). SRs leave infinite room for study and the generation of new understandings. No amount of data, description, or knowledge will ever “exhaust” an object; certain aspects of the object will forever be “withdrawn” from our experience (Bennett, Vibrant passim; Harman, Speculative passim; Bryant, Democracy passim). Therefore, I do not intend to provide a comprehensive ontology of wands. Instead, I describe how wands are not “a passive screen that merely reflects our intentions, meanings,
signs, narratives, and discourses” (Bryant, Democracy 258). They are, instead, “on equal ontological footing” with wixes and, therefore, “agents in their own right, changing the course of the narratives” (Bryant, Democracy 246; Oulanne 11). In a flattened ontology, in which no object “possesses greater ontological dignity than other objects,” we can give wands the room to be what they are qua themselves without regard for our access to their noumena (Bryant, Democracy 246). By doing so, we attend to “entanglements of the material and the cultural, humans and things,” which will “open new possibilities of interpretation and shift readers' understanding” of objects writ large (Oulanne 3).

3. History of Wands in Literature

Wandlore as seen in Harry Potter originates in the Drudic myths of the British Isles. In Diarmid and Grainne (c. 300 CE), a sorcerer uses a wand to turn his son into an amputated pig. The Myvyrian Archaiology [sic] (1801), which contains Welsh works pre-1370, includes a wand as a divination tool (Spence 27). Continental Europe’s wand tradition begins with Clearchus of Soli’s “On Sleep” (c. 400-300 BCE) (Williams np.). Wands fill the tales of the Middle Ages, post-Renaissance, and modern eras in Western culture. The Wars of Alexander (c. 1450) features a wand that conjures spirits. The Arthurian werewolf Gorlogon transformed when struck with “the slenderer part” of a felled sapling (Rawlinson 238). In Marie de France’s “The Lay of the Eglantine” (c. 1200 CE), Tristan uses a hazel wand to “lure [Yseult] a while to stay” (Costello 70).9 From La Fontaine’s “The Companions of Ulysses” (c. 1650 BCE) through the 18th-Century ballads “Allison Gross” and “The Laily Worm and the Machrel and the Sea,” to movies such as Disney’s Pinocchio (1940) and Cinderella (1950), the wand as a magical tool is embedded in the popular Western imagination.

Wixen wand materials have a similar history. Common woods for Druidic wands, including yew, hawthorn, rowan, ash, hazel, and elder, are all mentioned in Harry Potter (Lenzen 74; Conway 134, 137, 139). There are, however, significant differences between Druidic and wixen wands. For instance, wixen wands can use woods with no connection to Druidic lore, such as acacia, ebony, or walnut (Rowling, “Wand Woods”). Wixen wands also use filaments of magical creatures as wand cores, like a dragon heartstring, unicorn hair, or phoenix feather (Rowling, “Wand Cores”). Such objects have had magical powers and symbolic significance in earlier literature, but this usage is original to Harry Potter. Wand cores and the significance of the length and flexibility of a wand add a complexity to wandlore in Harry Potter not found in previous tales.

4. What is a Wand?

A wand is a magic rod or staff employed in enchantments (“wand, n.” 11a). Definition, however, does not exhaust an object. The first part of the definition undermines wands, “replacing [them] with [their] causal, material or

9 Each of the ways in which wands are used in the examples above closely parallel wand use in Harry Potter. However, I must leave the specifics for future scholarship.
compositional elements” (Harman, Speculative 106). Furthermore, the second part of the definition overmines wands, making them “nothing in [their] own right but only as having a...purpose,” replacing their ontological status with a merely functional one (ibid 16). This definition thus “duomines” wands, “reducing [them] out of existence in both directions at once” by “assuming that the thing itself is nothing outside of [functions or components]” (ibid 17, 42). To do so denies that an object is a sum “exceeding its relations, qualities, and actions” and replaces it with a “loose paraphrase of the thing” (Harman Immaterialism 8, 11). Descriptions and definitions fall short because over-, under-, and duomining cannot account for the conatus of an object.

Conatus, or the “trending tendency to exist,” is a “power present in every body” (Bennett, Vibrant 2). Of course, animals, human or nonhuman, have bodies. Recognizing a plant’s body is also simple. However, saying an actual abiotic object like a hammer, rock, or wand – let alone an imagined object – has a body feels absurd. These objects do not seem to have the same vitality as material, biotic objects. Yet, conatus is a “virtue” by which “any thing whatsoever...will always be able to persist in existing with that same force whereby it begins to exist so that in this respect all things are equal” (Bennett Vibrant, 2, my emphasis). In this way, conatus makes the language of vitality accessible to all objects, biotic or abiotic, material or conceptual, fictional or nonfictional, realistic or fantastic. When we recognize all objects as vital – i.e., possessing a “restless activeness, a destructive-creative force...[which] tears the fabric of the actual without ever fully coming ‘out’” – existence becomes “a rubric that tends to horizontalize the relations between [objects]” (Bennett, Vibrant 54, 112). Because every object has conatus, no description of the elements or effects of an object can exhaust the essence of that object. In other words, because language falls short of describing the conatus of an object, objects are irreducible to “the contexts in which (human) subjects set them” (5).

How, then, can we understand what an object is? The answer is as conspicuous as it is elusive. I use “conspicuous” here in its etymological sense: it derives from the Latin specere, “to look” (“conspicuous”). Objects are available to be seen or, more broadly, for observation. Relying on observation, rather than on analysis of materials or purpose, allows us to infer aspects of what an object is qua itself via local manifestations, “the qualities of an object [which] can undergo variations while remaining the object that it is,” or what some call “phenomena” (Bryant, Democracy 93, 111, 114). This is, at first glance, paradoxical. An object will show us what it is via manifestations, which can change while the object maintains its identity. However, the “virtual proper being”, or object qua itself, “is what makes an object properly an object. It is that which constitutes an object as a difference engine or generative mechanism,” and it “can only ever be inferred from its local manifestations in the world” (88). In other words, “[i]nsofar as virtual proper being is thoroughly withdrawn and never itself becomes present” – i.e., it is “not actual though it is real” – “it can only be inferred through the actual” (Bennett, Vibrant 54; Bryant, Democracy 281). The local manifestations, or the actual, give clues about an object qua itself, but the knowledge derived from these clues is never sufficient to draw forth the virtual proper object. The being qua itself cannot change. Manifestations can change while the object remains itself. The range of these changes is an object’s “phase space” (Bryant, Democracy 114). In short, all local manifestations – current and potential – of an object constitute the phase space.
through which it can pass, and the entirety of its phase space constitutes the virtual proper being. When an object passes through a manifestation of its phase space and back again, it “manifests...symmetrical qualities” (119). These qualities “can repeatedly snap in and out of existence,” such as how Bryant’s mug can become different colors in different amounts and qualities of light (90). The mug remains the same mug. Despite the changes in its phase, it maintains its conatus. Bryant also refers to “asymmetrical qualities” (119). These phases are irreversible. Brokenness is an asymmetrical quality for wands. When Harry’s first wand breaks, it is unfixable (DH 17, 24). Yet, it remains the same wand.

For the wix, wands’ virtual propers being unknowable does not mean they can never understand wands; rather, it means that their knowledge will always be incomplete. They can, for instance, tell if a wand is allied with them. Furthermore, they can get to know the wand better by “the observation of how [it] relates to the world in its non-relation” (Bryant, Democracy 88). Alas, wixes do not pay enough attention to notice. Such observations cannot be made casually. They can only be made by studying an object intently, such as how a couple might study each other throughout a relationship. For instance, a casual perusal of Harry’s first wand reveals it is made of holly, eleven inches long, and supple. A studied eye can determine it has a phoenix feather core (SS 5; GoF 18). However, only a wix who observed this wand over extended periods could see how it “respond[s] to unprecedented situations,” a primary quality of any object qua itself (Bennett, Vibrant 97). These observations must be done in the field because laboratory science relies too heavily on precedent and confirmation by replication to do so adequately. I do not mean that conatus is revealed through praxis. Indeed, “praxis does not get at the reality of the object any more than theory does” (Harman, Speculative 93). Praxis is better for revealing manifestations. Theory is suitable for measuring them. Yet, not even in combination can they bridge the gap between an object qua itself and its manifestations.

5. The Wand Chooses the Wizard

Wands in Harry Potter reveal aspects of their conatus, vitality, and self via their capacity to choose. As Harry tells Voldemort, “Possessing the wand isn’t enough! Holding it, using it, doesn’t make it really yours” (DH 36). It is not enough for a wix to choose a wand; the wand must also choose the wizard. Each wand has the phase space to ally with one wix at a time. A wand demonstrates one of the local manifestations within its phase space by revealing whether it has allied with its current wielder. The wand qua itself does not change. However, its reaction to the wix wielding it differs depending on whether they are allied. For instance, upon being accepted to Hogwarts, a new student’s wand will be neither ready- nor present-to-hand because it is absent (Bogost 5–6). So, most students will visit a wand shop. While there, they will try out wands until one sparks, signaling it has an “initial attraction” to them. The wix purchases the wand and is on a “mutual quest for experience” with that wand (SS 5; DH 24). From that point on, the wix is considered to own that wand or is its “master” (DH passim). This process has exceptions, such as Ron Weasley and Neville Longbottom, whom I discuss in section 6.
The idea that an object can ally with a person may seem bizarre. After all, this would require objects to act “like a sentient entity” (Hoffman 152). However, nonfictional circumstances can also be spoken of in such terms. Objects across techne, i.e., arts- or trade-based disciplines, parallel wands in this way. Programmers will arrange the hardware and settings of their computers to optimize their work style, and the equipment they use will shape how they code. Further, their coding style will sometimes necessitate using specific hardware or programs and vice versa. A musician can sense how to get an instrument they have worked with to create specific sounds, and the instrument will allow itself to wear down in various ways to fit the musician’s body. Furthermore, in these pursuits, technicians often claim, “[insert techne] found me,” or “I felt drawn to the medium.” In this way, mediums, modes, and muses – the three types of objects necessary for technai – choose the technician, and they become allied in the purpose of their techne.

Once wands are recognized as agential, conative objects, they become ontological equals to humans. Furthermore, via their capacity to choose which wix to ally themselves with, wands act as sentient entities and demonstrate another trait of conative objects: they select alliances “to enhance their power or vitality” (Bennett, Vibrant 118). The wand and the wix must both exercise conatus to create their relationship. By entering the local manifestation of mutual alliance with each other – or “entangling” – objects commingle, becoming new objects with phase spaces more extensive than the sum of the phase spaces of their parts (Bryant, Democracy 25). The relationship between wand and wielder reveals that both are member-actants in “assemblage[s],” or “collective[s],” i.e., “ad hoc groupings of diverse elements,” “entanglement[s] of human and non-human actors or objects,” or “ecolog[ies] of human and non-human elements” (Bennett, Vibrant 103, 23; Bryant, Democracy 24). Further, they are “living, throbbing confederations that can function despite the persistent presence of energies that confound them from within,” which “are not governed by any central head: no one materiality or type of material has sufficient competence to determine consistently the trajectory or impact of the group” (Bennett, Vibrant 23–4). Since assemblages and collectives do not have assemblers or collectors at their heads, I prefer to call them compound objects or compounds – i.e., “non-totalizable sums” that have “a distinct history of formation [and] a finite span” (Harman, Immaterialism 14; Bryant, Democracy 271). I have described the wand/wielder compound’s history of formation above. The span of the wand/wielder entanglement is terminated when the wix dies or when their wand ceases to be ready-to-hand, either by physically breaking or changing its allegiance.

Furthermore, compound objects depend on the inherent qualities of their internal arrangement, or shi. This “vibratory effluescence” “originates not in human initiative but, instead, results from the very disposition of things” and “persists before and after any [external] arrangement in space” (Bennett, Vibrant 57–8). In other words, there is perpetual vibration; no point or atom is still or devoid of virtual energy (35). Every object has shi, and it comes from the object qua itself. Shi is vital to the wand/wielder relationship: “It is the mood or style of an open whole in which . . . the members themselves undergo internal alteration” (Bennett, Vibrant 35). The shi is the source of the capability for the mutual quest for experience the wielder and wand undertake after they experience the initial attraction that begins their alliance.
It is also important to note that there are three conative objects in play here: the wix, the wand, and the alliance, each of which is a compound. The wand is a compound of wood, core, and experiences with previous allies; the wix of various biological cells, psychological states, memories, experiences, and intersectional social identities; and the alliance is a compound of these compounds. As wand and wix gain experience, together or separately, their compounded shi harmonizes until either one of them breaks the alliance. Indeed, all objects are compounds. Every object is made from other objects and changes over time based on how its members change. These changes aggregate as they move from less to more compounded objects.

Conative objects create alliances, which “are not governed by any central head,” to “enhance their power or vitality” (Bennett, *Vibrant* 24, 118). In other words, an alliance must be symbiotic rather than parasitic; all parties must benefit by becoming more powerful or vital. This dynamic is evident in the wand/wielder relationship: neither the wand nor the wielder can produce controlled, powerful magic alone, and neither is harmed by being allied with the other. Wixes understand the wielder to control the wand and, via education, they become competent in determining their shared trajectory. Nevertheless, certain wands are better for casting certain types of magic than others. Lily Potter’s wand, for instance, was “good for charms,” whereas James Potter’s was “excellent for transfiguration” (SS 5). So, while a wix’s inclinations toward studying or casting certain types of magic would match a purchased wand’s aptitudes, a wand won from another could draw out new aptitude or ineptitude for certain types of magic. A change of wand could cause such a shift in the orientation of the wielder or vice versa, so spells must be cast via a distributive agency. Neither wand nor wielder ever acts alone. Each “always depends on the collaboration, cooperation, or interactive interference” of the other (Bennett, *Vibrant* 21). All actions are collective and taken up by mutual decision. Just as the cells that make up my body must work in concert for me to live, all members of the wand/wielder compound must work harmoniously to produce, direct, and control magic.

Material objects rarely exhibit the vivacity and agency of the wands of *Harry Potter*. This difference occurs because fantastic objects are hyperbolic. Therefore, their capacity as actors is exaggerated when compared to material objects. Conductors’ batons are an obvious nonfictional analog to wixen wands. Batons have a similar shape to wands – though batons tend to be longer – and like Harry in Olivander’s shop, a conductor must sometimes be measured to find the right baton (SS 5; Praeclarus Wands). Further, a conductor, like a wix, must “understand, isolate, and practice a variety of gestures” (Wittry 48). For the wix, the “swish and flick” must be mastered, while for the conductor, motions such as the ictus, rebound, and dead beat are necessary (SS 10; Wittry 46–7). Wands and batons are also made partly of wood, and while the magic created by wands is more literal, with a baton, a conductor can create “a magic beyond all we do [at Hogwarts]” (SS 7).

While I focus on the wand’s ability to break an alliance, it is possible for a wizard to abandon a nonbroken wand. Charlie Weasley, for instance, abandons his first wand when he gives it to Ron, as discussed below (SS 6). Both the very young and the very powerful can use wandless magic. However, in the former’s case it is largely uncontrolled, and in the latter’s case they had to learn to control magic with a wand before they could develop this talent.
Another more quotidian analog is cell phones. Of course, there are a few differences between the two: phones feel less vital than wands, for instance – contra the usual differences between actual and fictional objects – because of the differences between artisanal and mass-produced objects, and phones physically resemble magic mirrors more than wands (McGregor and Kosman 1:18:00–1:18:50; McLaughlin 3). However, they are otherwise quite parallel. Phones are as ubiquitous in our society as wands are in wixen society. Also, some have an inherent aptitude for certain functions; some are designed for photography, and others are inclined toward streaming video. Creating and maintaining an alliance with a phone is also similar to the aforementioned wand-purchasing experience. A phone that fits your needs is neither ready- nor present-to-hand, so you go to a store. You view several, and you assess various models to see if there is an initial attraction. Sometimes, you know exactly what you are looking for; sometimes, the right one surprises you. Once you find one that shares that attraction, you purchase it. Newly entangled, its shī and yours harmonize as you become allies in social – and parasocial – communication. As the alliance ages, you and the phone undergo a mutual quest for experience with each other and learn from each other as you use various apps and achieve acts of information gathering and connectivity previously only possible through magic. You manipulate the settings – and other software – of your phone and are limited by its hardware. These aspects of the phone shape how you interact with your environment; then, when you use someone else’s phone, it might feel odd or behave differently from what you expect, like how the blackthorn wand produces spells that do not quite fit Harry’s intentions (DH 20). The phone – or at least the network behind it – also learns you by feeding your data into recommended content algorithms, allowing for personalized advertisements and content suggestions, which – alongside browser histories – mirrors the wixen ability to trace underage magic use and to determine which wand produced a spell (McLaughlin 5; OotP 3; DH 4; GoF 9). Object/human compounds involving houses, furniture, appliances, and cars follow similar patterns.

6. On Wand-Being

Wands, much like nonfictional objects, cease to be ready-to-hand when they break. When Heidegger’s hammer breaks, or “definitely refuses to work”, it ceases to be ready-to-hand (98, 406). Ron’s is the first wand to break in Harry Potter. It “snapped, almost in two; the tip was dangling limply, held on by a few splinters” (CoS 5). While still usable, his wand projects spells backward onto the caster or produces partial or unintended effects (passim). Other broken wands include Neville’s and Harry’s, both of which snap in two, breaking beyond use (OotP 35; DH 17). Though a broken wand retains its conatus, the broken phase keeps it from entering certain other phases, such as casting a spell.

Wands ceasing to be ready-to-hand when they break is significant because wands differ from other objects in Harry Potter. When most other objects break, a wix can fix them by casting Reparo. Wands, on the other hand,
cannot be fixed by this method.\textsuperscript{12} This attribute stems from the difference between autopoietic and allopoietic objects. Autopoietic objects are living things and systems that self-maintain and self-regulate. For all but the most severe injuries, autopoietic objects can move from an injured phase to a healed phase on their own. These compounds repair themselves and reproduce. Allopoietic objects, by contrast, are everything else (Bryant, Democracy 137). Some damage is symmetrical for autopoietic objects, but all damage is asymmetrical for allopoietic objects (120). Wands’ allopoiesis means they hold a precarious place in their alliance. Wands rely on wixes for their production and protection. However, while a wix relies on their wand to produce spells, wands are not a wix’s sole source of protection. Harry, for example, can dodge spells when his wand is missing (GoF 9). Thus, wands and wixes equally exist but do not “exist equally;” they have “different types and degrees of power,” and each contributes to their compound accordingly (Bogost 11; Bennett, Vibrant 108–9).

While wixes understand wands breaking, the other way in which wands cease to be ready-to-hand is more mysterious. Wands can stop being ready-to-hand at will by switching allegiances or by refusing to ally with a wielder. Any wix can use any wand, but “the best results. . . come where there is the strongest affinity between wizard and wand” (DH 24). Further, a wix cannot force a wand to switch allegiances; the wand must do so voluntarily. Initially, the idea of an object changing allegiances of its own accord seems just as strange as objects making allegiances in the first place. But think of an artist’s block: an artist might spend their whole life working in a medium, but then the tools start feeling “clumsier and less powerful,” and they might describe the work as “feeling wrong” (DH 20, 26). A new medium, mode, or muse might call their name, and they can follow this initial attraction, starting a new quest for mutual experience. Are the object(s) involved not dissolving their allegiance in such cases? Just as any member can dissolve a human/human alliance, any member can dissolve a human/object alliance.

Wands change allegiance upon an ally’s defeat or choose a new wix after the death of their previous wielder. As mentioned, Ron and Neville inherit wands from their brother and father, respectively (SS 6; OotP 35). These wands have no reason to change allegiances to their new wielders: neither Ron nor Neville defeats the people to whom the wands “belong,” nor has either wand’s ally died. The lack of alignment within their compound means the shi of the wand and wielder are not in alignment. Because Ron’s and Neville’s shi are dissonant with those of the wands they wield, they quickly gain reputations as unskilled spellcasters. When their wands break, Ron and Neville finally get wands that ally with them. Once Ron and Neville purchase wands whose shi resonate with theirs, they become much better at using magic. Compared to his previous difficulties, Ron has no issues in his first Defense Against the Dark Arts lesson in Prisoner of Azkaban (7). Similarly, Neville manifests as a powerful wizard only after being chosen by a wand between his fifth and sixth year at Hogwarts.

Because wands choose wixes and work best for their chosen wix, wands must perceive the identity of their wielder. Perception enables agency. Before delving into the specifics, it is necessary to describe how objects can interact

\textsuperscript{12} Harry does find an exception to this at the end of Deathly Hallows. However, it only applies to a wix allied with the nearly omnipotent Elder Wand (36).
despite being withdrawn from each other. Objects “perturb” each other, and “any information value the perturbation takes on is constituted strictly by the distinctions belonging to the organization” of the object, and all objects, whether auto- or allopoietic, “constitute the way in which they are open to other entities in the world” (Bryant, Democracy 141). Perturbations and responses between compounds are “exo-relations;” within a compound, they are “endo-relations” (68). Wand’s endo-relations are the interactions between the wood and core. Moreover, the relation between wood and core produces an “endo-quality,” e.g., being better for certain types of magic than others (120).

Wixes and wands each perturb the other in particular ways. The most obvious way is the physical. The wielder holds the wand, waves it, and points it at a target. The wand has a particular weight, a certain flexibility, and is designed to be held by one end. They perturb each other magically as well. The wix provides the wand with intention and incantation. The wand provides a focal point for that intention and the capacity to emit the spell. However, Levi Bryant does not explore one critical aspect regarding endo- and exo-relations: since we can “treat relations adequately as compound objects,” the previous paragraph describes not only the exo-relations between wand and wix but also their compound’s endo-relations (Harman, Immaterialism 14). The entanglement of wand and wix makes the production of focused, powerful, and directed magic possible. Therefore, the compound casts the spell rather than either the wix or the wand. Given this dynamic, it is essential to examine this endo-relationship, including what happens when a wand and its wielder are not allied.

7. Wands as History Makers

No wand can deny a wielder, “if you are any wizard at all, you will be able to channel your magic through almost any instrument” (DH 24). Therefore, wands are “small agencies” (Darwin qt. Bennett, Vibrant 94). Yet, wands can resist by making spells “clumsier and less powerful,” by “feeling wrong” to the wielder, or by rebounding attacks upon the caster (DH 20, 26, 36). A wand can tell if its wielder is an ally, decide whether to change allegiances, and resist use when a non-ally perturbs it. Again, wands parallel objects used in technai. If someone is not on a mutual quest for experience with a medium, their work will remain clumsy, and the tools will feel wrong in their hands. If technicians find media, modes, and muses to ally with, they can make massive leaps in skill. “In the right confederation with other [objects],” wands, like other small agencies, “can make big things happen;” wands can “make history” (Bennett, Vibrant 94–5).

The Elder Wand, the most powerful wand ever made, is the prime example of this in Harry Potter. Throughout the first five books, it is allied with Albus Dumbledore (HBP 30). When Dumbledore is killed, the reader is led to believe it allies with his killer, Snape, but it actually allies with Draco when he disarms Dumbledore a few moments before Dumbledore’s death (DH 27). Later, Harry wrestles Draco’s first wand from him (DH 23) and soon after, uses Legilimency to watch Voldemort steal the Elder Wand from Dumbledore’s grave: “a shower of sparks flew from its tip, sparkling over the corpse of its last owner, ready to serve a new master at last” (DH 24). Voldemort – and the reader – understand the new master to be Voldemort, but it is not. Harry is also
present via his psychic connection to Voldemort. The wand sparks in Voldemort’s hand, but it recognizes Harry, who disarmed Draco, who, in turn, disarmed Dumbledore.13

This moment changes the endo-relations of the compound composed of Voldemort, Harry, and their wands. Harry’s first wand is broken, but he is allied with Draco’s first wand and the Elder Wand. Voldemort possesses the Elder Wand but is only allied with his first wand. Ironically, as the more skilled and experienced duelist, Voldemort might have won their final battle if he had used his first wand rather than the more powerful Elder Wand because then each would have been wielding an allied wand, rather than them both using wands that are allied to Harry (DH 23, 24, 26, 36). Thus, while still a small agency, the Elder Wand’s resistance against both being wielded by a non-ally and being used against its ally enables Harry to defeat the “most dangerous dark wizard of all time” (Bennett, Vibrant 96; DH 18).

However, the Elder Wands’ role in Voldemort’s death is not the only way wands make history. In the opening chapters of Deathly Hallows, a charm protecting Harry since the night his parents were killed is about to expire. Harry and his friends enact a plan to hide Harry somewhere that Voldemort and his Death Eaters will not find him, but en route to the new safe house, they are ambushed (4). Harry casts Expelliarmus, revealing himself with his “signature move” (5). When Voldemort pursues, Harry’s scar incapacitates him with pain. Then, “[Harry’s] wand acted of its own accord. He felt it drag his hand around like some great magnet, [and] saw a spurt of golden fire” (4, my emphasis). Harry’s wand is able to manipulate his body. Somehow, it draws forth a spell and keeps its ally safe.

It is later explained that the wand doing this is due to the complex entanglements between Harry, Voldemort, and their first wands. Their first wands have “twin cores,” making them “brothers,” which implies that wands can create “social connections” and could even have something that “resemble[s] human emotions” (SS 5; Hoffman 152). This connection is doubled when Harry’s and Voldemort’s wands connect via Priori Incantatem during their graveyard duel, entangling them more than any two wands had ever been before (GoF 36; DH 35). Therefore, Harry, Voldemort, and their wands form a single compound object, allowing Harry’s wand to “recognize [Voldemort] ... a man who was both kin and mortal enemy” and manipulate Harry’s body to protect him (DH 35). Despite the rarity of a wand wielding a wix, these scenes prove that a wand can do so, calling to mind again the image of a technician riding the wave of inspiration brought on by their relationship to their medium, mode, and muse, and lending credence to wands’ more quotidian influence in their wielder’s ability with one type of magic over another. Thus, the “small agency of the lowly [wand] makes” as much or “more difference than the grand agency of humans” (Bennett, Vibrant 98). Wands’ ability to make history suggests that "small" agencies may, instead, be “dormant, inactive, or veiled by the agency of other objects” (Bennett, Vibrant 95–7; Bryant, Democracy 48).

13 Lorrie Kim did an excellent job explaining the importance of these two moments in terms of Harry’s allegiance with and possession of all three Deathly Hallows in her presentation “Chapter 24 of Deathly Hallows: ‘The Wandmaker.’” at The 12th Annual Harry Potter Academic Conference.
Even the wandmaker Olivander has trouble seeing beyond this veil. Despite his deep understanding of the wand/wielder relationship, he speaks of how if “conquered,” a “wand will usually bend to the will of a new master” (DH 24). Olivander’s language shows that he does not understand the nature of wands. He cares for them deeply. He remembers the specifications of every wand he has ever made and can quickly recognize all elements of wands made by others (SS 5; GoF 18; DH 24). Nevertheless, while Ollivander’s care for wands subverts the typical wixen overmining of wands, it undermines them. By contrast, Harry becomes an experiential expert on wandlore, gaining knowledge outside of Olivander’s academic study. In short, while overmining, undermining, and duomining are unavoidable “to the extent that human survival hinges on acquiring such knowledge,” they fall short of understanding what objects are (Harman, Immaterialism 12). A wand is not merely a tool for channeling magic, a combination of specific materials, or both at once. A wand is a conative, agential object, vibrating with shi, more significant than any purpose or sum of its parts, and so is every other object, biotic or abiotic, material or conceptual, fictional or nonfictional, realistic or fantastic.

8. Conclusion

Harry allies with three wands in the course of the series and wields two others. He observes their differences without judgment and develops an awareness of their allegiances. He humbles himself, flattens his ontology, and approaches wands on their terms, which allows him to treat wands as equals. He trusts them, allowing them to behave “according to [their] own organizations” (Bryant, Democracy 174). He respects their shi. In doing so, his shi encourages wands to perturb him in new ways. By observing and noting these interactions, Harry gains the wands’ respect and allegiance, which helps him fulfill his destiny. Similarly, by observing objects revealed through their relations to themselves and other objects, we, like Harry, can build an ever-growing but forever incomplete understanding of the nature of the objects in our lives and gain new allies – whether they be cars, friends, computers, ideas, or shoes – in our journeys.

I did not set out to, nor could I possibly, exhaust the ontology of wands. Many questions about the essence of wands remain unanswered. For instance, what is the relationship between an incantation and the wand/wielder compound? How can wandmakers make bespoke wands, such as Fleur Delacour’s or Luna Lovegood’s wands (GoF 18; DH 25)? What is the relationship between wands and non-human magic users, like house-elves or goblins (GoF 9; DH 25)? These questions show the virtual proper of wands’ continual withdrawal. While answers to these questions may surface, they remind us that objects qua themselves will forever remain withdrawn. Even so, we can increase our understanding of all objects, fictional or nonfictional, via what they reveal of themselves in novel situations. Ironically, doing so within a flat ontology allows us to fulfill Kant’s ethical imperative more categorically than his epistemology allows by treating objects “never merely as a means to an end, but always at the same time as an end” (Kant 36).
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“I hope they really evolve into a different species from us”: Human-Nature Disconnection, Eeriness, and Social Class in Han Song’s “Submarines”

Eero Suoranta

Abstract: Human-nature disconnection is commonly seen as one of the major problems caused by modernization with many in the industrialized world advocating for people, and especially children, to spend more time in contact with nature. In this paper, I argue that the 2014 short story “Submarines” by the Chinese SF writer Han Song (b. 1965) challenges this widespread idea of a “return to nature” while calling attention to the links between environmental problems and class politics. I further argue that the story accomplishes this via the “eeriness” that Li Guangyi sees as the most apparent feature of Han Song’s literary style as well as by invoking the critical realism of Lu Xun (1881–1936), making the story an example of the “generic hybridity” of SF that Cara Healey has previously examined. As such, I contend that “Submarines” does not present the reader with ready-made answers, but instead offers a way to think about how ecological crises intersect with inequality.

Keywords: Chinese science fiction, eeriness, Han Song, Lu Xun, nature-deficit disorder, social class

1. Introduction

In a world where herds of submarines seem to be a more common sight than shoals of fish, a group of children that live in an unnamed city dive into the Yangtze River to encounter their migrant counterparts, who have somehow
adapted to life under the river’s polluted waters. Finding the lifeworld of the newcomers incomprehensible and even disturbing, the city children return to the surface, where they later join a crowd of urban residents watching passively from the sidelines as a mysterious disaster befalls the submarines. Such is the plot of Han Song’s (b. 1965) short story “Submarines” (“Qianting” 潛艇, 2014), a previously under-researched work of contemporary Chinese SF that uses its estranged setting to explore questions of environmental degradation and of inequality between social classes.

With multiple ecological and social crises drawing attention to the problems of a highly technologized way of life, the idea of a “return to nature” has become appealing for many, particularly in the industrialized and urbanized parts of the world. Disconnection with the natural world is seen as especially lamentable in the case of children with concepts like Richard Louv’s “nature-deficit disorder” or NDD (Louv 36) used to describe how loss of physical contact with nature (in particular during childhood) can lead to mental and physical health problems. Although scholars, such as Elizabeth Dickinson, have criticized NDD and similar discourses for promoting “a fall-recovery narrative” that centers on a return to an idealized past and for ignoring the impacts of social inequality (Dickinson 315 and 330), the nostalgic images associated with the idea of living “closer to nature” still seem to give such discourses considerable rhetorical power.

In this article, I examine how “Submarines” challenges “return to nature” discourses in the Chinese context. Based on an examination of the interactions between diegetic estrangement, naturalization, and defamiliarization in the story, I demonstrate that “Submarines” utilizes literary estrangement in a way that seems atypical for SF in order to establish an eerie atmosphere that not only allows for multiple interpretations of its marvelous elements, but also casts tropes found in NDD narratives into an ironic light. By comparing the parallels between Han Song’s story and the works of pioneering Chinese realist writer Lu Xun (1881–1936), I will also show that “Submarines” is marked by a generic hybridity of SF and Chinese critical realism through which it calls attention to the links between environmental problems and unequal economic and social relations. As such, I argue that “Submarines” is a useful avenue for what Dickinson calls “inward expansion” and offers a way to grapple with complex and pertinent questions about how social and cultural systems create ecological crises and inequality.

2. “Nature-deficit disorder,” China, and SF

To illustrate the discourse around children and disconnection with nature, I now turn to the concept of “nature-deficit disorder” (hereafter NDD) and Elizabeth Dickinson’s incisive analysis of it. Coined by journalist Richard Louv in his 2005 book Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder as “a catchphrase and medical diagnostic metaphor” (Dickinson 316), the term NDD “describes the human costs of alienation from nature, among them: diminished use of the senses, attention difficulties, and higher rates of physical and emotional illnesses” and suggests that these can be ameliorated through “positive physical connection to nature” (Louv 36). In the United States, Louv’s book became a New York Times bestseller, and his
message has been widely embraced by both activists and public organizations, such as the US Forest Service (Dickinson 316).

A Chinese translation of Last Child in the Woods was published in the People’s Republic of China in 2010. The translation effort was organized by China’s oldest environmental NGO, Friends of Nature (Ziran zhi you 自然之友), whose chairman Yang Dongping warned in a new foreword to the book that China’s exam-centric education system would help usher in “a complete rupture in the connection between youth of the Internet age and Nature” (Efird 1144). Science teacher and environmental education pioneer Liu Guochun has expressed similar sentiments with the following pithy comment: “I grew up in nature. My students are growing up in the classroom” (1443). Although these examples are not necessarily representative of wider popular opinion, they show that NDD and similar ideas resonate among environmentalists in contemporary China as well as the West.

However, while the benefits of being out in nature may seem commonsensical and do have at least some basis in empirical research, Dickinson points out that Louv’s account evokes “a fall-recovery narrative – that children are separated from nature and must return” (315). According to Dickinson, such narratives can in turn “reify the human-nature split, obscure environmental justice, influence irresponsible behavior, and normalize contemporary conditions and relationships,” for example, by ignoring environmental degradation in the past or by elevating only certain kinds of childhoods (321). Therefore, while the efforts of Louv, Yang, Liu, and others to counter the negative effects of disconnection with nature are certainly commendable, NDD discourse should be approached critically, and alternative frameworks for understanding such disconnections should be sought.

For a perhaps more nuanced perspective on disconnection with nature and environmental degradation in contemporary China, I next turn to Chinese SF, specifically to Han Song’s short story “Submarines.” The idea that Chinese SF is especially well-suited to shedding light on Chinese society has previously been advanced by scholars such as Mingwei Song, who has examined how Chinese SF is able to represent an “invisible,” otherwise unrepresentable social reality (“Representations of the Invisible” 552), and Cara Healey, who has analyzed how Chen Qiufan’s novel Waste Tide (Huangchao 荒潮, 2013) specifically illuminates the complex phenomenon of ecological destruction (“Estranging Realism”). In the following three sections, I analyze “Submarines” along similar lines by examining how the story’s eerie atmosphere, ironic echoes of NDD tropes, and parallels to the critical realist works of Lu Xun facilitate reflection on the links between environmental degradation and unequal economic and social relations.

3. “Submarines,” estrangement, and the eeriness of the (un)natural

Recounted in the first person by an unnamed narrator recalling their childhood, Han Song’s short story “Submarines” gives an account of the presence and eventual disappearance of a fleet of submarine-dwelling migrant workers in a city along the Yangtze River. Amid speculations that the migrants might be
developing into a new civilization, the narrator and their friends dive beneath the surface of the river, finding their peasant counterparts well-adapted to underwater life. In the end, however, a fire of unknown origin spreads among the submarines while the city’s entire native population passively observes the destruction, after which the migrant workers stop coming to the cities of the Yangtze.¹

Han Song is widely considered one of the major authors of contemporary Chinese SF (Isaacson 4; Healey, “Madmen and Iron Houses” 517; Song, “After 1989” 8), and his works have been variously described as “intensely political” and “couched in layers of allegory” (Liu 112), “dark and experimental” (Cigarini 20), and exhibiting his “eerie imagination and fulsome language” (Wang 26). Arguing for the uniqueness of Han Song’s style among Chinese SF authors, Li Guangyi has suggested that “no phrase captures Han Song’s writing better than ‘eerie’ (guiyi 诡异)” and that “the most apparent characteristic [of this eeriness] is its indeterminacy.” To support this claim, Li notes that Han Song’s stories commonly feature “mysterious images” that are explained either not at all or only inconclusively with the narrative also bringing up alternative possibilities for them (29). In this section, I argue that in a similar fashion, “Submarines” hinges upon the indeterminacy between the natural and the unnatural, which significantly complicates the idea of a “return to nature.”

In order to better understand how this eerie indeterminacy is realized in “Submarines,” I employ Simon Spiegel’s theorization of the different forms of estrangement to examine how they are used in the story. In his challenge to Darko Suvin’s definition of SF as the “genre of cognitive estrangement” (Suvin 3–15), Spiegel argues that on a formal level, science fiction “does not estrange the familiar, but rather makes the strange familiar” (Spiegel 372, emphasis original). Spiegel justifies this claim by breaking down Suvin’s concept of “estrangement” into the three related but separate categories of “diegetic estrangement,” “naturalization,” and “defamiliarization” (375–376) and by arguing that “first-degree defamiliarization” (which operates on the formal level and does not depend on the prior use of naturalization) is in fact rare in SF (378). However, I argue that in “Submarines” all three of these elements are in fact present in an uneasy yet productive tension, which contributes to the story’s eerie atmosphere.

First, let us consider diegetic estrangement, where “a marvelous element is introduced into a seemingly realistic world” (Spiegel, 375). In “Submarines,” the most obvious example of this “marvelous element” (Suvin’s “novum”) are the eponymous vessels themselves, although less by virtue of their actual technical capabilities than of their prevalence and the fact that they have apparently been built by hand by ordinary craftspeople and farmers. Perhaps even more marvelous are the children of the migrant workers, who have seemingly adapted to underwater life in an accelerated form of evolution that would seem highly improbable in terms of real-world biology. In either case, both elements clearly exist in the otherwise more or less realistic world of the

¹ In this article, references to the story will be mostly to the 2019 English translation by Ken Liu (“Submarines”), except when it is necessary to point out significant differences between the Chinese original (“Qianting”) and the translation.
story and therefore fit unproblematically within the category of diegetic (not formal) estrangement.

However, in terms of naturalization, which Spiegel defines as the “process of normalizing the alien” (376) where a work “behaves as if its novum were normal and plausible” (377), “Submarines” presents a more complicated picture. To an extent, both the submarines and the aquatic children are indeed treated as “plausible” in that they are tentatively explained with reference to science and technology. Yet these explanations are presented to the reader as merely unconfirmed rumors and speculation circulating among the city residents, and indeed, they seem to raise more questions than they answer. For example, no explanation is offered for what may have caused the accelerated evolution of the peasant children, nor for how the city children are able to have a spoken conversation with them underwater. Rather than being fully naturalized and therefore presumably “accepted” (Spiegel 377) by the implied audience, the marvelous elements of the story instead remain “mysterious images” (in Li Guangyi’s sense) that allow for multiple interpretations.

Finally, there is defamiliarization, or “the formal-rhetorical act of making the familiar strange” (Spiegel 376), which, unlike diegetic estrangement, is not meant to indicate that the world of the story is actually different from our own. In “Submarines,” this is most apparent in unusual descriptions of diegetic elements, such as when the narrator refers to the stinking trash strewn across the surface of the river as “an unforgettable, lovely sight” (121), or when the submarines are compared to “wisps of rain-soaked clouds” (115) or to “a pack of hungry, silent wolves in the deep of winter” (121). Notably, despite Spiegel’s claim that defamiliarizing the novum in SF “contradicts the genre in certain ways” (378), it is in fact the novum of the migrant workers’ submarines that is made strange (or stranger) by the narration in the latter two examples.

It is this formal estrangement of marvelous and incompletely naturalized diegetic elements that helps explain the eeriness of “Submarines”: the reader is not only kept unsure of whether the given techno-scientific justification for the novum (that the submarines are simply clever pieces of folk artisanship) is true within the world of the story, but also actively directed to think of alternative points of reference, such as animals and weather phenomena. The defamiliarizing language thus casts a shadow of indeterminacy over the submarines that renders them eerily (un)natural and makes it unclear whether they should be seen as examples of human encroachment on nature, a blurring of the line between the artificial and the biological, or perhaps even in some sense the supernatural. As such, in the next section I will examine in more detail how “Submarines” builds upon this eerie indeterminacy in order to portray environmental degradation and in doing so challenges the assumptions underlying NDD discourse.

While a detailed discussion of the relation between Han Song’s “mysterious images” and the supernatural is beyond the scope of this article, it is perhaps worth noting that Han Song has expressed a certain amount of skepticism over the ability of science to fully explain natural phenomena: “Human knowledge and powers are limited, and because of this we should maintain an eternal reverence for the boundless universe” (qtd. in Li Guangyi 31).
4. The ironies of “nature-deficit disorder” and the pervasiveness of environmental degradation

The image of children playing in a polluted river filled with vaguely animalistic submarines also naturally leads us to consider how “Submarines” deals with questions of environmental degradation and children’s lack of connection with the natural world. In her insightful article on Chen Qiufan’s SF novel Waste Tide, Cara Healey argues that while “ecological destruction at times exceeds realism’s expressive capabilities” (“Estranging Realism” 8), Waste Tide is able to capture the enormity of ecological devastation through science-fictional estrangement. In this section, I argue that “Submarines” uses its eerie indeterminacy to draw attention to environmental degradation similar to Waste Tide, but at the same time, also questions certain tropes found in NDD narratives and similar discourses through ironic juxtaposition and inversion.

The parallels between “Submarines” and NDD narratives are evident from the very first line, which also provides the framing of the story. According to Dickinson, one of the central features of NDD discourse is a trope that she terms “when I was young” after the phrase frequently used by adults to begin accounts in which “they sentimentally depict their ideal childhood experiences.” In NDD discourse, the trope is specifically deployed in stories about “how modern childhood has negatively changed,” evoking a fall-recovery narrative (320). In “Submarines,” the narrator likewise starts their description of the riverside trip that opens the story with the words xiao shihou 小时候 (Han, “Qianting” 76), which might be translated as “when I was little” or “when I was a child.” As in NDD discourse, the phrase evokes a kind of childhood that belongs to the past and not to the narrator’s present, an implication that is confirmed when the final lines of the story reveal that the submarines no longer travel along the Yangtze River.

However, the story’s parallel to the “when I was young” trope is also an ironic one since instead of recalling an encounter with some wonder of the natural world (such as migrating animals), the narrator tells of going to see the migrant workers’ submarines. This outing is later followed by the narrator and their friends going for a swim in the Yangtze – a form of playing outside that might spark nostalgic memories in some, were it not for the detail that it takes place in a thoroughly polluted (yet still somehow “lovely”) river. Unlike the typical “youth of the Internet age” that Yang Dongping refers to in his preface to Last Child in the Woods, the city children of Submarines clearly do spend time exploring the world outside their classrooms, but their explorations hardly fit into Louv’s conception of “positive physical connection to nature” and may, in fact, even threaten their health.

3 Although the Chinese original does not specify the gender of the narrator, the phrase appears in Ken Liu’s English translation as “as a boy” (“Submarines” 115).
4 While this is not referred to in the narration, the setting of the story in the Yangtze region would suggest that the submarines might have taken the place of the possibly extinct baiji or Chinese river dolphin specifically. The English translation makes this connection more explicit by describing the subs as arriving to the city “in herds and pods” (Han, “Submarines” 115), while the original uses the less specific phrase chengqun jiedui 成群结队, “in large numbers” (Han, “Qianting” 76).
The juxtaposition of the “natural world” and the lifeworld of the city children is made more explicit in their encounter with their migrant counterparts, which also recalls the practice of naming promoted by Louv as an important tool for reconnecting with nature (Dickinson 327). In “Submarines,” naming is foregrounded in a brief yet significant exchange between representatives of both groups, prompted by the “leader” of the city children asking the peasants whether the latter have ever seen a car:

Finally, a look of curiosity appeared on the face of one of the peasant children. “A car? What’s that?” His voice was barely a whisper. I thought he looked like a creature out of manga.

“Ha, I knew it!” Our leader sounded pleased. “There are so many types of cars! Honda, Toyota, Ford, Buick... oh, and also BMV and Mercedes!”

“We don’t know what you’re talking about,” said the peasant kid, his voice hesitant. “But we’ve seen lots of fish. There’s red carp, gold carp, black carp, sturgeon, oh, and also white bream and Amur Bream!”

Now it was our turn to be nervous. We looked around but didn’t see any fish. Our teachers had taught us all fishes in the Yangtze had gone extinct, so were the peasant children trying to trick us? Where could they have seen fish?

“I hope they really evolve into a different species from us,” muttered our leader. (120)

In this passage, both children demonstrate their skill in naming things that are relevant for their own lives with the similarity of phrasing underlying the contrast between their circumstances. Being more familiar with car brands than aquatic animals and apprehensive at the idea that the Yangtze might still contain fish, the city children certainly appear to be “nature-deficient” in Louv’s sense. Conversely, one might assume that their rural peers are “closer to nature,” as they are simultaneously knowledgeable about fish species and ignorant about modern technology. However, it must be noted that the apparent precondition for this knowledge of the “natural” world has been biological adaptation to living in the polluted (and thus “unnatural”) waters of the Yangtze, which have marked their very bodies.

Instead of representing the possibility of a “return to nature” or even a remnant of an idyllic “pre-fall” time, the aquatic migrant children of “Submarines” function more as a reminder of the pervasiveness of environmental degradation, which by not discriminating between humans and non-human organisms challenges the “human-nature binary” (Dickinson 329) that NDD discourses evoke. Moreover, this pervasiveness means that at least for those in a similarly underprivileged position as the migrants of the story, environmental degradation may be a reality that one must simply adapt to, instead of something that one might have the opportunity to lament from a distance. In light of this, the narrator’s defamiliarizing description of the trash-filled river as a “lovely sight” also gains a new significance: if there is no real “nature” left for children to explore and play in (as Louv and many others would prefer them do), are they not justified in finding enjoyment and beauty in what is actually there?
5. Generic hybridity, social class, and echoes of Lu Xun

As previously mentioned, one of Dickinson’s major criticisms of NDD discourse is how its assumptions can obscure environmental justice and issues of power, including how environmental degradation relates to class politics (Dickinson 321–322). By contrast, contemporary Chinese SF has often foregrounded questions of class difference and inequality. For example, both Cara Healey and Hua Li have analyzed how Chen Qiufan’s *Waste Tide* comments on the status of migrants working in China’s waste processing industry. Li reads the novel as portraying what Rob Nixon has termed “slow violence,” an attritional form of violence that occurs “out of sight” and principally affects those already afflicted by poverty. More broadly, this kind slow violence is also made visible in documentaries such as Wang Jiuliang’s *Beijing Besieged By Waste (Laji weicheng 垃圾围城, 2011)*, which focuses on the ecological and social impact caused by the landfills surrounding China’s capital and the city’s continuous expansion. In this section, I show how “Submarines” also approaches environmental degradation from a class-conscious perspective. However, in order to fully understand how class and environment issues intersect in “Submarines” and the challenge that its social commentary offers to NDD discourses, the story should also be considered in light of its parallels to the critical realist works of Lu Xun, often dubbed the “father of modern Chinese literature.”

To clarify my approach, it is perhaps necessary to address the concept of “science fiction realism” that has been prominent in Chinese discussions of SF in recent years. Originally proposed by SF author Zheng Wenguang in 1981 and gaining new prominence after it was brought up in a speech by Chen Qiufan in 2012 (Peng 77), the framework of “science fiction realism” posits a somewhat nebulous connection between (social) reality and Chinese science fiction. Chen Qiufan, for example, has proposed that science fiction realism is a “style” (fengge 风格) that can encompass subgenres, such as space opera and cyberpunk, and that the difference between it and other forms of SF (such as formulaic Hollywood SF movies) is a matter of “truthfulness” or “authenticity” (zhenshixing 真实性) (39). Meng Qingshu holds that Chinese science fiction realism both “grasps reality holistically from a three-dimensional viewpoint” and “uses science fiction to reflect the future, showing deep concern for humanity” (72), while Peng Chao considers science fiction realism to have the three characteristics of “manifesting a shocking experience … combining exploration of the universe and reflection on humanity,” “using metaphor to see clearly the social changes brought by science and technology,” and “paying close attention to the relationship between science and technology and humanity, surpassing anthropocentrism and reflecting on the ultimate meaning of ‘human’ from a post-human perspective” (77).

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5 In the Chinese context, one example of this obscuration might be the idea that Chinese children are (in Liu Guochun’s words) “growing up in the classroom.” While undoubtedly rooted in the realities of China’s education system and its heavy emphasis on preparing for exams, this broad generalization ignores groups with limited access to formal education, such as the children of migrant workers, and thereby privileges middle-class viewpoints.
While the above formulations do help understand why many recent readers and critics are drawn to Chinese science fiction (including the works of Han Song, which Chen, Meng, and Peng all reference in their discussions), as definitions they are broad enough that “science fiction realism” seems to almost become a near-synonym for contemporary literary SF. Moreover, being focused on affirming the connection between SF and “reality,” they do not offer much elucidation of the relationship between contemporary SF and the Chinese tradition of literary realism. As such, rather than trying to classify “Submarines” as either an example or a non-example of “science fiction realism”, I focus on analyzing the genealogical connections between Han Song’s story and the works of Lu Xun to help bring to light the political themes of the story.

The influence of Lu Xun on contemporary Chinese SF and Han Song especially has been noted by multiple scholars. Jia Liyuan even describes the latter as “an inheritor of the May Fourth tradition of cultural criticism and enlightenment as represented by Lu Xun” (104). In turn, Cara Healey has argued that Lu Xun is “foundational to contemporary Chinese sf” (“Madmen and Iron Houses” 512) and highlighted parallels between his works and SF stories such as Han Song’s “The Passengers and the Creator” (“Chengke yu chuangzaozhe” 乘客与创造者, 2006). Healey regards these as examples of generic hybridity in which contemporary Chinese SF “combines, subverts, and reinterprets conventions of mainstream modern Chinese realism and Western science fiction subgenres” (“Estranging Realism” 2). I now adopt a similar approach by first comparing “Submarines” to Lu Xun’s short story “My Old Home” (“Guxiang” 故乡, 1921), after which I will specifically look at Lu Xunian motifs in the climax of Han Song’s story.

As in several other works by Lu Xun, the protagonist of “My Old Home” is an “urban-educated intellectual returning to his ancestral village” (Healey, “Estranging Realism” 9), in this particular case “with the sole object of saying goodbye” to his family’s old house (Lu Xun, “My Old Home” 171). While there, he briefly reunites with his childhood friend Runtu, the son of an employee of the protagonist’s family and his guide to the wonders of the countryside. However, the former camaraderie between the two has now been replaced by “a lamentably thick wall” (189) with Runtu treating the protagonist not as a friend, but as a master. Although depressed by this change, at the end of the story the protagonist realizes that his nephew and Runtu’s son have already formed a bond similar to the one the two men once had and expresses hope that the two boys would not be driven apart or have to settle for unsatisfying lives like the previous generation: “They should have a new life, a life we have never experienced” (197).

As can be seen from the above, both “My Old Home” and “Submarines” hinge on an encounter between children from two different social classes, and both stories are wholly or partially framed as the recollections of the now grown-up and urban-educated viewpoint character. Moreover, the peasant child characters of both works are very well-informed about the natural world. Runtu demonstrates knowledge of various animals ranging from birds and seashells to a melon-stealing mammal that he calls “zha,” while the aquatic migrants are familiar with different kinds of fish, as previously mentioned. Conversely, in both stories adult intellectuals maintain their difference from the
peasants by viewing them through a rationalizing, science-based lens: the protagonist of “My Old Home” secretly laughs at the adult Runtu for worshipping “idols” (197), and in “Submarines” a curious few, “mostly artists and poets” (Han, “Submarines” 118), speculate about the evolving civilization of the migrants and wish to study their folklore and customs.

However, there are also significant differences or inverted parallels between the two works. While “My Old Home” features the same milieu and characters at different points in time with the protagonist’s introspective reflections on their changes forming a large part of his narrative, the narrator of “Submarines” restricts themself to recounting their childhood impressions, which limits the amount of information revealed to the reader and contributes to the story’s eerie atmosphere. Moreover, while “My Old Home” centers on an urban resident coming to revisit their old family home, “Submarines” makes no mention of a connection between the city-dwellers and any ancestral lands in the countryside. Instead, Han Song’s story has the peasants coming to the cities to work in “the dirtiest and most physically demanding jobs in exchange for the lowest and most uncertain wages,” with the submarines acting as their temporary homes and as a replacement for the fields that they have lost to “local governments and real estate developers” (“Submarines” 119). In this manner, “Submarines” explicitly links the effects of China’s rapid urbanization to environmental injustice and the socioeconomic exploitation and marginalization of the rural poor while also evoking familiar discourses about migrant workers’ ability to suffer hardships or “eat bitterness” (chiku 吃苦).

Perhaps most importantly, “Submarines” appears much less hopeful about the ability (or willingness) of children to look past class divisions than “My Old Home.” In Lu Xun’s story, the protagonist is very much impressed by Runtu’s “strange lore,” comparing the peasant boy favorably to his sheltered former friends (“My Old Home” 179), and both he and his nephew easily bond with Runtu and his son, respectively. The city children of “Submarines” are similarly confronted with the realization that the peasant children know more about nature than they do. Yet, they react to it with disquiet rather than admiration, and their further attempts to play with the migrants are stymied because the two groups do not know any of the same games. Instead of “new life” in Lu Xun’s sense of a more equal society, the encounter between the two groups points towards the inception of “new life” in the form of an aquatic offshoot of humanity that may have nothing in common with the land-based one: “It was like a picture of fish and shrimp versus cattle and sheep – was that the future?” (Han, “Submarines” 120).

The lack of reconciliation between classes is further highlighted in the climax of “Submarines.” A fire of unknown origin destroys the anchored submarines, which for some reason do not try to escape the flames by simply diving under the surface. The narrator observes both this destruction, thinking with “shock and worry” about the peasant children, and the either excited or

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6 For an examination of the evolution of this concept up to the early 2010s, as well as its relevance to attitudes towards rural-to-urban migrants, see Griffiths and Zeuthen.

7 Although the narrator does not comment on whether the fire was accidental or intentionally set, their musings about how the river seems to be “defying the physical properties endowed by nature” and on whether “another fantastic fire was burning underwater” (122) might be interpreted as suggesting the use of an incendiary weapon that cannot be extinguished with water, explaining why the subs are unable to save themselves.
dulled reactions of the other city-dwellers, who have gathered “to witness the death of alien creatures in the river, to watch as the uninvited guests achieved total freedom” (122). At the same time, the narrator notes that witnessing the fire does not actually make them feel “sad or mournful” or that it has any effect on their own future (122–123), making it ambiguous to what extent they are different from the other residents of the city.

This kind of tension between the loner and the crowd is also a well-known motif in the writings of Lu Xun, such as in his description of an execution scene in the preface to his 1923 collection *Call to Arms* (*Nahan* 呐喊), where he “diagnoses the cruelty and numbness of the masses turning on their own as one of the primary illnesses of the Chinese” (Healey, “Estranging Realism” 13). More specifically, the execution account is connected to the climax of “Submarines” by references to the apathetic or numb expressions of the onlookers and to the event itself as a “spectacle” (Lu Xun, “Preface” 7) or “show” (Han, “Submarines” 122). In addition, the focus on children in the scene both as the victims of the mysterious fire and as the ambiguously innocent viewpoint character also recalls the end of “A Madman’s Diary” (“Kuangren riji” 狂人日記, 1918), with its famous call to “save the children” (Lu Xun, “Diary” 53) from being corrupted by China’s “cannibalistic” traditional culture. While “Submarines” makes no reference to literal cannibalism, Han Song alluded to this motif in an interview with Chiara Cigarini in 2014 (the same year that “Submarines” was published) when describing the role that aliens play in his stories:

... on one hand, it’s like the Western world is the alien. On the other hand, it’s like we (the Chinese people) are the aliens. We’re alienating ourselves from our hearts; in this sense Chinese people are themselves becoming monsters. We’re eating everything: the environment, our culture, our people. (Cigarini 22)

At this point, I return to the “mysterious image” of the submarines and their specific significance in the context of class division and Han Song’s other works. Mysterious means of mass transportation feature prominently in several of Han Song’s stories, such as the novels *Subway* (*Ditie* 地铁, 2010) and *High-Speed Rail* (*Gaotie* 高铁, 2012) and the short stories “Security Check” (“Anjian” 安检, 2014) and “The Passengers and the Creator.” However, unlike the trains and airplanes of these stories, or the Western and Japanese car brands listed by the “leader” of the city children in the passage quoted in section four, the eponymous vessels of “Submarines” do not appear to represent high-tech, high-speed modernity or foreign influence in China. Instead, they are constructed from cheap materials (such as scrap metal, fiberglass, and plywood) and painted in styles that are noted to reflect a sense of humor typical of the peasants. Moreover, the urbanites find no evidence that the submarine makers had received foreign aid or inspiration from Western culture, such as from the works of Jules Verne (Han, “Submarines” 117–118). At the same time, their crude and low-tech quality of the submarines also invites comparison to Han Song’s “Regenerated Bricks” (*Zaishengzhuan* 再生砖, 2010), where the eponymous bricks are made from the rubble and bodies left behind by an earthquake, mixed with wheat straw. However,
ability to hide underwater and surface unexpectedly recalls Carlos Rojas’ reading of the buried and hidden subway in Han Song’s 2010 novel as comparable to the unconscious (36–37). These aspects reinforce the importance of the ambiguously “unnatural” submarines as also representing a peasant culture and way of life whose presence is devalued and rejected by the city-dwellers, who respond to it as an unwelcome reminder of their own role in the “slow violence” against the environment and the rural population.9

Based on the above, it would seem fair to say that Han Song sees disconnection with nature and environmental degradation in a Lu Xunian fashion, that is, as a symptom of a wider phenomenon of alienation, which also includes inhumanity towards one’s fellow citizens. In “Submarines,” moreover, this inhumanity specifically manifests along class lines and is explicitly linked to the displacement and economic exploitation of the rural-to-urban migrants. As such, unlike the forms of NDD discourse that Dickinson criticizes, Han Song’s story calls attention to not only how environmental degradation affects different social groups unequally, but also to how it should be understood in conjunction with the marginalization and dehumanization of those most vulnerable to its effects.

6. Conclusions

In this article, I have examined how “Submarines” challenges the idea of a “return to nature” found in NDD and similar discourses by using a literary toolkit. Through the interaction of diegetic estrangement, naturalization, and defamiliarization, the story establishes an eerie atmosphere where tropes found in NDD narratives are cast in an ironic light that highlights their limitations. At the same time, I have shown that this eerie indeterminacy does not prevent “Submarines” from being read through the lens of generic hybridity. This helps understand how the story evokes the legacy of Lu Xun in order to call attention to the connections between environmental degradation and social inequality, issues that critics like Elizabeth Dickinson see as missing from NDD discourse.

Given the parallels between Han Song’s story and the works of Lu Xun, who famously wrote of giving up the study of medicine so that he might change the spirits of his fellow citizens through literature (“Preface” 9), it might be tempting to place the ethical and political dimensions of “Submarines” in direct opposition to the way NDD discourse has emphasized the physical and mental health benefits of connecting with nature. However, instead of this kind of positioning of literature as “spiritual medicine,” I would prefer to view

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9 My reading here is similar to Hua Li’s observation that the migrant waste workers in Chen’s Waste Tide “embody everything that the socially and financially privileged classes ... seek to repress and banish” (280). However, while the urbanites in Chen’s novel live “at a distant remove” (279) from the waste workers and their polluted worksites, in Han’s story the submarines and their inhabitants are associated with the trash-filled river passing through the city itself, underlining the way that China’s urban middle-class has viewed migrants as “unwanted, polluting elements in the city” (Griffiths and Zeuthen 163; emphasis added).
“Submarines” in terms of what Dickinson has called “inward expansion,” which she describes in the following way:

Inward expansion calls on adults to address the cultural, economic, and political systems that contribute to alienation [from nature], notably concerning issues that are missing from Lou’s conversation—poverty, racial segregation, cultural alienation, environmental racism, and rampant overconsumption. Louv and educators call for children to be outside and active in nature places; I call on adults to first be reflective in our inner unknown spaces, perceiving the psyche and cultural practices as frontiers.

While Dickinson does not describe in detail how we might work towards inward expansion, I would posit that “Submarines” provides a useful avenue for this kind of practice, and that this is at least in part because of its productive combination of eerie ambiguities and critical realist social commentary. At the same time as Han Song’s “mysterious images” allow readers to form their own interpretations of how and to what extent the world of “Submarines” differs from ours, the story’s explicit references to contemporary Chinese social realities and invocations of Lu Xun clearly position environmental degradation as a political and moral question that is also linked to the way societies treat marginalized groups. As such, rather than any kind of panacea, the story might be compared to the dark, polluted waters of a river that can show us both the external results of our destructive way of life and an eerily distorted image of our ways of thought, allowing us to recognize ourselves and to reflect on the way that we should relate to others and to our world.

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Grafting Symbiosis: Care, Empathy, and Scientific Reform in Naomi Mitchison’s Memoirs of a Spacewoman

Grace Borland Sinclair

Abstract: This article examines the presence and potential applications of care, empathy, and anti-binary approaches in relation to scientific thought and practice in Naomi Mitchison’s first science fiction novel, Memoirs of a Spacewoman (1962). I argue that Mitchison’s portrayal of alien mothering and interspecies communication both interrogates the social consequences of reproductive technology and gestures towards a model of scientific study where empathy and care are valued, where the unstable boundaries between “Self” and “Other” can be interrogated, and where structures of sameness and difference might be revised. Mitchison’s emphasis on relationality, emotion, contextual particularity, and empathy shed light on the radical possibilities of engaging with care in the scientific field. By first engaging with the relevant historical and contemporary discourse surrounding care, feminist science and technology studies, and feminist speculative fiction criticism, this article investigates the ways in which Mitchison’s alien encounters can disrupt the gendered binaries of both social and scientific thought.

Keywords: Science fiction, otherness, care, empathy, feminist science, Scottish

1. Introduction

Scottish writer Naomi Mitchison’s 1962 novel Memoirs of a Spacewoman (hereafter referred to as Memoirs) can be characterized as a work of numerous
dichotomies. It presents a future vision that is simultaneously utopian and perilous: as Jane Donawerth writes, Mitchison’s novel “records an attempt to build a utopian science for women” while at the same time offering “an examination of the problems which might arise in such a science” (30). In Mitchison’s novel, the protagonist Mary travels between planets as part of a research team. Her task lies in the development of new modes of communication to enable exchange and understanding across species. In between planetary visits, she volunteers to have not one, but two alien grafts fused to her human body in an effort to heighten her abilities in empathetic interspecies communication. The complexities and contradictions inherent to Memoirs reflect Mitchison’s own intimate experiences with science and feminism during her lifetime. As she was born in 1897, it is critical to consider the changing cultural and political landscape of the twentieth century in relation to this experience; Mitchison was sixty-five at the time of the novel’s publication and had already lived an active life as an activist and writer. Within Memoirs, her first SF novel, evidence of engagement with many ideas and contexts – ranging from subversion to reinforcement (and at times the simultaneous appearance of both) therefore appears. In 1962, the endeavor of imagining a future in which the boundaries of scientific discovery could be dismantled or made accessible remained an extremely difficult task for writers of feminist SFF. Thus, complex entanglements and inheritances are inextricably written into Mitchison’s visions of a social and scientific future as she continues to grapple with scientific advancement as both inherently harmful and potentially liberating.

Although gendered essentialisms and feminist contradictions remain embedded in the social and cultural values of the novel, Memoirs simultaneously acknowledges and interrogates the socially constructed nature of scientific practices, objectivities, and binaries. Experiences of alien mothering interrogate reproductive technologies while instances of interspecies communication allow protagonist Mary to explore alternatives to binary modes of thought and in turn enable Mitchison to present her own meaningful contribution toward what Susan Merrill Squier calls “the feminist vision of an emancipatory science” during a period in which the new possibilities of feminist science studies were beginning to take shape (199). As Donawerth writes, the novel at once both distrusts and hopes (30).

As the only daughter of Oxford physician John Scott Haldane (1860–1936), Mitchison’s fascination with the world of science was nurtured from childhood. Surrounded by an atmosphere of experimentation and intellect, she developed an interest in biology alongside her elder brother J.B.S. Haldane (1892–1964) with whom she carried out numerous breeding experiments with mice and guinea pigs during childhood. Together, they followed the animals’ behaviors from generation to generation, observing them carefully from behind wire fences in their Oxford garden. The siblings even co-authored a scientific paper on the subject, which would start J.B.S. Haldane on his path to become a successful geneticist.¹

From Mitchison’s own childhood memoirs, we can see how each sibling approached their scientific work differently. This was partly to do with gendered and generic conventions. Mitchison later reflected that Jack always

¹ For more, see Krishna Dronamraju’s edited volume of Haldane’s writings, What I Require from Life: Writings on Science and Life from J.B.S. Haldane.
wanted to do “serious genetics” with the guinea pigs, while she characterized her own approach as “semi-scientific”: “I never had my brother’s early understanding of [science] and I wonder, now, whether this was temperamental or whether certain avenues of understanding were closed to me by what was considered suitable or unsuitable for a little girl” (Caldecott 14-15). Indeed, from a young age Mitchison was personally invested in a feminist reconfiguration of science. However, she also goes on to describe her particular interest in and relationship with the animals of her early scientific experiments, which suggests an intrinsic questioning of the subject/object divide: “I had started by keeping a few [guinea pigs] and gradually began to study them in a semi-scientific sense, listening to, identifying and copying their various squeaks and chitters, and seeing their relationship with one another” (As it Was 61).

The young Naomi had unknowingly hit upon an alternative vision of scientific practice which suggested, as Susan Merrill Squier highlights, that “the methodological boundaries of science, like gender boundaries, are not invariant and natural but rather culturally constructed” and therefore, as Mitchison would explore decades later in Memoirs of a Spacewoman, could be disrupted (172). Modelled on Mitchison’s alternative approach to the study of her guinea pigs, the goal of Mary, protagonist of Memoirs, is not to achieve domination over new territory, but to establish communication with non-human species. As a communications expert, Mary is at the forefront of this method of scientific enquiry which can be best described as empathy. Throughout the novel, she strives to develop this model, which, as we will see, is not without its risks.

I first provide a brief outline of the relationship between care and speculative fiction writing, drawing upon theoretical concepts offered by scholars of care studies and feminist science and technology studies to support my arguments. I also devote further space to my understanding of relevant essentialisms, binaries, and dichotomies, situating Mitchison’s novel in relation to a history of feminist SFF and exploring the relationship between women and science more broadly. Memoirs does not follow a traditional plot or narrative structure, instead it presents a collection of memoirs (some personal reflections, some detailing specific experiences) belonging to Mary, an interplanetary explorer and scientist with expertise in interspecies communication. The first incident, analyzed in section 3, details Mary’s involvement with an alien graft experiment and enables an exploration into sexuality, motherhood, and reproductive technologies, while the concluding section documents Mary’s attempts at empathetic non-verbal communication with an alien species, which demonstrates both the potential risks and rewards of more fluid conceptions of “Self”/“Other.”

2. Care and Speculative Fiction

Before moving to a more detailed textual analysis of the novel, I would like to delve further into conceptualizations of care with the aim of providing a brief overview of its varied definitions that outlines the key points in relation to Mitchison’s novel. In her 1982 monograph In a Different Voice, Carol Gilligan critiques the perceived superiority of moral development theories which prioritize a “morality of rights” rooted in autonomy and individual ambition. She instead advocates for a “morality of responsibility” which prizes interdependence
and views intimate relationships with others as critical to the trajectory of moral development (19). Since the publication of Gilligan’s original work in 1982, the ethics of care as a theory of morality has developed and expanded in numerous ways across various fields of study. However, as Susan M. Wolf makes clear, feminist ethics does not equal the ethics of care (8–9).

The relationship between feminist ethics and an ethics of care is more complex than simple equation. It is also necessary to address, as Jane Keller and Eva Feder Kittay point out, that early articulations of feminist care ethics (such as Gilligan’s and Nel Noddings’) have been criticized for their affirmation of a distinctly “feminine” ethic that reinforces the essentialisms of patriarchy and thus does not systematically address the inequalities of power between genders (543). It is critical to acknowledge such essentialisms and, in turn, to emphasize the subjectivity, contextuality, and nuance with which we must approach the ever-changing notions of feminism and care. As María Puig de la Bellacasa writes in her influential work Matters of Care (2017):

We learn from feminist approaches that [care] is not a notion to embrace innocently. Thought and work on care still has to confront the tricky grounds of essentializing women’s experiences (Hoagland 1991) and the persistent idea that care refers, or should refer, to a somehow wholesome or unpolluted pleasant ethical realm. Delving into feminist work on the topic invites us to become substantially involved with care as a living terrain that seems to need to be constantly reclaimed from idealized meanings, from the constructed evidence that, for instance, associates care with a form of unmediated work of love accomplished by idealized carers. Contemporary reengagements with care are keeping this outlook when they both engage to continue fostering care as well as warn against an overoptimistic view on its practice when they prompt us to continue “unsettling” care (Murphy 2015), or as Aryn Martin, Natasha Myers, and Ana Viseu put it, prolonging Donna Haraway’s call, to “stay with the trouble” (Haraway 2016) in the way we engage in caring. (7–8)

For the purposes of this analysis, when discussing aspects of “care” as present within Mitchison’s novel (prior to its moral theorization by Gilligan and others), I draw upon several features articulated by Virginia Held in her 2005 work, The Ethics of Care, which include: the rejection of abstract reasoning as a means of achieving impartiality, an emphasis on context that advocates for variability and subjectivity in interpersonal relationships, the appreciation of emotions, and the advocacy of interdependence (10–13). While acknowledging and embracing, as Puig de la Bellacasa does, that care is messy: “meaning different things to different people, in different situations” and simultaneously “an affection, a moral obligation, work, a burden, a joy, something we can learn or practise,” and “something we just do” (1), for the purposes of this article I wish to also...

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2 Other early works of feminist care ethics include Nel Noddings’ Caring: A Relational Approach to Ethics & Moral Education and Sara Ruddick’s “Maternal Thinking.”
3 See Virginia Held’s The Ethics of Care: Personal, Political, and Global, Joan C. Tronto’s Caring Democracy: Markets, Equality, and Justice, Donna Haraway’s Staying with the Trouble: Making Kin in the Cthulucene, María Puig de la Bellacasa, Matters of Care: Speculative Ethics in More than Human Worlds, and see also Ingvil Hellstrand’s recent work on care, science fiction, and technology, including “Almost the same, but not quite: Ontological politics of recognition in modern science fiction.” And her work as part of the Caring Futures: developing care ethics for technology-mediated care practices project (2020-2024: https://www.uis.no/en/caringfutures).
emphasize that care is not a human-only matter. Puig de la Bellacasa continues, “affirming the absurdity of disentangling human and nonhuman relations of care and the ethicalities involved requires decentering human agencies, as well as remaining close to the predicaments and inheritances of situated human doings” (2). This entanglement has particular resonance with the experiences of Memoirs’ protagonist Mary, and I return to it in the following sections.

3. Feminist Science (Fiction): Essentialisms and Subversions

I argue here, as Joanna Russ proposed in 1972, that feminist SFF continues to provide a vehicle for exploring pressing anxieties and experiences concerning women’s relationship to science and technology in a way that is not possible in more traditional genres where expectations limit the feminist imagination (79–93). I also argue, as Hilary Rose did in 1994, that current literary criticism concerned with a recovery of women’s SFF continues to underplay its relationship with science criticism (208–29). Since the days of early utopian writing, feminist authors have endeavored to create space for women in science, for example, Margaret Cavendish’s scientist and philosopher Empress in The Description of a New World, Called the Blazing World (1666), the inventor heroine in Mary Griffith’s Three Hundred Years Hence (1836), and the female geneticists of Charlotte Perkins Gilman’s future in Herland (1915). Cavendish’s Blazing World even positioned creative and imaginative fictional writing as stemming from the rational mind, whereas philosophy, supposedly grounded in “rational probabilities,” was prone to “embrac[ing] falsehood for truth” (Mary’s gender essentialism in Memoirs supports a similar claim).4

It is also critical to acknowledge the importance and relevance here of Mary Shelley’s Frankenstein (1818) (which Brian Aldiss calls the first true science fiction story) in the history of science fiction writing and in particular relation to its engagement with conceptions of gender and scientific advancement more generally. As Aldiss states,

Frankenstein: or, The Modern Prometheus was published in 1818, in the same year as works by Shelley, Peacock, Scott, Hazlitt, Keats, and Byron. The Napoleonic Wars were over; Savannah crossed the Atlantic, the first steamship to do so; the early steam locomotives were chuffing along their metal tracks, the iron foundries going full blast; the Lancashire cotton factories were lit by gas, and gas mains were being laid in London. Telford and McAdam were building roads and bridges, Galvani’s followers and Humphry Davy were experimenting with electricity. (20)

Aldiss identifies Frankenstein as Gothic in character, and yet Shelley’s world would be the dream from which “science fiction springs.” In combining a focus on new scientific ideas with firm social criticism, which plugged directly into the environment of her day, Shelley anticipated the scientific romances of H. G. Wells and many of the authors who followed him (Aldiss 23).

4 See Margaret Cavendish, edited by Kate Lilley, The Description of a New World Called the Blazing World and Other Writings (pp. xxvii–xxix, 123–24, 224–25) and Ruth Watts, Women in Science: A Social and Cultural History (pp. 51–53).
Early in Shelley’s *Frankenstein*, Victor Frankenstein listens enraptured to his lecturer M. Waldman, who inspires him to pursue a scientific career. Waldman confidently declares: “The labours of men of genius, however erroneously directed, scarcely ever fail in ultimately turning to the solid advantage of mankind” (Shelley 50). Scientific excellence is presented as unequivocally beneficial to “mankind” and thus neutral in its pursuits, yet this statement upholds biological determinism and the exclusion of women from scientific pursuits (both of which the field of feminist science and technology studies strives to critique). Conceptualizations of scientific neutrality and objective rationality are not only exclusionary, but simultaneously exploitative. As Katherine McKittrick identifies, there exists an inextricable link between the ideologies and exploitations of the colonial project and the continual accretion of scientific knowledge; thus, positioning scientific development as closely intertwined with the constitution of a racialized and gendered body. Scientific neutrality can therefore be considered a masculinist and colonial knowledge system (129–132). In *Frankenstein*, whilst male achievements in scientific fields are heralded as labors of genius, their pursuit of socio-civilizational progress relies upon the extermination and exploitation of female bodies. As David Leishman points out, “the scientification of childbirth, in the wake of men like William Hunter, was another instance of patriarchal forces both rendering passive the female body and socially suppressing the midwives who had previously been the female attendants of a birth process,” but it was also commonly considered a science of *morbidity* “since surgeons and male midwives primarily intervened in cases of foetal and maternal complications where one of the primary objectives was the removal of a dead foetus” (205–06). As such, Katerina Kitsi-Mitakou asserts that:

Almost all female bodies in the novel are turned into corpses even before they are given the chance to experience motherhood. Some female bodies have, of course, never existed: like the monster’s mother, or the monster’s female companion. They have been replaced by Frankenstein’s “workshop of filthy creation” ([Shelley] 315), for it is there that the scientist combines and animates bones, limbs, and organs snatched from the “dissecting room and the slaughter-house” (315). (212)

Themes of the abject maternal and the relationship between the objectification and commodification of women’s bodies in relation to scientific practice are key to Mitchison’s concern with reproductive technologies in *Memoirs*, made clear during a communications experiment in which Mary has two alien grafts attached to her upper thigh. Shelley’s connection between the scientific advancements of her age and the social ramifications for women is a critical starting point in the development of feminist science fiction, a thread that runs through the work of Mitchison over a century later.

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5In the context of Scottish Literature, Alasdair Gray’s 1992 novel *Poor Things* should also be acknowledged here as a conscious echo of Shelley’s narrative. *Poor Things* tells of the surgical creation of “Bella Baxter” by Godwin Bysshe Baxter: brought into being by joining the body of a woman, dead by suicidal drowning but reanimated by Baxter, with the brain of a living fetus with which she was pregnant at the time of her death. For more, see John Glendening’s “Education, Science and Secular Ethics in Alasdair Gray’s *Poor Things.*”
Events in Mitchison’s novel take place in a future where traditional family structures have been forced to adapt to frequent space travel and the necessary “time blackouts” in which spaceship crew members are exposed to varying levels of time dilation as they journey across the universe. While new parents in the field are allowed a singular “customary slow-motion year” on Earth to care for their children in the early stages of development, they soon return to their work off-planet and must accept that when they next stop at home, their children may be older than they are. From the opening of Mitchison’s novel, we are confronted with what Isobel Murray calls “the device that makes the book truly science fiction”: the confluence of mother and scientific expert (viii). The opening words Memoirs provide an insight into Mary’s experience of motherhood: “I think about my friends and the fathers of my children. I think about my children, but I think less about my dear four normal than I think about Viola. And I think about Ariel. And the other” (Mitchison, Memoirs 5). We are immediately exposed to the normalcy of multiple children borne to multiple fathers (human and non-human) and, as will later be explored, those borne to no fathers at all.

Mary also indicates a greater sense of attachment to her non-human children born during her time away from Earth. Despite Mary’s claims of normalcy and acceptance, “as a child I had accepted this without bothering …. For me and my friends, parents and grandparents came and went” (Memoirs 7–8), her reflections on motherhood indicate that while some aspects of this future world are perhaps more accommodating to a feminist model of science (as highlighted by Murray), difficulties remain ever-present in the relationship between care and technology. Despite the freedoms afforded by the space travel of her profession, Mary continues to outline the complications attached to these variable temporalities of motherhood: “I know as well as the rest that one shouldn’t let oneself be attracted, and at least all my children’s fathers were in my own age group or older. One ought to leave the young alone. How many times I’ve said that to myself! And usually, I will say, acted on it” (Memoirs 6).

Early in the novel, Mary reflects on her attitudes towards her scientific profession:

I may be out of date, but I always feel that biology and, of course, communication are essentially women’s work, and glory. Yes, I know there have been physicists like Yin Ih and molecular astronomers – I remember old Jane Rakadsalis myself, her wonderful black, ageless face opening into a great smile! But somehow the disciplines of life seem more congenial to most of us women. (Memoirs 9)

In Mary’s world, women’s scientific history (notably including women of color) has been restored, and access to the scientific workplace has been granted (even for those who choose to have children). Yet, Mitchison struggles to envision a future where the constructs of gender and accompanying essentialisms are abandoned entirely (protagonist Mary continues to champion innately “feminine” traits, and acts of care and the expectation of motherhood remain associated with biologically determined gender roles). Similarly, although a scientific experiment involving Mary as human host to an alien graft gestures towards the celebration of a relationship outside heteronormative bounds and the potential for non-gendered pregnancy, it falls short of presenting a future
in which femininity is no longer synonymous with sexual reproduction and woman as child-bearer.

In *Memoirs*, we can identify a tension between what Sandra Harding refers to as the two key questions of feminist science studies: “What is to be done about the situation of women in science?” and “Is it possible to use for emancipatory ends sciences that are apparently so involved in Western, bourgeois and masculine projects?” (9). Harding argues that feminist science and technology studies had gravitated away from the former question towards a key focus on the latter by the time her work *The Science Question in Feminism* (1986) was published (9). Mitchison’s novel occupies a space between the two – often reaching for both and thus generating contradictions and complexities, subverting and reinforcing patriarchal hierarchies simultaneously. Even today, the labels of “soft science” (associated with women) and “hard science” (associated with men) remain present and influential along with many of the stereotypes that accompany them – all of which are present within Mitchison’s novel (Light, Benson-Greenwald, and Diekman 1–12). In examining Mitchison’s portrayal of a female scientist, her presentation of inter-species motherhood, her critique of reproductive technologies, and her suggestion of an empathy-based and anti-binary mode of scientific thought and practice, it is critical to keep in mind the oppressive cultural constructions of the scientific field. Harding articulates that it

holds that the epistemologies, metaphysics, ethics, and politics of the dominant forms of science are androcentric and mutually supportive; that despite the deeply ingrained Western cultural belief in science’s intrinsic progressiveness, science today serves primarily regressive social tendencies; and that the social structure of science, many of its applications and technologies, its modes of defining research problems and designing experiments, its ways of constructing and conferring meanings are not only sexist but also racist, classist, and culturally coercive. (9)

Throughout *Memoirs*, Mary continually asserts that “biology and, of course, communication are essentially women’s work” and that “the disciplines of life seem more congenial to most of us women” (Mitchison, *Memoirs* 9). Although these claims are definitively essentialist, this does not necessarily indicate that the novel is anti-feminist. Mitchison uses Mary’s womanhood as a claim for legitimacy as a scientist, presenting traditionally feminine qualities as positive attributes, which in this society, make women indispensable to the development of science. Thus, by combining this view of essentialism with a history of science that has always included and celebrated women, Mitchison is attempting a revisioning of our own scientific histories, which (as outlined above) have seen women excluded, erased, marginalized, and harmed. Rather than limit women’s achievements to the gendered sphere under patriarchal hegemony, Mitchison positions these qualities as markers of women’s superiority over men. As Lynda Birke asserts: “it has sometimes been politically expedient for feminists to make [the] claim” of “an essentialist view of gender” (244).

However, in her presentation of the alien graft, Mitchison does engage with an interrogation of reproductive technologies that moves beyond the notion of gender representation within the scientific workplace and highlights the harms associated with scientific progressiveness and objectivity. Further, Mary’s work as a communications officer (particularly her experience with a
starfish-like radial species) attempts to undermine dichotomies and to challenge stereotypical binaries such as subject/object, scientist/woman, hard science/soft science, reason/emotion, and mind/body (Donawerth 2, Buran 253–254). As Donna Haraway highlights in *Staying with the Trouble*, the relationship between science fact, speculative fabulation and speculative feminism is intimate and entangled: “Science fact and speculative fabulation need each other, and both need speculative feminism” (3). Thus, as Squier argues, Mitchison’s novel explores practices and technologies that “oscillate between the potential for emancipation and control, and thus challenge human beings to remain continually alert to the unconscious fantasies embedded in [the] seemingly neutral” (264).

As Ursula K. Le Guin posits in *The Carrier Bag Theory of Fiction*, there may still be non-hierarchical systems of thinking and doing in which, as Haraway writes in *Staying with the Trouble*, science fiction and science fact can cohabit happily (7):

Science fiction ... is a way of trying to describe what is in fact going on, what people actually do and feel, how people relate to everything else in this vast sack, this belly of the universe, this womb of things to be and tomb of things that were, this unending story .... Still there are seeds to be gathered, and room in the bag of stars. (Le Guin 170)

4. Alien Grafts

In Mitchison’s novel, the interplay between science fact and science fiction is explored when protagonist Mary agrees to have two alien grafts fused to her own body (as part of her ongoing effort to explore new ways of communicating and connecting with non-human species): “I was aware that it was an exciting and novel piece of research. We decided to put the graft on my thigh, where there would be ample blood supply” (Mitchison, *Memoirs* 49). Mary soon begins to form an intense psychological and physical bond with her graft which she likens to pregnancy: “As the graft grew, I began to have feelings of malaise, of the kind which one understands to be common during pregnancy” (*Memoirs* 49).

As the alien graft continues to grow, it explores the surfaces of her body, returning frequently to the orifices of the mouth and, likely, the vaginal opening: “By now Ariel was three feet long. It liked to be as close as possible over the median line, reaching now to my mouth and inserting a pseudopodium delicately between my lips and elsewhere” (*Memoirs* 51). Sarah Shaw argues that Mitchison’s open exploration of female sexuality and what she terms “the deviant erotic” is a radical and threatening counter to the perceived public identity of women (and mothers in particular) during this period. She writes, “it is only with the metaphorical child that details of organ and orifice, sensation and movement can be detailed ... this explicit language speaks to Mitchison’s concern with female sexuality” (163). The conflation of interspecies sex with a mother’s erotic pleasure subverts both political and scientific binaries “connecting women’s scientific work and public identity with satisfying

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6 This depiction evokes Japanese artist Hokusai’s *The Dream of the Fisherman’s Wife* (1814).
sexuality over a period of months in a deviant erotic that cannot be separated from life” (142). This demolition of the boundary between private and public spheres of womanhood to portray the more genuine and complex life maps to the dismantling of the boundaries between motherhood and female sexuality. Similarly, Mitchison associates this reconceptualization of motherhood with a post-capitalist future in which the world of work does not infringe upon maternal relationships and vice-versa.

Mary’s experience with the alien grafts at first enables an exploration of the body (both political and intimate) from a position simultaneously estranged and near, removing barriers between conceptions of selfhood and otherness. As Anna McFarlane argues, Mitchison’s narrative “represent[s] a contingency, not just of human bodies, but of the concept of the body itself” (291). At the same time, biological determinism and social constructionism are blurred and disrupted. Mitchison subverts scientific and theoretical presuppositions and offers an experiential maternal account that foregrounds emotion and subjectivity and emphasizes female sexuality. As Shaw states, “sensuality, love, spirituality and politics unite in the erotic” (145). Mary feels herself becoming gradually consumed by the graft. This occurs first in a mental capacity:

I found myself thinking endlessly about the graft, or rather not thinking, but musing about it. I could not think of it without a name, and I named it to myself with splendid inappropriateness, Ariel. I had a feeling it was part of me, in the same way that Ariel and Caliban are part of Prospero (Memoirs 49–50).

Then it is portrayed in a physical capacity: “Somewhow it was – how can I express it? – flesh of my flesh” (167). It is worth lingering for a moment on the numerous references made by Mitchison to Shakespeare’s The Tempest and on how they might frame the complex nature of Mary’s relationship to the graft. Such references not only indicate that Shakespeare’s influence continues to persevere into this far future but align Mary’s relationship to the graft with the submission of Ariel under Prospero and in Prospero’s eventual rejection of a system which perpetuates such marginalization. Beyond the references to the unrecognized care labor of motherhood and the conflation of female sexuality with deviancy that Mitchison makes in her portrayal of the grafts, her Shakespearean references prompt readers to recognize the hierarchical relationship between human and non-human other at play in this experiment.

As Mary equates the graft with feelings of pregnancy, there is a definite link between her experience and Adrienne Rich’s description of pregnancy as a continuum by which the “inhabitants of the female body” are both a welcome and unwelcome presence, simultaneously alien and familiar (63–5). She contends that the representation of fetus as alien “invader” can be tied to instances of sexual violence or what Niles Newton calls, “the conditions of conception – frequent undesired sex and the absence of orgasm” (24–6). As she gradually becomes subsumed by the graft’s needs and desires, Mary begins to act violently towards her colleagues who are tasked with supervising the experiment. This escalates into an eventual emergency severing of the graft from her body:
I had ceased to be a civilised scientist. I bit Françoise, my pupil. I hit Pete a crack on his bitten and inflamed arm and he let me go .... I was stronger than he was, younger and stronger .... Then Olga cut the neck of the graft, cut into it, into me –. (Mitchison, Memoirs 168)

Mitchison depicts the abnegation of the self as a critical aspect of Mary’s experience of alien motherhood: “What I am fairly certain of is that I was completely under the influence of the graft, except that far down, almost smothered, there was still a very small, quietly struggling observer” (Memoirs 167). While (as I will return to in the following section) there are potential methods for navigating and overcoming this fear of “losing” the self which often accompanies notions of empathy in popular psychology, in this instance Mitchison is expressing legitimate fears surrounding pregnancy as parasitism. Here, science ends in loss as Mary becomes overwhelmed by grief following the graft’s removal: “Instead of being relieved by the separation, I felt I couldn’t bear it” (Memoirs 50–1). Although the care labor associated with motherhood and the labor of the scientific workplace are supposedly treated with equal value and respect in the post-capitalist society of Memoirs, there are indications (like Mary’s experience with the graft) that this is perhaps not entirely true. Indeed, it appears as though the potential emotional, physical, and mental trauma associated with pregnancy and motherhood has not been grappled with, nor has there been much attempt to rectify the gendered oneness of such experiences.

Published the same year as Memoirs, Betty Friedan’s The Feminine Mystique relayed with shocking clarity the disillusionment and frustration of women who, despite university education or full-time employment, remained primarily considered by society as wives and mothers. One woman wrote: “I’m desperate. I begin to feel I have no personality. I’m a server of food and a putter-on of pants and a bedmaker, somebody who can be called on when you want something. But who am I?” (16–17). As Süimeyra Buran highlights, “the postwar patriarchal ideology imposed the idea that women need to choose either their family or their career because having both are regarded as ‘unnatural’” (254).

Mitchison herself grappled with such guilt following the death of her first-born son. As outlined by biographer Jenni Calder, Mitchison felt as though she was in some way personally responsible for her son’s death due to her preoccupation with her professional life and numerous resultant trips away from home during his lifetime:

Inevitably, she felt guilty. She was living a complex professional and personal life, the well-known author of fiction, a collection of poetry, and articles and reviews …. Had she, perhaps, neglected her children? If she had behaved differently, been less ambitious, striven less for love and recognition, could she have protected her son from his fatal illness? (112)

This, as with Mary’s experience with the graft, is reminiscent of Jacqueline Rose’s insistence that we must recognize “what we are asking mothers to perform in the world – and for the world” (2). Yet, despite the limitations of gender essentialism experienced by Mary during her time with the graft (which can be linked to the exclusion of women from scientific study, the violation of women’s bodies by the practices of reproductive science, and the unequal burden of reproductive labor), this alien encounter nevertheless presents a form of gestational labor which is utterly independent of a person’s
reproductive organs. This, then, demonstrates that Mitchison was also willing to engage with the potential for a non-essentialist reconceptualization of science that breaks with the contrasted binaries of gender.

Mary’s experiences with the grafts again convey the complexities and contradictions of Mitchison’s relationship with science and feminism, simultaneously occupying differing points on the spectrum between Harding’s two questions: “What is to be done about the situation of women in science?” and “Is it possible to use for emancipatory ends sciences that are apparently so involved in Western, bourgeois and masculine projects?” (9). On one hand, the experiment is fairly radical in its positioning of Mary and the graft as neither subject nor object of scientific research. Instead, such research necessitates subjectivity, embodiment, and understanding, which may disrupt categorical conceptions of self and other (both human/alien and scientist/object of study). Mary has, according to Squier, “underestimated the extent to which a creature seemingly separate from her can influence and shape her own experience – both mentally and physically” (187). Similarly, Mary’s association of the experience with that of pregnancy raises the possibility of non-gender-specific mothering which exists outside heteronormative control and is disassociated from sexual reproduction (particularly as the graft grows and Mary’s role transcends that of the surrogate mother, instead moving towards mental and emotional absorption by the graft). This is also apparent in the potential sexuality of the graft and host relationship, which extends beyond maternal care. Further, the grief Mary experiences with the eventual removal of each graft reflects Mitchison’s own maternal struggle, therefore breaking the boundaries not only between self and other, scientist and object, but also between author and character.

On the other hand, however, Mitchison continues to connect pregnancy and mothering to an innate femininity as Mary argues her female biology can provide a unique perspective into the alien symbionts that is impossible for male science to achieve: “I don’t believe this is a man’s job. You ought to get a woman to do it. She’d get a better relation with the graft” (Memoirs 44). Indeed, this is not merely Mary’s own hypothesis – when the grafts attach themselves to species on their own planet, the host, they are only sustained by “maternal” feelings: “If the accidentally chosen host was a male, the graft did not arouse ‘maternal’ feelings, was looked upon as a nuisance ... and was, sooner or later, rubbed off” (Memoirs 146). Similarly, while one of Mary’s grafts perishes in the early stages of the process (again mirroring Mitchison’s own experience of maternal grief), another must be forcibly removed by Mary’s colleagues due to changes in Mary’s personality as her behaviors become influenced by the graft’s emotional state. The reasoning given for the necessity of the removal is primarily that Mary is becoming “anti-scientific.” Once “completely under the influence of the graft” Mary has “ceased to be a civilised scientist,” regressing into a “pre-intellectual state” (Memoirs 164–168). Thus, reproductive technologies continue to reinforce a hierarchy of rationality and empiricism (blocking new subjective and anti-binary modes of scientific thought and practice from full realization), which continues to perpetuate traditional gender roles. Despite the novel’s far future setting, Mitchison continues to associate reproductive technologies with the medicalization of birth and the commodification of female bodies.

The continued presence of pregnancy and childbirth (whether via sexual reproduction with human or alien, or in the form of an alien graft akin, at least in some form, to surrogacy) in Mitchison’s novel and the persistently gendered
framework surrounding the role of mother and maternal care associations requires some discussion of reproductive futurism. The term “reproductive futurism,” as developed by Lee Edelman, denotes a political order by which the social good is unequivocally tied to a human futurity that is underpinned by the figure of the child and sexual reproduction (11). Indeed, this view of reproduction has been utilized throughout history to couple sexuality with domesticity, repeatedly reaffirming and naturalizing such formulations (Sheldon, “Somatic Capitalism”). Images surrounding childbearing and the child continue to be idealized, in spite of what Amber Lea Strother terms “the physical and emotional costs of reproduction” (v). Further, in Edelman’s attack on reproductive futurism, no future signals the organization of sociality, happiness, and citizenship around heterosexuality (emblemized by the figure of the child) which posits queerness, or rather the figure of the queer, as antithetical to futurity (Edelman 28 and Fontenot 253). In her portrayal of motherhood and in Mary’s celebration of innate feminine qualities, Mitchison does not consider or interrogate the relationship between sex and gender, reinforcing traditional gender roles while rejecting identities that do not conform with a societal “progression” reliant on reproductive negotiations or reformulations.7

While Mitchison certainly falls victim to the perpetuation of gendered notions of reproduction and a reliance on the figure of the child, which might foreclose avenues of queerness, no future also implies that the “future” upheld by the figure of the child is merely an empty replication of our present, an infinite deferral of whatever is coming next: the figure of the child “enacts a logic of repetition that fixes identity through identification with the future of the social order.” (Edelman 25). As Rebekah Sheldon writes on the implications of Edelman’s work, “The figure of the child stands in for a futurity that strips the future of everything but repetition and yet insists that repetition is progress” (The Child to Come 36). In Mitchison’s novel, she does not idealize the experience of pregnancy and motherhood, again breaking the boundary between author and character in experiential and emotive reference to her own maternal grief. Similarly, her portrayal of reproductive technologies, the medicalization of the body, and the rational scientific institution which together continue to foreclose new methods of inquiry that might disrupt gendered hierarchies and the boundaries of self/other indicate Mitchison’s acute awareness of the pretence that repetition is progress.

5. Conclusion: Breaking Down Binaries

However, it is evident within the novel that some attempts at communication with alien life forms, namely those who don’t think “in terms of either–or” (Mitchison,

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7 Mitchison’s later SF novel Solution Three (1975) grapples even more closely with these concerns; it is set in a far future where humanity, aided by a new cloning programme, is moving towards a monocultural society. Heterosexuality and sexual reproduction are banned as they are thought to perpetuate an “aggressive” society, and homosexuality is instead hormonally enforced. All clones are to be birthed from the DNA of one man and one woman, and embryos are implanted into surrogate “Clone Mums” who must carry and birth these children without forming emotional attachments. It is soon discovered, however, that (akin to Mary’s experience with the graft) some of the Clone Mums’ DNA has mixed with that of the embryos.
Memoirs 18), require the development of processes previously devalued by the intellectual tradition, processes that draw on subjectivity, embodiment, and identification and that necessitate the disruption of the subject/object and self/other binaries. One such instance occurs when Mary attempts to establish communication with a new alien species whose “evolutionary descent had been from a radial form, something like a five-armed starfish” (Memoirs 11). She finds that the radiates have developed from “a budding spiral” which “had remained throughout evolution and completely dominated all mental and psychic process” (Memoirs 11). At first Mary considers the radiates so estranged from binary modes of human thought that communication may be impossible: “One is so used to a two-sided brain, two eyes, two ears, and so on that one takes the whole thing and all that stems from it for granted” (Memoirs 18). However, as she begins to employ a situated empathy, focusing her efforts on an imaginative and emotional rather than biological or empirical understanding, she is able to transcend previous limits of scientific enquiry.

As Squier writes:

Mitchison suggests that even to identify with the object of scientific knowledge can remap the boundaries of scientific investigation, reshaping the kinds of questions a scientist asks, the relationship between the subjects and objects of scientific knowledge, even scientific practises themselves. (180)

The relocation of the scientific object from periphery to centre requires a commitment on the part of the researcher to an intimate and situated empathy, despite the challenges such a commitment might bring. Empathetic and imaginative association are critical components of the feminist re-conceptualization of science relayed through Mary’s experience.

However, as she finds herself becoming more adept at inter-species communication, her individual identity begins to blur in the wake of such intense association: “These were, however, group names shading into one another. Slowly I began to forget my own name” (Memoirs 19). Ironically, as Donawerth highlights, it is “because of her identification with a species which operates differently” that she “is unable to function as a member of her own species” (33):

Even while one admitted that moral and intellectual judgements were shifting and temporary, they had still seemed to exist .... But after a certain amount of communication with the radiates all this smudged out .... If alternative means, not one of two, but one, two, three, or four out of five, then action is complicated ... two or more choices could be made more or less conflicting though never opposite. (Mitchison, Memoirs 18–19)

The value Mitchison places upon care, empathy, and imaginative identification in the wake of a long history of oppressive medical practices attempts to resist repeating exploitation in favor of a science which values collaboration and benevolence. Furthermore, the empathetic practice which Mitchison advocates extends its influence outside of the scientific realm, possessing much wider implications for the social configuration of the self and other.

Megan Boler writes on the extreme difficulties of attempting to employ an active empathy, which, unlike superficial compassion or sympathy, must involve an inward gaze and result in self-accountability: “our silence shall not
protect us, nor passive empathy protect the other from the forces of cataclysmic history that are made of each of our actions and choices” (273). She continues, “At stake is not only the ability to empathize with the very distant other, but to recognize oneself as implicated in the social forces that create the climate of obstacles the other must confront” (257). Yet despite the difficulty and disorientation of such extreme empathy, the challenging nature of such work is equated with positive progression towards a new understanding of science that renegotiates concepts of sameness and difference and interrogates binaries of subject object. It is Mary’s attempt at such empathy and care (the means purposefully estranged from any notion of idealized ends) in Memoirs that sparks a realization on the necessity for methodological reform:

But they never thought in terms of either-or. It began to seem to me very peculiar that I should do so myself, and that so many of my judgements were paired: good and evil, black or white, to be or not to be. (Mitchison, Memoirs 18)

This critical empathy can also be conceptualized as part of what Rosi Braidotti terms “a feminist figuration.” Inspired by Haraway’s work on figurations, Braidotti argues that a feminist figuration can be defined as “a politically informed account of an alternate subjectivity” (Nomadic Subjects, 1). Drawing on both Braidotti and Haraway, Ingvil Hellstrand summarises these figurations as “conceptual tools for rethinking and refiguring the parameters of how we understand and perform identities and ontologies ... (re-)conceptualizing conventional categories that determine structures of differentiation, such as gender, sexuality, and race” (“From Metamorph to Metamorph?” 1). In her recent work Posthuman Feminism, Braidotti even goes so far as to include not only empathy but care, compassion (for both human and non-human), and the speculative imaginary (all of which Mitchison draws upon in Memoirs) as key traits of such figurations. These features work alongside one another, tangled and simultaneous. She writes:

The feminist style of posthuman figurations favours a cognitive brand of empathy, combining the power of understanding with the capacity for compassion and the force to endure ... it also cultivates longings and care for ... all sorts of non-human entities. Posthuman feminism dares to dream, even and especially among the ruins of our damaged planet, yearning for ways out. (216)

As a speculative fiction text, Memoirs employs empathy, care, and compassion to acknowledge and interrogate the socially constructed nature of scientific practices and gendered binaries. While not achieving straightforward utopian successes, Mary’s willingness to attempt, and crucially to work at, such intense association with what initially appear as non-human “Others” makes way for a potential alternative scientific method. Her experience with the alien graft enables the removal of barriers between concepts of selfhood and otherness while interrogating the perceived public identity of mothers during this period.

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8 See Donna Haraway’s work on figures such as the trickster or coyote in “Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective,” the cyborg in “A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century,” and companion species in The Companion Species Manifesto.

9 See also Anna Tsing, Heather Swanson, Elaine Gan and Nils Bubant’s edited volume Arts of Living of a Damaged Planet.
by exploring both pleasure and trauma. In conclusion, Mitchison’s portrayal of alien mothering and interspecies communication gestures towards a model of scientific study where empathy and care are valued, where the unstable boundaries between self and other can be interrogated, and where structures of sameness and difference might be revised. Mitchison’s emphasis on relationality, emotion, contextual particularity, and empathy shed light on the radical possibilities of engaging with care in the scientific field.

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A Created Adult and the Ideal Childhood: Genetic Technology, Childhood, and Class in Anne Charnock’s *A Calculated Life*

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**Abstract:** Science fiction has discussed questions of ethics and reproduction since its birth. This article demonstrates how Anne Charnock’s *A Calculated Life* (2013) contributes to these discussions by connecting questions of genetic technology and reproduction to discourses on class and childhood. The analysis of the novel demonstrates how childhood as a social construct is connected to social class and to ethical questions that carry over to the discussion on the possibilities of reproductive technology. The interaction between the protagonist, Jayna, a programmed lower-class human, and Alice, a child of middle-class privilege, shows how discourses of the past are always included in speculations about the future. The article shows how science fiction can serve as an important site for examining the prospects of new technologies by producing speculative yet concrete scenarios about imminent yet abstract technologies.

**Keywords:** class, genetics, technology, reproduction, science fiction

1. **Introduction**

The 20th century has been called “the century of the child” (Clarke 10). During the 20th century, the contemporary concept of childhood, born in middle-class homes in the 1800s, began to spread in the Western world and via globalization beyond (Austin 3; Clarke 10–11). Similarly, many critics argue that modern science fiction (henceforth SF) began as a reaction to the science and technology of the 19th century, which led to both industrialization and a reimagined concept of the middle-class. SF developed into its contemporary form and popularity
during the latter 20th century alongside the technologization of Western society (Bould and Vint 1–2; Roberts 42). Indeed, SF can be metaphorically described as “a child of technological society” (Kupferman and Gibbons 7) whereas children have been a part of the genre’s central discussions on the relationship between societies and technologies (Yaszek and Ellis 75–6; Bould and Vint 32–3, 39). SF has a vested interest in the progression of human society, and the child is seen as the figure of the future (Edelman 2–3). It is thus not surprising that the child has gained increased attention in science fiction when discussing genetic reproductive technologies and their social implications.

Whereas the 20th century has been referred to as the child, the 21st century has been depicted as “the century of the gene” (Herbrechter 28). The advances in gene technology, especially its prospective reproductive appliances, have significant potential and require extended ethical discussion (see, e.g., Braidotti 57–59; Habermas 13; Herbrechter 27–29). For example, Jürgen Habermas has argued that reproductive technologies produce ethical questions, such as those concerning the autonomy of a person, that the tradition of ethical philosophy in its current form is not equipped to discuss because the emerging possibilities for bodily modification were inconceivable until recently (13, 39). Advances in genetic technologies have also received significant attention in the media, discussing topics such as the plans for commercializing recent experiments (Pajunen), the public support for further gene sequencing (Davis), and the ethical implications of such modifications (Kahn). In addition, the creation of life and posthuman figures have received new consideration in recent years in the so-called mainstream literature. Notable examples include novels by award winning authors such as Ian McEwan’s Machines Like Me (2019) and Kazuo Ishiguro’s Klara and the Sun (2021). (Both authors have won the prestigious Booker Prize for Fiction while Ishiguro has also won a Nobel Prize in literature.) SF writers, however, have long shown an interest in genetic reproductive technology, well before this century’s burst of attention to it. As Lisa Yaszek and Jason W. Ellis state, “SF writers have explored the mutability and multiplicity of the human condition,” depicting the impact of developments in genetics on the changing conceptions of humanity (71). For example, feminist science fiction novels, such as Marge Piercy’s Woman on the Edge of Time (1976) and Joan Slonczewski’s A Door into Ocean (1986), have discussed the utopian potentials of alternative modes of reproduction and childcare, especially in connection to gender politics, through depictions of far-future or distant societies.

The beginning of the 20th century was not only marked by the emergence of the modern concept of childhood; it was also an age when eugenics had major influence in Western societies. As Promise F. Ejiofor argues, eugenics was largely discredited after the Second World War without abandoning one of its core tenets of improving humanity through science and technology (7–9). This tenet, as well as the possible ethical implications of genetic technology and its impact on children’s autonomy, have been explored in the field of bioethics (see, e.g., Haberman; Glover). These philosophical discussions have often produced abstract and complicated arguments concerning the future of humanity, which have frequently bypassed questions of gender and class (see, e.g., Turner; Marway and Widdows). However, SF, whose importance to the examination of the contemporary human condition has been noted by numerous scholars of
posthumanism,¹ has elaborated on these questions. As I argue, SF has operated as an important site for putting these fields into conversation and for expanding the discussions on how science and technology have transformed humanity and the way humanity is perceived. As Yaszek and Ellis argue, “SF authors have shared a commitment to issues of ethics and social justice that have long haunted human society and that may be amplified by its posthuman successors” (75). Although Jēmeljan Hakemulder claims that SF and other genre fictions cannot operate as successfully as mainstream literature as “moral laboratories” – safe places to examine moral conundrums – I argue that SF offers an important site especially for examining the moral and ethical implications of genetic reproductive technologies (150). It has the potential, as Donna Haraway claims, to “braid” its readers “into beings and patterns at stake” (2–3), offering not only a laboratory but also a reminder of the unhygienic ways technology touches the world we inhabit and calls attention to it.

In this article, I demonstrate how SF depictions of childhood and genetic technology are intertwined with questions of class through an analysis of Anne Charnock’s SF novel A Calculated Life (2013). Anne Charnock (b. 1954) is a British author who has won several accolades, including an Arthur C. Clarke Award, for her fiction. A Calculated Life is part of a cycle of stories along with the novella Enclave (2017) and the novel Bridge 108 (2020), all of which take place in the same setting. Another novel by Charnock, Dreams Before the Start of Time (2017), also explores the possible implications of reproductive technology, demonstrating the author’s continued interest in this question. A Calculated Life is set in a near-future Britain where advanced technologies such as brain implants and gene modification have become widely available. Despite these technological developments, life on the streets of Central Manchester resembles current reality, the society still operates under capitalistic economics, and the division of humans into different classes is not overcome. Charnock’s fiction has been described as thematically cogent and level-headed, yet rarely “soothing” (Clute). The narrative of A Calculated Life, for example, calmly moves forward through everyday events most of the time, but the reader gradually becomes aware of the power inequalities and injustices that mark the world of the novel. Unlike many earlier dystopian or utopian novels, A Calculated Life explores both the utopian and dystopian potentials of technology in a society that is reminiscent of the 21st century, tying the speculative to the current world through a discussion on childhood and class.

A Calculated Life operates as a moral laboratory concerning genetic technology, childhood, and class. Although numerous SF stories have addressed questions of genetic reproductive technology, this novel, which has received little academic interest, brings new perspectives on the intersection of class, autonomy, and childhood to discussions on reproductive technologies’ effects on humanity. Jayna, the protagonist, is grown to bodily maturity in an artificial womb to serve a specific role as a data analyst in society, and she is given both genetic and computerized augmentation to fulfill it. Her childhood, as is the case for all members of her class, is affected severely by technological advancements: She does not have identifiable parents, and she is completely denied the stage of childhood. This article focuses on a critical scene in A

¹ See, for example, Herbrechter, who has highlighted SF’s “importance within the cultural representations of technoscientific capitalism” (114–5), as well as Vint, and Yaszek and Ellis.
Calculated Life where Jayna has the chance to examine her existence when she visits the home of her employer’s middle-class family and encounters their daughter. Through close readings of this scene, I aim to demonstrate how discourses on childhood change in the face of scientific and technological developments and how these changes are tied into contemporary and historical discussions on class. In what follows, I will first introduce the existing discussions on childhood and class in SF and examine SF’s potential to serve as a moral laboratory in the face of technological developments. I will then demonstrate the workings of this potential, whose connection to childhood and class has been understudied, through an analysis of Charnock’s novel. Following an analysis of the novel’s portrayal of an ideal childhood and its class dynamics, I will examine how the novel depicts the ethical implications of genetic reproductive technologies in connection to childhood and autonomy. Through this analysis, I will demonstrate that A Calculated Life acts as a moral laboratory by examining childhood from the perspective of class – a perspective that is often bypassed in discussions on the ethics of reproductive technologies.

2. Childhood, Class, and Science Fiction

The improvement of humankind through the cultivation of children has been central to the Western liberal humanist tradition (Häyry 66–67). This goal is often achieved through the improvement of education and parenthood to enhance the overall quality of childhood. However, as John Clarke argues, the current idea of childhood has only developed in the recent centuries (3). According to Clarke, the idea of childhood began to take shape in Western societies in the 16th century with the rise of the middle-classes and their emphasis on the family, and it continued to be associated with the middle-classes until the 19th century (3–8). Indeed, as Erica Burman and Jackie Stacey highlight in reference to earlier studies, “the model of child development inscribes an idealypical white, middle-class childhood that is also culturally masculine – as indicated by the normative developmental trajectory from irrationality to rationality and from dependence to independence and autonomy” (230). As such, childhood, a concept often associated with innocence, is steeped in ideologies and structures of power.

The figure of the child in this developmental trajectory was long seen as an object of attention. The Romantic ideal emphasized the innocence and purity of the child, and only since the end of the 19th century have children been envisioned more as “autonomous beings rather than mere extensions of patriarchal family” (Austin 3). Indeed, children are often conceived as possible victims who historically have needed the protection of patriarchs, adults, institutions, state, and, recently, science (Clarke 9–11; Burman 180). The conception of “the child as a ‘competent social actor’” received further boost as recently as 1989 in the United Nations Convention on the Rights of the Child. Since then, the child and childhood have received increased attention, especially in the social sciences. Claudia Castañeda has discussed the innate embodied mutability of children, their potential as agents of change, and their centrality to social concerns (2–6). Furthermore, as Lee Edelman argues, concerns about the wellbeing of children are often used to uphold social policies, especially those connected to heteronormativity (2–4).
discourse on childhood, the child becomes a representative of current political choices and their endurance in the future. As the advances in reproductive technologies have complicated the question of what is artificial and what is not, SF has become increasingly more engaged with technology’s impact on childhood. While historically the discussion on the creation of beings has centered more on entities such as robots, children have also been used to express concerns over both technological progress and societal development. SF has, for example, discussed the mutations caused by technology, environmental hazards, and the fears that societies might express against such mutated children (Yaszek and Ellis 75–6). However, few technologies, whether fictional or real, have had as fundamental and direct an effect on children as genetic and reproductive technologies.

Scholars such as Istvan Csicsery-Ronay Jr. have criticized SF for upholding historically the narrative of science as a problem-solving force at the forefront of the continuous improvement of humanity (112). Similarly, scholar and author Joanna Russ has criticized SF’s unquestioning emphasis on “white, middle-class suburbia” (81). However, SF has also acted as a critique of scientific narratives and technological advancements; it has drawn attention to matters such as the connections between “global capitalism and exploitative class systems” (Csicsery-Ronay 4, Melzer 13). The critique of science has also addressed technologies concerning the creation of life as well as questions of class and other intersections of identity. As Mark Boul and Sherryl Vint summarize, “SF’s fascination with artificial beings ... often articulates an interest in questions of class, race, gender and sexuality” (39). SF’s discussion of science and technology often intersects with class, and as A Calculated Life demonstrates, reproductive technology is no exception.

While in fields such as bioethics discussions on reproductive technologies have, until recently, mostly remained on a purely philosophical level, bioethics has also been criticized for its disconnect with questions of class. Turner has even argued that “the literature of bioethics seemed dominated by middle-class preoccupations and fears” (374). While bioethicist Evie Kendal acknowledges that SF has been used to promote such class-connected fears of technology in bioethics, she argues that SF has a unique potential to contribute critical forms of “engagement with existing social structures” to bioethics and philosophy through careful literary analyses. SF has speculated on the ethics of reproductive technologies not only in connection to childhood in general but also on the level of individual experiences. As such, SF has developed into, what Csicsery-Ronay describes as, an “immanent possibility (perhaps even the inexorability) of those transformations, and reflection about their possible ethical, social, and spiritual consequences” (3). In the case of gene technology and childhood, SF has continued the tradition, as Neil Easterbrook argues, of exploring “ethical moments” when “technological change alters the moral relationships and traditions” (386). In her depiction of genetic and reproductive technologies, the moral laboratory offered by Anne Charnock’s A Calculated Life allows for an examination of moral questions such as the right to childhood, which are impacted by technological developments and may remain hidden until technology discloses them.
3.0. *A Calculated Life* and the Ideal Middle-Class Childhood

In *A Calculated Life*, the class system is prominently based on technology as the society is divided into three classes with distinct living spaces and jobs according to the level of technological modifications. The first class is "the bionics," who are genetically inoculated against afflictions such as addictions and receive a brain implant when they reach adulthood. The second class is "the simulants," who are genetically designed (not merely modified) and receive an implant at conception. The third class is "the organics," who are inoculated against afflictions but do not receive a brain implant. They are therefore confined to menial labor and to living in ghetto-like communities with no chance to progress further. This article will concentrate on the first two classes, "the simulants" and "the bionics," which are more explicitly connected to questions of childhood in the novel.²

Philosophical discussions on childhood have historically deemed it a necessary stage in human life that cannot be bypassed on route to an adult³ human. Yet in SF, the possibility of bypassing childhood has been present at least since the early conceptions of reproductive sciences.⁴ In *A Calculated Life*, Jayna, the protagonist, does not experience childhood and is released from the artificial womb when she reaches physical adulthood. She is, however, interested in exploring her origins by examining a catalog description:

*Simulant Operative Version CS12.01.*
*Maker: Constructor Holdings plc.*
*Product description: Biological simulant, grown in vitro from a genetic master-type characterized by prodigious analytical attributes. Widespread additional genetic interventions. Extensive bionic cognitive implants.*
*(Charnock 20, italics in original)*

The excerpt describes the class⁵ that Jayna belongs to – "the simulants," who are the most modified of the three classes in the novel's society. This does not, however, mean that the simulants are more privileged than other modified beings. In fact, it means just the opposite. Jayna and her kind have been created by their maker company as adults and leased to institutions and enterprises to fulfill specific needs. They serve in menial jobs that require certain types of

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² In the novel, “organic” children only appear running past the main character in the streets of the ghetto-like communities. For further discussion on them, another book in the cycle, *Bridge 108*, would be more suitable for analysis. For further discussion on simulants and organics in *A Calculated Life*, as well as the interconnections of life, capital, and biopolitics in the novel, see Vint.

³ As Deborah Durham argues, *adult* as a concept is also historically and culturally changing and connected to class (3). Durham further discusses the concepts of “social adulthood” and “biological adulthood” (4), of which Jayna in a sense is a paradoxical combination: She has been created physically to fit the cultural conception of biological adulthood but without the lived life of social adulthood.

⁴ The creation of life and adult beings without a connection to scientific theory, of course, precedes SF in myths and legends (see, e.g., Graham).

expertise, such as Jayna’s skill in analyzing large amounts of data. After their workdays, they are housed by the companies in special stations where they are monitored and have limited access to personal belongings or social activities.

Jayna has a chance to glimpse the life of another class when she visits her employer Benjamin’s home. Benjamin and his family are “bionics,” who, like organics, are protected from afflictions, but they also gain access to a brain implant at the age of eighteen. These implants are described in the novel not as enhancements to brain capacity but as status symbols that enable their recipients to work in offices and similar middle-class environments. Such suburban living areas in the novel are defined more by security and comfort than by control or containment. By allowing instant connection to knowledge and to the ability to process it, technological modifications also take the place of education in the construction of class. As Vincent and Ball argue, middle-classes have used education to uphold the separation between them and the working class both physically and socially (5, 11). Now technology determines the lifestyles of both classes as only those of a certain stature receive the required level of modifications to work and live in middle-class areas. Although Carol Vincent and Stephen J. Ball describe the shared features of the middle class in the 21st century as “fuzzy,” i.e. difficult to define, in the novel these features are clear to everyone (53).

Jayna’s visit to the middle-class suburbs, which are separate from the business center areas and the crowded blocks where the simulants and the organics live respectively, allows Jayna to observe the family’s space as well as their life. Her main interest, however, falls on the family’s child, Alice, whose first appearance underlines her different access to both technology and childhood:

Benjamin’s wife and daughter arrived in the hallway, laughing – the young girl half walking, half sliding over the wooden floor – Jayna glimpsed an intimacy, just momentarily, that they now surrendered ... the introductions were interrupted by scuffling noises of five White Terriers slid into the hallway, falling over one another. Alice shrieked with laughter ... She knelt down and the dogs jumped around her. “Go to sleep,” she said to them. And they vanished. (Charnock 127)

Her first glimpse of Alice is in a playful, happy mode, and while restricted by the presence of a guest, Alice is free to glide and shriek instead of following the guidelines of adult behavior. She also has quite sophisticated toys, far beyond what Jayna could afford with her meager allowance. Alice is the owner and controller of holographic pets and thus has agency over these lifelike beings, just like Benjamin has agency over Jayna. She certainly has a chance to play with her toys and enjoy them. Through the contrast between Alice and Jayna, the text does not only deem certain technologies affordable by select members of the society, but it also highlights play as an activity available only to people of affluence. Childhood, and play as an integral part of it, is thus marked as the

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6 A suburb that is reminiscent of the pictures of middle-class American suburbs in the 1950s. Durham claims that the idealized form of adulthood as an object of modern nostalgia only truly existed in that limited cultural and temporal frame of the 1950s suburb (3). Jayna therefore confronts not only the ideal of childhood but also of middle-class adulthood, both of which are denied her.
property of bionics, that is, the middle-class of the novel’s society. This emphasis on class dovetails the historical development of the idea of childhood, which was first introduced to middle-class homes as an ideal in the 1600s and from there spread to other segments of the society starting in the 1800s (Clarke 8–9).

Despite the clear advances in technology, the society of the novel has degenerated in comparison to the 20th century, “the century of the child” (Clarke 10–11), as children’s rights seem to be limited to fewer individuals than before, at least in Manchester. Of course, the ideal was not available to all even during the 20th century. Consider, for example, racialized and immigrant children of working-class backgrounds, to whom the novel’s simulants have an allegorical connection. Working-class families’ decision to immigrate is often guided by the search for an idealized childhood for their children, unavailable to them in their former homes. The children of such families may paradoxically experience a “lost childhood,” if the harsh conditions of immigration lead to the loss of safety associated with parental care or expose the children to work and exploitative circumstances at an early age (Horton 2008, 929–931). Simulants who have no parents and are used as work instruments to fulfill certain tasks immediately after gaining consciousness share similarities with immigrant children as individuals who are denied childhood. Immigrant children, like many racialized children, often also lack the reassurance of a safe future. Emily Ashton argues that the aforementioned “Edelman’s Child,” which signifies the child as an emblem for future hopes and fears, “is a privileged figure endowed with assurances of a future that are denied to racialized children” (15). Ashton also demonstrates how racialization has often been connected to a lack of innocence, which is further used to exclude some from the category of childhood or the protective ideals connected to it (15–16). Jayna, for one, does not even have the agency to choose play as she has been created as an adult. Her agency concerning childhood is not merely limited like Alice’s by courtesy to guests; it is completely removed. Jayna’s case depicts an extreme removal of agency, comparable to the worst of Habermas’s fears of genetic modifications as “encroachment on a child’s ethical freedom” (13, 33).

Jayna has no experience of a childhood or even youth but only knows what has been installed in her and her subsequent experiences. Similarly, she has no real conception of her origins or parents, which she expands on when Alice leaves the room and Jayna is left talking with Benjamin’s wife, Evelyn:

Don’t forget, there are born-humans who don’t live with their biological parents. Just like them, I don’t know my origins. The main difference for me is that my genetic make-up is derived from so many sources that I probably have hundreds of parents. You see, Evelyn, the master-type is the closest I have to a parent. My master-type would be someone with analytical prowess. That basic coding is then heavily modified. But I don’t know if my specific master-type was a man or a woman. Basically, it would be impossible for anyone like me to be born from two parents. (Charnock 132–3)

As she states, it would be impossible for her to pinpoint, even with her superior analytical abilities, her biological parents. The closest in theory would be the scientists who oversaw the modification of her DNA. She could therefore be seen as part of a long tradition of scientists creating life in SF, where science is the father instead of the parents, and her creation is more of a group effort than
that of a couple (Lie 178–180). Perhaps like those scientists, she appears to approach her origins with calmness and a detached logic. This is, of course, the ability that has been scientifically nurtured in her during the creation process. The scientists have not only denied her agency, childhood, and play but also programmed how she should approach these losses.

As Jayna realizes, Alice’s creation was a significantly different process, one where chance played a greater role.

She realized that Alice could have been a different child. She might have never existed; a boy child could be here in this room if Benjamin and Evelyn had conceived the child a few minutes later, or earlier ... She imagined the room full of Alice’s unrealized siblings and looked for similarities, trying to read character traits in their faces ... How would you choose, if you had to? ... How did they cope with such vulnerability? (131)

While Alice has already had inoculations and modifications, her creation is almost chaotic compared to Jayna’s. Jayna’s creation is the result of engineering from hundreds of sources while Alice is still mostly created through classical methods via hundreds of coincidences. Alice is an example of the mutability of children, their unpredictable nature and potential, which is often in contrast with “adult desires and projections” (Castañeda 2–3). Of course, there are the inoculations and other genetic enhancements that have been given to Alice, but not at the same scale as Jayna’s modifications. Zygmunt Bauman discusses how having children is a jump “headlong into uncharted waters of unfathomable depth” – an obligation with unknown consequences. Such uncertainty is uncommon in modern societies where most consumption choices are controlled – consumers know what they get for their money (43). Science might help make Alice a less risky investment since she is unlikely to die of diseases, but there is still much unknown about her, especially when compared to Jayna. However, thanks to the modifications, her parents can hope with a higher probability to enjoy, what Bauman describes as, “the kinds of joys no other object of consumption, however ingenious or sophisticated, can offer” (42). Jayna has no parents, but the decision over her has been made by society and the companies instead. They have taken few risks, bypassing as much as possible the mutability and contingency underlying the conception of children.

Mutability may not be what the parents want, but like childhood, it is a privilege that only middle-class children like Alice have whereas Jayna’s precise design assigns her a lower class and denies her a childhood. In her analysis of Charnock’s Dreams before the Start of Time (2018), which also problematizes reproductive technologies, Anna McFarlane critiques the novel for offering a nostalgic view of a middle-class unaffected by technological changes (39). While in A Calculated Life, the depiction of the family in Benjamin’s home certainly paints an idealized and middle-class picture, Jayna’s perspective provides what McFarlane calls for: a critical examination of how reproductive technologies might create inequality. In this sense, this earlier novel by Charnock is more successful in asking the question that McFarlane suggested

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7 A seminal example where scholars have analyzed how science or a male scientist is seen as a father figure is Mary Shelley’s Frankenstein; or, the Modern Prometheus (1818) (see, for example, Schmeink), which is often seen as the first modern SF novel (Roberts 42).
each utopia should ask: “Who does it exclude? (38)” The answer in A Calculated Life is everyone who does not belong to the middle-class.

3.1. Acclimation through Play, Autonomy by Choice

After introductions and observing Alice with her parents and conversing with their adult guests, Jayna has another chance to observe Alice during play. Marleena Mustola and Sanna Karkulehto discuss how “children ... are always positioned as ‘others’ in a world where the adult perspective is the perpetual default” (125). In a sense, Jayna, due to her creation, has the opportunity to observe the children not from this adult perspective but from a positionality between adulthood and childhood. While all the parents are inside, Jayna wanders to the yard, where she observes a game the children play. The game is connected to the adult world and the world of commerce Jayna herself is a part of. The children seem to have chosen this theme themselves as perhaps they might choose their careers later. In the game, ordinary matter found on the yard receives abstract values and turns into objects of trade, much like the goods, stocks, and money the parents work with. The children do not perhaps see the connection but Jayna, from her liminal position between the two worlds, does:

Jayna gazed around the small group of children fixed in their fantasy world of inanimate and deadly treasures. The rules of the game were shockingly free of any moral base ... Did they think the world operated like this? Was this their attempt to emulate the adult arena in which some people did well and others did not? (Charnock 138)

The middle-class neighborhood provides a site for play, one of commerce. The area, seemingly with no businesses, stores, or people of other classes, is completely removed from public life and other children with less privilege. Michael G. Wyness highlights how during the 19th and 20th centuries the ideal of childhood moved towards children who are protected from the public until they are ready to join it in youth or even in adulthood (96–7). Alice and her friends certainly live in such a protective circle upheld by the modifications they already have and the ones they will receive in the future. While Jayna has been designed by scientists, who simply ran a short diagnostic before sending her to the public realm to work, Alice and her friends can first explore this world privately through play.

Jonathan Glover discusses how decisions concerning genetic technology and pre-natal modifications made for children limit their later autonomy as well, recalling what Feinberg calls “the right to an open future” (69–70). This idea ties into Ejiofor’s discussion on how liberal eugenics, where parents make the reproductive choices as an expression of their autonomy, is seen as “conducive to human progress,” especially in comparison to the older, disreputable form of eugenics (7). Ejiofor, however, argues that the results may nevertheless “exacerbate social divisions, marginalize different social groups, and engender homogeneity” (6). This is certainly true when comparing Alice and Jayna. Even though Alice is also modified prenatally to a certain extent, unlike Jayna, she at least has a chance to decide what she does with those modifications. Her future is still open, but Jayna’s is closed. It is Alice’s privilege
to choose how technology affects her future. Jayna, by contrast, has no past, no real future, and only a precarious present that can be taken away by the company that produced her or by Alice’s father. Though it can be argued that both are affected by what Ejiofor discusses as another result of prenatal genetic modifications – undermining the autonomy of a person to participate in liberal society – one has no autonomy while the other’s is only hampered (6). Because of her origins in her middle-class parents, Benjamin and Evelyn, Alice is the only one who can enjoy the advantages of technology and has agency over them. Through her, both technology and the chance for an open future become issues of class.

Even if Alice is unlikely to be aware of the privilege she lives with and how this affects her future, she is aware, to a certain extent, of her freedom:

Jayna ... ventured another question: “Do you know what you want to be when you grow up?”

It was Alice’s reply to this second question that made her jealous: “I’m only eight years old.” (142)

Jayna is jealous because she has never been eight years old. She will never have her future ahead of her or be unaware of what kind of future is expected of her. Unlike the ideal child, Jayna is not allowed this freedom and will never experience this aspect of life (Wyness 9–10). Researchers often discuss play as a modern social construct that is seen as an important part of how children’s growth is connected to the growth of their social and emotional abilities (Wyness 9–10). Yet, Jayna is left without a chance to participate not only in play but also in the social growth and freedoms that come with it.

Whereas Alice and her family represent the middle-class ideal of family life that, as Clarke (2–6, 10–11) and Austin (3) argue, began to evolve during the modern era, Jayna represents a return to the earlier period in which childhood as we know did not exist. However, it is not merely the concept of childhood that is missing from Jayna’s life but the lived period itself. In A Calculated Life, childhood is represented as a privilege and, to paraphrase Edelman, Alice is its “emblem” (4). Edelman discusses how social policies are built around the idea that the protection of reproduction, the figure of a future child, is regarded as having “unquestioned value” (2–4). The social policies protecting Alice are not directly discussed, but they are certainly visible in the lack of policies protecting Jayna’s childhood and life in general. Certainly, some present policies, such as the ones agreed to at the Convention on the Rights of Children in 1989 (UNICEF), would include Jayna in the ideal that all humans should have the right to a balanced childhood.

Although Jayna is aware that she did not have a childhood and her rights as a human are limited, only through observing Alice does she realize the connection between the two: She was denied her right to childhood and her rights as a child. Jayna, though in existence for a shorter time than Alice, is much more aware of their differences:
So, Alice was a much-loved child, free to play games with no concerns for the future. Jayna, though, surmised a wider narrative. This young girl was unaware that her parents were already watching for the tiniest signs of her natural talents, which they would nurture. And they would assist Alice in realizing her talents as she entered adult life so that, over the subsequent years, the rewards of professional success would fall into her lap as naturally as a fallen branch followed a watercourse to the open seas ... Jayna recalled [a saying], quite puerile now that she considered it: What you've never had, you'll never miss. (142)

Due to the manipulation of her nature, Jayna has been denied the opportunity of being nurtured. What Jayna sees in Alice is what she has missed: the nurture, the possibilities, a childhood, and a future. All of these elements that are tied together in social life were denied to her from the very start due to the class she was created in – the simulants. As Kinga Földváry claims, a child is “often employed as an embodiment of development (or the lack of thereof) and can thus be seen as central to any creative or critical discussion of the future of humanity as well” (211). Alice and Jayna, as representatives of childhood and the lack of childhood, are thus at the center of this novel’s discussion of the future of humanity, and they remind the reader of the possible ethical implications of genetic technology. One such ethical implication, which I have examined in this article, concerns the impact of technological developments – whether utopian or dystopian – on class relations. Focusing solely on Alice or Jayna could not account for the structures of childhood that a comparative study focusing on their interactions allows us to assess. Alice highlights Jayna’s lack of privilege, and without Jayna, Alice would remain, to refer to Edelman, almost a fantasy of a child instead of a depiction of privilege (2–4).

4. Conclusion

A Calculated Life calmly depicts an extreme possibility of how the future of humanity might progress and the ethical implications of technological advancements that render such progress possible. Instead of the humanist belief in constant progress led by scientific developments, the novel maintains that no future is free from the past. In addition, the text reminds us that childhood, as we know it, is only a recent development that spread from middle-class homes to the wider Western society at a time when eugenics was a widely accepted method of improving the future of humanity. It is plausible that such a method becomes relevant once more. Though the liberal eugenics of the novel has removed many afflictions, it has also been used to marginalize and create divisions (see, e.g., Ejiofor). Certainly for Jayna, the eugenics are liberal only insofar as she is a product of a liberal, capitalistic system. Reproductive technology has removed unwanted afflictions, such as addictions and diseases, but it now also determines one’s social class.

In the narrative of A Calculated Life, human rights have become a privilege, just as some bioethicists have feared. Jayna is an extreme example of the fear of prenatal modification, which leads to the recipient’s alienation from society and loss of autonomy (see, e.g., Habermas; Glover). Through the juxtaposition of Jayna and Alice, the novel however adds questions of class to this conversation, an absence for which bioethics have been criticized (see, e.g.,
Turner; Marway and Widdows). Some of this criticism was made when a widely visible sector of bioethics was concerned with discussing futuristic genetic modifications instead of the inequalities that occur in everyday medical care. Indubitably, if the discussion has moved to this territory in the world of the novel, it has not stopped the inequalities from becoming an integral part of this stage of gene technology, as Alice and Jayna present. Alice is a middle-class preoccupation of her parents and of the society with access to all possible technologies, while Jayna’s inequality is determined by technology. The modern ideal of children was born among the middle-classes, and their control over technology has made them the only ones who can achieve this ideal. As such, in the novel, Alice is an emblem and a figure of the middle-classes. She has all the rights available to children as well as the future of possibilities that comes with those rights. Meanwhile, the oppression of simulants is easier when they have never been children or experienced play – this lack of childhood has been used to justify the poor treatment of marginalized groups historically and even today. Of course, the possibility of an allegorical reading should not be dismissed, but the direct message is just as important: The discourses unaddressed today can be used to justify an unjust future. A childhood that is made available only to select classes would certainly be the most significant change in the conception of childhood yet.

* A Calculated Life* reminds the reader that class may still play an important role in future societies. As the story illustrates, despite the technological and scientific advances in society, economic inequality continues to grow. SF can often be used to explore these borders between equality and technology. It can operate, as Hakemulder claims is possible for some literature, as “a moral laboratory” for the exploration of ethical issues (150). However, although Hakemulder made clinical trials with universal and abstract ethical ideas, the questions posed by *A Calculated Life* create a more embodied and affective moral laboratory. By turning abstract ethical questions about the future of humanity into something affective, SF does not only popularize discussions on the ethics of technology but also offers new perspectives on them. *A Calculated Life* thus creates a tangible space for the examination of technology’s ethical implications whereas philosophy might fail by simply pointing at connections between abstract ideas and earlier discourses. When Jayna and Alice meet, it is not only a meeting of two characters who are affected by the same technologies with widely different consequences but also a meeting of various ethical discussions and disciplines. Acknowledging these discussions should remind us not to examine technology as a producer of, what Haraway calls, “technofixes” that will solve problems without careful ethical examination. We should be careful not to approach speculative science fact and fiction as forms of “abstract futurism” that only lead to “sublime indifference” (3–4). Ethical examinations need to be followed by ethical actions.

As my analysis of Anna Charnock’s *A Calculated Life* has shown, children are seminal to discussions on the future and the ethical implications of technology. Who else would better reflect, as Földvár considers, anxieties concerning the future (207)? Children are used to justify past actions as the ones who need protecting in the present and in the future. The choices made for Jayna and Alice may be in the past, but these choices are made only to protect the present and the future of Alice. Jayna and Alice represent the duality underlying discussions on reproductive and genetic technologies: The former,
whose earlier story is defined by markets and scientists, has no past, a limited present, and an unlikely future, whereas the latter, whose past is defined by her parents and their choices, has a free present and an open future. Children are harbingers and heralds of possible futures. In addition, if we agree with Castañeda about the mutability of children (2–3), Alice and Jayna are in many ways also posthuman since unlike most children today, they have been modified via technological means. Children evolve in strong interaction with their environments, as even the humanist theorists who conceptualized the ideals of childhood would agree, but their future – what they become – cannot be fully controlled. This unpredictability makes children an important topic of discussion for posthumanism, a continued concern for bioethics and a worthy source of speculations for SF.

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**Works Cited**


Conversation:
What, How, Where, and Why is Speculation?

Essi Varis, Elise Kraatila, Hanna-Riikka Roine, & Sarah Bro Trasmundi

A working definition for speculation: (n.) the cognitive or artistic act of approaching or exploring the possibilities inherent in an unknown or uncertain area or phenomenon through the playful or strategic use of imagination, as modified by one's own perspective and the known circumstances (e.g. for the purposes of speculative storytelling, research, or planning for the future)

Fafnir is an academic journal focusing on research of speculative fiction, a popular spectrum of genres that has absolutely nothing to do with financial speculation, speculative philosophy, or speculative computing – or does it? Although speculative works, practices, and moods have popped up in numerous different domains for a long time, finding a proper definition for ‘speculation’ – what it is and how it works in each domain – remains difficult. Let us speculate: what if things were different? Could speculation, more carefully observed and defined, emerge as a useful methodological tool for humanist research and beyond?

We are four postdoctoral researchers with varied backgrounds in literary, narrative and media studies, cognitive research, philosophy, and cultural anthropology, yet united by our common interest in the workings of speculation and imagination. After exchanging ideas in various seminars and workshops in 2021–2023, we decided to continue our discussion in writing. The result is the following chain-letter, in the course of which we do our best to pinpoint what we talk about when we talk about speculation. Is it a natural human capacity of perceiving possibilities, or a trainable creative skill? How does it relate to imagination and make use of other cognitive, linguistic, and
social resources? Where – or in which domains – is speculation useful or harmful? And finally: why should we speculate and develop our understanding of speculative works and practices?

Our discussion meanders around different modes of storytelling, sense-making, and creating, and delves into the evolutionary, adaptive, and sociocultural roots of speculation. We hope the reader is able to find some points of contact and relevance between our thoughts and their own work, whether they work in research, education, or creative industries. In order to stay true to the open-ended nature of speculation, we do not wish to provide too firm conclusions or chain speculation to too definite frameworks, ends, or definitions. Instead, we extend an open invitation to participate in this conversation and embark on a shared exploration of as-of-yet-speculated potentials of speculation.

**Hanna**

I have often likened speculation to exploration, because it is freer and less goal-oriented than forecasts or predictions. However, speculation does not lack purpose. When it comes to works of fiction, that purpose is often summarized as the reason behind the act of someone asking someone else to engage in a thought experiment, beginning with “imagine if” (see e.g. Scholes, Landon). Imagine if gender was defined in non-binary terms, as it is in Ursula K. Le Guin’s classic *The Left Hand of Darkness* (1969). Or imagine if enchanted silver bars, manifesting the meaning lost in translation, were used to fuel colonial networks of power, as they are in R. F. Kuang’s *Babel, or the Necessity of Violence* (2022). In cases like these, speculation is directed towards imagining something as *otherwise* (McHale); it’s an act of exposing something in the present, of adopting a different perspective to something familiar, of making things appear by introducing a new context.

While the effect of estrangement – the artistic technique of making objects “unfamiliar” and forms difficult (e.g. Shklovsky) – is not restricted only to fiction, speculative fiction is unique in the way it makes use of estrangement as a means of communicating ideas. Although strange, wondrous, and fanciful worlds are crucial for speculative fiction in this regard, I maintain that the interplay is not simply situated between the “real world” and an “imagined world”, but between “what is” and “why that is” or “how it might be otherwise” – or between models for making different truths (Kraatila). In other words, both as a playful and strategic use of imagination, speculation can enable us to reconsider the ways in which we maintain our understanding of *what is* through engaging with imaginings of *what is not*.

**Elise**

I like the direction you suggest here, towards considering speculation a primarily epistemological rather than an ontological matter: a strategy (or play) for gaining knowledge about our reality and its present circumstances as well as potential futures. As such, speculation could be regarded as a practice of consolidating uncertain knowledge, potentially facilitating improved comprehension of things that cannot be perceived directly or known for certain – like future developments, or the “more-than-human” aspects of reality. It is, in short, an attempt to render something unknowable knowable. This formulation has the benefit of avoiding the implication that phenomena
explored in this manner are (at least as of yet) nonexistent or not “real”. This makes speculation a much more versatile analytical tool for discussing the ways in which literary speculation can engage with real-world phenomena. For example, speculation can be a means for extending our perception of the world into areas that remain mostly hidden in our ordinary, human-scale lives, such as planetary-scale changes in the climate or ecosystems, or human activity on species-level (cf. Raipola, Caracciolo). Such areas involve a lot of aspects that are unknown or uncertain (and perhaps even unknowable), but they are still very much real and existent at this moment, not mere possibilities.

Considering speculation in epistemic terms also amounts to a counterproposal to various generic definitions of speculative fiction that equate “speculativeness” with anti-mimeticism or opposition to reality, which, in effect, constitutes an ontological separation between those wondrous, fanciful worlds built by such fiction and the concerns of our own reality. It might also be a starting point for rethinking the term for the purposes of fields like futures studies, where speculation often gets fairly bad rap, connoting lazy, poorly founded, or unjustified beliefs about the future, unbacked by rigorous scientific thought. Instead, speculation could perhaps be considered a perfectly legitimate form of constructing and communicating knowledge, as long as the heuristic and tentative quality of that knowledge is duly acknowledged (cf. Bergman et al., Grishakova et al.).

Sarah
I also like this direction! The separation between real and unreal often acts as an ontological troublemaker, particularly when we are trying to define the concept of speculation. Why should my thinking be considered less real than my actions? Just because I speculate about the existence of dragons does not mean that dragons roam the earth in flesh and blood. Instead, I have made them explicit and tangible in my thinking – they exist in a unique cognitive realm. What truly matters is the impact of this speculation: Thomas and Thomas’ theorem hit the nail on the head in suggesting that when people define situations as real they become real in their consequences.

Consider children who speculate about the whereabouts of dragons or trolls; they instinctively avoid these supposed locations. While some may argue for ontological realism, we run into epistemological traps anyway. We never perceive the same, and our framing is always shaped by history. Just recently, when a colleague gave a lecture, I could not help noticing that he was not wearing his glasses. Is that a real perception? Perception extends beyond the physical, and it involves recognizing not only what is present but also what is absent. Likewise, speculation seems to be intricately coupled with perception, as it revolves around what we desire or imagine could be there (Nagy & Neff).

My problem with speculation is that it has a mechanical ring to it, especially when it is discussed within the realm of cognitive science. When speculation is treated as a cognitive activity similar to problem-solving, where known pieces are put together to venture intelligently into the unknown, the cognitive subject’s immediate situation and the environment in which they are embedded are often ignored. Furthermore, when we explore the cognitive mechanisms underlying speculation, we sometimes lose touch with embodied sensitivities – those palpable tensions that surface when one attempts to “grasp” something and make it tangible in their own experience. These tensions
possibly arise from dialectic or interactive processes between being situated in and having the experience of being decoupled from the world.

From the point of view of embodied cognition, I have little to say about the distinction between speculation and imagination. I think vivid mental images, epiphanies, and open-ended thinking can emerge and be traced to embodied tensions in both activities. In a similar vein, Ingold’s perspective on imagination aligns with this notion of “material engagement that is always holding us back”. In a public lecture he articulated:

“[T]his is a particular tension that humans experience. Any artist will agree on that [...] Imagine you are a composer, and the music is shooting ahead in your imagination, and you are struggling with this pen and paper, trying to notate it down on manuscript paper. And a really hard work of composition is holding it there – the imagination – so you can get it down. And there is a constant anxiety that it will all [be slipping] away from you before you manage to catch it. And I think that is really the root of human life – the imagination.”

(Ingold)

Thus, the question is not only how speculation is different from imagination – if there’s any difference at all. Instead, it behooves us to contemplate whether any cognitive processes are entirely devoid of speculation. While speculation certainly extends perception, as Elise suggests, humans always read more into the world than what is there (like me noticing my colleague not wearing his glasses). Perhaps it would be worth getting a bit more immersed into the phenomenology of speculation? How do embodied tensions manifest and vary across different situations? Can we explore the nuances of speculation, considering not just its activation but also its quality and intensity?

**Essi**

Sounds like you’re all associating speculation with fantastical worlds or creatures on the one hand, and with knowledge production on the other hand. On the first blush, that sounds very counterintuitive. But if we approach speculation in more practical terms, I think we find it’s an unlikely lovechild of imagination and experimentation – indeed, of actively reaching for something that’s not immediately here by probing and engaging with something that is.

So, unlike Sarah, I think there is a distinction between speculation and imagination. Like Hanna points out, speculative imagining should be differentiated from more free-flowing modes of imagining, such as daydreaming or mind-wandering, because it’s usually structured by some goals or parameters – questions like “what if?”,” what would happen if?”, or “why would this happen?”. As someone who has undertaken all kinds of creative projects all my life, I find these cognitive patterns familiar: they allow you to plan what you want to investigate and how, even if you don’t quite know what it is you are doing yet (cf. e.g. Cain 18 on drawing and Gaiman 452 on writing). In other words, they allow you to start experimenting in a way that moves you, no matter how haltingly, towards the thing you want to understand. Of course, it depends on the “what” and the “how” – the aim and the methods – whether these experiments are more artistic or academic in nature. But what all experiments have in common is that they start with something familiar – a skill, an experience, material, or data – and steer you, by the way of an extremely
uncertain and unpredictable terrain, towards something new – a new understanding, a new combination, or a new artifact perhaps. In this sense, there’s no need to ask whether we should use speculation as a research method; I think we are already doing so, although usually quite unknowingly.

Moreover, since experiments start with questions and grope their way through uncertainty, it’s hardly surprising they pair well with imagination. Imagination is, after all, still something of an unknown terrain in and of itself – one that still holds mysteries to experts across all fields of arts and sciences. In other words, while the experimental “methodology” of speculation can be explained or even broken down to a flowchart, its imaginative sub-processes cannot; they are more of a black box.

I’ve found that speculative fiction authors are very fond of describing imagination through all sorts of natural and organic metaphors: it’s something that sprouts or grows or ferments, seemingly on its own (see Varis “Kuinka kirjailija spekuloi?”; Varis “The Skeleton”). That is to say, not even professional speculators, like writers, claim to be able to fully control imagination. On the contrary, they can tend and nourish it, but beyond that, seem to be quite at its mercy. This is why I don’t think speculation should be equated with a “mere” thought experiment or problem-solving either; the imagination at the core of it makes it something a bit more strange and volatile. It involves the kind of procedural knowledge and pre-conscious processing – including the embodied sensitivities and tensions Sarah mentions – that you cannot fully put into words (cf. Varela et al. 147–148).

**Elise**

Speaking of experimenting, tending and nourishing, I think we also need to consider what it would mean to discuss speculation as a practice – that is, as an intentional and at least loosely structured activity that requires certain cognitive, epistemic, and rhetorical resources. For my part, I like this outlook because it helps us to further distance speculation from mere daydreaming and imagination, both of which could be considered resources for speculation, but neither of which amounts to speculative practice in themselves. Understanding speculation as a practice manages this distinction without suggesting that it would have to be a particularly goal-oriented or deadly serious practice – instead, it emphasizes the process itself in all its volatile and unpredictable glory. I think this approach, therefore, creates a lot of room for considering the playful and strategic modes of speculation that Hanna brought up; they could both be regarded as epistemic resources involved in the speculative practice, the entanglement of which facilitates speculation’s characteristic tension between the open-endedness and instrumentality. It is interesting how the gleefully autotelic and more goal-oriented forms of speculation can intertwine in, say, climate fiction, where much of the rhetorical impact derives from the tension between considering the speculative scenario as an urgent warning about a possible future and engaging with it as immersive and emotionally charged play.

Conceiving speculation as a practice, furthermore, seems to necessarily suggest that it requires some specific skill set. It is fashionable these days in literary and narrative studies to talk about different kinds of literacies – media literacy, climate literacy (Ożiewicz), futures literacy (Liveley et al.), and so on – that people need in order to navigate the contemporary media environment and
partake in society from a well-informed position. So, what about speculation literacy? What kinds of skills do we need to recognize the prompts for speculative thinking in different texts, or to carry out thought experiments or experimental imagination in a constructive, interesting, responsible, and safe manner?

These questions interest me, because lately, I have been thinking a lot about the proliferation of speculative stories, “what if?” propositions, and contingent future predictions in narrative journalism. In this type of journalism, speculation tends to be used as a rhetorical resource for consolidating uncertain futures, from the possible escalation of the Russian invasion into Ukraine and potential new pandemics to the increases in mortgage rates and the price of electricity. A lot of it is just fear-mongering clickbait rather than good-faith epistemic practice, obviously. But that is exactly the point: employing speculation as a vehicle for clickbait seems to call for a certain literacy, a certain skill to assess the epistemic value and intentions of different speculative texts, and a skill to engage with such texts with the appropriate degree of criticism.

I have a hunch, or perhaps a hope, that this kind of skill set could be trained by reading speculative fiction, which can facilitate mindful speculation in a “safely” imaginary and remote context (cf. Emmi Itäranta’s comments in Varis “Kuinka kirjailija spekuloi?”). Then again, is it reasonable to assume that speculation as a literary, artistic, or readerly practice could truly correspond with the speculative practices required in nonfictional contexts? Are they really similar practices, when it comes to epistemic resources, approaches or aims, or even rhetorics? I would actually like to hear your thoughts about this. More broadly speaking: how does speculation, as a practice, relate to storytelling on the one hand, and fiction-making on the other hand?

Essi

Your idea of speculation literacy reminds me of Ursula Le Guin’s statement that imagination should be trained and disciplined just as much as rational intelligence, because a well-cultivated imagination is, in and of itself, a valuable resource for both delight and insight (Language of the Night 41–43).

I would claim that some speculative skills must already be baked into the literacies that are taught in schools. Karin Kukkonen, for instance, has highlighted the role that predictive processing plays in the act of reading all kinds of narratives. Also, even if the Author has been declared dead decades before, could we really recognize the contexts and purposes of any texts without speculating about their creators and their intentions to some, however brief and unconscious degree?

To reiterate what Sarah says, perhaps speculation, much like perception, is somehow inherent in most cognitive activities. It’s just the other, darker, smudgier side of the coin: we perceive what we can, and what we cannot perceive, we must either imagine, ignore – or, if we do get more intentional and methodical about it, speculate about. Perhaps this basic duality is the ground zero where all our thought and action stems from?

So, some could be more skilled in the conscious, elaborated practice of speculation than others – sure. The imaginative experimentation I described above could be such a skill, learned and developed through repeated creative activities. But on a more fundamental level, I believe speculation is a human
impulse that cannot be stopped or avoided. Le Guin says this about imagination, too: whether it’s cultivated or suppressed, it “will out”, if not in its healthy and flourishing form, then in some stunted and twisted form (*Language of the Night* 41–43). The outcome depends on the imaginer’s interactions with their environment.

In the framework of 4E cognitive theories, the “resources” of speculation that Elise talks about would boil down to affordances, the action potentials arising between cognitive subjects and their surroundings (Gibson, Varela et al.). As such, they are like complicated equations or chemical reactions. On the one hand, you have the conscious speculator with their capabilities and dispositions: their propensity to imaginative and counterfactual thinking; their abilities of mental simulation, theory of mind, and self-reflection; a certain sensitivity to uncertainty; a certain degree of openness to novelty; cognitive habits; memories and affects attached to them; and possibly a desire, an intention, and the skills to understand or create something new. On the other hand, you have the lifeworld where the subject is embedded: the perceivable and knowable facts and circumstances; the feedback from others; mark-making tools that allow meta-cognition through writing or drawing; and the innumerable, collectively shared texts, images, and myths enveloping individual imaginations in their interwoven layers. When you bring these two complex amalgamations – an imaginative subject and an average human environment – together, some sort of speculation will almost certainly emerge from the cracks. It just depends on the ingredients whether it’ll be a probable projection, a bout of wishful thinking, an anxious worst-case scenario, a conspiracy theory, or a tellable narrative.

Even if speculations deal with the unseen and the unknown, they cannot exist in a vacuum any more than any other type of cognitive activity can. So, for me, Elise’s questions about speculative literacy depend on how we, individually and collectively, are able to manage these resources of speculation and, consequently, the action potentials they entail.

**Sarah**

I resonate strongly with this idea that imagination constantly resides in the background, persistently lurking and ready to “get out”. I like the idea that speculation is an inherent aspect of what we do, because we never fully grasp the world as fixed or complete. It perpetually evolves, and our influence on its evolution is intertwined with our perceptions of what we think our next moments will, can, and should be like.

But if speculation is part and parcel of our daily activities, how could we establish speculative practices that purposefully bring this capacity to the forefront of our endeavors? I believe this can be achieved by directing our attention explicitly, yet in open-ended ways, towards this very process. Consequently, it is not a matter of identifying when or if speculation is present, or where it can be integrated into our practices; it is about making speculation itself the locus of interest, in ways that enrich its quality and phenomenological depth.

Because imagination is an enduring human feature that is always present (in the background), we do not choose to enact or suppress it – but we can choose to make it a primary practice. That is, we can engage our speculative processes directly by making it a task-oriented practice. Alternatively, we could...
intermash speculative practices with other engagements, which would allow us to manage the tensions that arise when speculation intersects with other tasks, as in the cases of speculative literacy, speculative reading, or speculative design (see Dunne & Raby).

So, for me – and building on the points you’ve all made – speculation is an ever-present facet of our existence. We can choose to establish it as a task-based practice by training our attention on how we interact with possible futures within and beyond any other practice. Just as we can create and organize tasks around other activities, we can do the same with speculation, and in doing so, bring it to the fore by opening up and exploiting the tensions that emerge from the interplay of knowing and not-knowing. Developing one’s speculative practice largely entails learning to engage with and endure these tensions.

Finally, I think we need external criteria to judge the quality of speculation. In other words, establishing speculation as a practice requires some way of discerning between mere conjecture and guesswork, and genuine expert speculation.

**Hanna**

I’d like to circle back to Elise’s idea of speculation literacy and the question of whether the skill set needed to assess different speculative texts can be trained by reading speculative fiction. I am usually quite wary of approaching literature as a “training ground” for any purpose (cf. Kidd and Castano; Mar and Oatley). But since fiction writers could, indeed, be called experts in the field of speculation – following Essi’s and Sarah’s suggestions of professional and expert speculation – perhaps turning to them could help us become better speculators. We would then need to specify what exactly they are experts on. Essi points out that speculation is usually structured by some kind of goals and parameters, so maybe we could start from the presumption that expert speculators are particularly skilled in working with such structures.

However, reading speculations written by experts does not guarantee that we learn to assess or criticize the texts. It is conceivable, for instance, that we just become familiar with the structure and are, therefore, more than happy to see it used in clickbait journalism and conspiracy theories in the same way we enjoy serial fiction and drama recycling conventional, sometimes harmful formulae. The more familiar we are with such formulae, the more natural it becomes for us to immediately and affectively react to them on various digital platforms where both clickbait and conspiracies flourish. What if, in turning to speculative fiction, we “train” ourselves with conventional speculative exercises that follow stereotyped or otherwise narrow lines of thinking and imagining? This is one of the reasons why I have wanted to emphasize the how of speculation in addition to the what of speculation (to paraphrase the age-old distinction between the what and the how of narrative, see e.g. Phelan). In other words, instead of looking solely at the “results” of a speculative exercise – such as a speculative scenario set in the future – we also need to analyze the premise onto which that exercise is built – the very starting point that limits and guides what is seen as possible or impossible, and as the unknown that is being approached (see also Roine “Speculative Strategies”). After all, speculation is modified by one’s own perspective and the known circumstances.
So, although speculative experiments might steer us towards something new, not all of them accomplish this, or the structures that steer us might be based on problematic premises. When it comes to scientific processes and speculations, we – as the experts! – know how to criticize such premises. But how could we disseminate such critical speculative practices elsewhere? I have no answers (yet), but would like to consider communality and dialogue as possible resources of speculation, in addition to all the other resources mentioned above. There is evidence, for instance, that while reading literature can increase the wellbeing of individuals, participation, community, and taking part in reading groups or other such environments, where one is heard and can connect with others, are even more beneficial (e.g. Kosonen). So, perhaps such communities and groups would be a useful resource for both creating and trying out speculative experiments as well as engaging in and analyzing such experiments?

Essi
I might be able to gather all the valid concerns Hanna is raising here under one word: awareness. If we want to start building practices of expert speculation, one of the building blocks should be self-reflective awareness – or mindfulness: mindfulness of the premises and goals of the speculations; mindfulness of the ways and purposes by which they can and should be communicated to others; and of course, mindfulness of the often blurry lines between fact and speculation. If we are not self-critical and intellectually vigilant enough, we always run the risk of basing our worldviews, or even our research, on premises and frameworks that might be mixtures of knowns and unknowns, rather than the firm bedrocks of fact we assume them to be. It should be evident to all researchers by now that ideologies like patriarchy or capitalism can become so normalized they are practically treated as facts – the supposedly only way that things can be. In these cases, speculation could act as something of a litmus test, or a 21st century version of the Socratic method: we should always, always ask ourselves if things could be different. This, and only this, can help us differentiate between premises that really are laws of nature, and premises that are actually matters of choice, habit, or context.

Speaking of context, that’s another variable expert speculators should remain highly aware of. I think we have already agreed that speculation is useful, or even unavoidable, in many domains of human life – it’s like a special spyglass that can give us a slightly wider view of almost any terrain (cf. Varis “Strange Tools and Dark Materials”). But of course, the tensions between the known and the unknown, which Sarah is talking about, should be managed differently in different domains. In art, we can – or might even want to – reside within those tensions. Art doesn’t necessarily have to resolve or even claim anything; on the contrary, it can give us space where we can just be, feeling whatever we feel and experiencing whatever we experience (cf. Varis “Hitaiden kuvien äärellä”). This kind of approach is very generative of speculation, because it doesn’t necessarily conclude or instrumentalize it. Fiction and art can and should speculate just for the sake ofspeculating. That in and of itself likely trains the imagination, as it were – and it’s fun! But in research, at least some of the cognitive openings afforded by speculations are usually limited or seized in some way. The exploration is expected to lead to a discovery, so one must move from the tension between the known and the unknown towards some new
certainty, probability, or at least a better inventory of what exactly is known and unknown.

Understanding this continuum of speculative strategies extending between arts and sciences could, perhaps, help us rethink the relationship between artistic and scientific practices as a whole. This, in turn, might prove crucial if we want research – especially humanist research – to progress beyond positivism and grasp human experience in a more holistic manner (cf. Leavy 256). The sustained speculative tensions and the experientiality of art could have much to offer to researchers who are trying to get past the classic empirical, structuralist, and cognitivist models, towards more phenomenological, embodied, enactive, and posthuman understanding. But lots of methodological bridges still need to be built. A more systematic and aware approach to speculation could form one such bridge, since it’s already something that both sides utilize in one way or another.

But of course, arts and sciences aren’t the only areas of speculation. If there’s one thing we speculate about incessantly, it’s surely the thoughts, intentions and feelings of other people! We may call it "mind-reading”, but of course, there’s no such thing. "Theory of mind” is a more apt term, because it’s really about hypothesizing and speculation, even if it is so automatized we barely notice it. Many literary researchers have suggested that the social speculations invited by narratives, especially literary narratives, could make us a bit more aware of these speculations and, hence, also a bit more skillful at them (Kidd and Castano, Mar and Oatley, Zunshine). So, if reading fiction can make us, if not measurably better, at least more mindful of our social speculations, why would the same not hold true with other kinds of speculations as well? It’s not an automatic or straightforward process of learning and transference, of course, but engaging mindfully with fiction and art could make us more mindful of the ways we engage with the rest of our reality as well.

**Sarah**
I want to advocate for the dialogical nature of speculation, because, like Essi said before, speculation never emerges in isolation. Per Linell highlights the dialogical nature of human sense-making, and argues that we are always saturated by previous social interactions. These interactions significantly shape our present actions, and we are held accountable for them in future social encounters. Our minds thus emerge as dialogical and multi-scalar entities.

Literary speculation is not only tied directly to cognitive processes; it also hinges on the speculator’s habitual linguistic actions. This allows conceiving ideas as cognitive processes which (re-)enact parts of an individual’s life experience within their encultured social activity. Therefore, at its core, speculation is traced to social processes that can sculpt the course of future events.

The conventional approach that confines speculation within the individual, leads not only to a computational understanding of cognition but also of language. This viewpoint prioritizes the syntactic functions of a language system and, consequently, fails to shed light on how language relates to human forms of life. By contrast, a dialogical perspective on speculation puts emphasis on the dia-logies inherent in an individual’s speculative processes. A dialogical perspective thus allows us to understand how human thinking and language are intricately linked to specific forms of cultural practices.
Emergent speculation can involve multiple voices that often intermesh. Linell emphasizes how “others”, whether implicitly or explicitly present in the situation, saturate local action-perception. For instance, the voices emerging during speculation can refer to broader societal influences, such as norms, values, and beliefs that are dominant within a particular socio-cultural practice.

The connection between language and speculation is thus pivotal. If the speculator’s linguistic and cognitive couplings with their environment sculpt cultural niches, then language is a diachronic phenomenon. This means that language experience consistently influences how we perceive the world and how we are trained to attend to our cognitive processes, including textual elements and speculative practices in general.

The dialogical backbone of speculation challenges any notions of speculative processes as purely mental, autonomous, and locally derived. Instead, this perspective prompts discussions about the value of cultivating and shaping speculative processes within dialogical contexts. It also highlights the multiple timescales that constrain how we engage and attend. The “who” of speculation is not singular but plural, and the “where” of speculation is not simply a matter of localization; the multi-scalar nature of dialogical speculation introduces temporal complexity and distribution into the equation.

**Hanna**

I definitely subscribe to this idea of speculation, its processes, and its settings being plural and distributed, instead of singular and isolated! Literary studies habitually take the singular perspective and often focus on, for instance, the works of a single author or reading as a private meeting between a reader and a text. One of the reasons for this is that the current concepts of textual analysis are limited when it comes to distributed and multi-scalar phenomena. The concept of author is based on an idea of a single human-like actor and their “experience” (see Roine & Piippo, “Authorship vs. Assemblage”), and even the analyses of complex phenomena, such as the emergence of story-like content on digital platforms, emphasize human action and perception (see e.g. analyses of popular hashtags as representative of the “story logic” of social media, Dawson & Mäkelä; “viral storytelling”, Mäkelä et al.; users “storying their lives”, Georgakopoulou; or sharing their beliefs and values as “shared stories”, Page).

As such, these suggestions for a dialogical and distributed framework of speculation come close to my research: I have examined speculation as a tool for analyzing the entanglement of humans and computational media. This is a context where, in my view, speculation is especially pronounced – but often still goes unnoticed, because the ways in which computational media and algorithmic actors affect, guide, and shape our ability to imagine are mostly opaque to human scrutiny. While computers’ ability to model complex scenarios and their possible outcomes has been known for a long time, it is now urgent to recognize the full extent of the ways in which human cognitive processes are externalized to computational systems (Hayles) and the ways in which our central social and cultural practices – such as reading and writing! – are fast becoming digital processes. Furthermore, these processes rely on platforms owned by private corporations – such as Alphabet, Meta, Amazon, Apple, and Microsoft – and on these platforms, the content that users can perceive through their interfaces is (re)formed, (re)organized, and updated by
a meshwork of procedural and unfolding agencies (see Roine & Piippo, “Social Networking Sites”).

With regard to our engagement with the possible, it must be kept in mind that speculation does not simply expand our views, but also participates in producing the possible by drawing it into the present. In other words, it narrows infinite possibilities down to a more manageable scenario. From the birth of finance capital in the 18th century, such possibility-oriented thinking has been routinely tied to normative goals, such as profit and loss (see uncertain commons). Current computational, algorithmic actors follow similarly instrumental models of speculation, which can significantly affect our understanding of the spectrum of the possible. As algorithmic operations are designed to gather, process, and classify data in order to bring forth comprehensive patterns in the world, they increasingly participate in making certain – often highly normative – forms matter. The self-reflective awareness that Essi called for is thus crucial when speculating in digital contexts, as in the digital, networked age, speculations of both hopeful and apocalyptic scenarios are used across platforms to affect not only our understanding of ourselves as human beings within our lifeworld but also our social and political decisions.

Elise
What I find interesting and troubling about normative future narratives, in corporate storytelling for example, is that they tend to cast the described futures not as speculations but as visions: brave new worlds where Meta or some other corporation leads the way. Of course, such corporate storytelling is not really a matter of any honest pursuit of knowledge but of money, power, and influence; they are not trying to scope out possible futures but selling their own particular flavor of it. This constitutes an interesting antithesis to the kind of autotelic and freeform speculation that is, occasional didacticism aside, usually afforded by speculative fiction. The key difference between these types of storytelling is not how speculative they are, but how open the respective storytellers are about being speculative, about their epistemic aims and limitations, and about the contingencies hidden in their truth claims.

Therefore, I definitely subscribe to the call for self-reflective awareness of speculative thinking. In this world full of storytellers trying to pass off their speculations as much more certain knowledge, being able to recognize both when someone else engages in speculative thinking and when we do it ourselves is, indeed, crucial. That’s also what I was getting at with my earlier point about speculation literacy – or perhaps metaliteracy, the ability to “stay with” and reflect on our own speculations, and those of others, as interpretive practices. This entails being more cognizant of the epistemic limitations of our perception of the world, and some sense of how large a part of what we think of as “reality” is actually built of speculative matter. As Essi noted, other people’s interiority falls quite inescapably into this realm of speculation – and so do all nonhuman experiences, future developments, and much of the past, both on personal and world-historical scales. Then there are what Timothy Morton calls hyperobjects, phenomena that are so all-encompassing and alien to human experience that they cannot be perceived or empirically described in their entirety, but only in their localized manifestations – climate change being the example par excellence.
Strictly speaking, then, it could be said that most of the universe consists of things that are unknown, unknowable, unnarratable (Raipola), or irrepresentable, at least if we reject the naïvely positivist view that only scientifically observable phenomena constitute meaningful facets of our reality. We scope out these other facets of reality via models, theories, scenarios, calculations, narratives, and other heuristic “good enough for now” approximations of all kinds in both arts and sciences. These are flawed but essential attempts to grasp, construct, and share with others something like what Kathryn Hume famously named “consensus reality.”

I’m inclined to think that in order to become better, more mindful speculators, we need to start by orienting ourselves towards our shared reality as something that is mutable and flexible, rather than fixed and pre-given. Similar outlooks have been expressed by speculative authors like N. K. Jemisin, who stated in her Hugo Award acceptance speech in 2018 that “we create the engineers of possibility” (Cunningham), and Emmi Itäranta, whose latest novel, *The Moonday Letters*, gives us the gnomic utterance: “Sometimes imagination is more important than the truth. Not because it covers the truth, but because it expands it and makes its potential bigger” (78). According to such outlooks, our world is something we build for ourselves and each other, rather than something we merely perceive. All this world-making probably shouldn’t be called speculative, but speculations are certainly an inescapable part of knowing the world and sharing it with others.

So, perhaps this is another crucial part of that awareness we need to develop around our own speculations: some knowledge may only be true contingently or potentially or hypothetically, but that does not necessarily make it useless or illegitimate. On the flip-side, just because we are used to taking some things – like Essi’s earlier examples of capitalism and patriarchy – for granted, or seeing them as necessarily true interpretations of reality, it does not make them any less debatable or more legitimate. I hesitate to argue for a position that “reality” is fully a matter of interpretation (let alone speculation), because such a viewpoint would carry a certain whiff of “post-truth” politics, science denialism, and paranoid conspiracy theory. However, I do not think that defaulting to naïve scientism helps with any of that either. Famously, fact-checking rarely works, because facts have little impact on how people actually experience the world.

Instead, maybe it would be more helpful to treat speculations as potentially meaningful contributions to our shared reality – and to get a little more comfortable with the idea that this reality is not fixed. Like Essi, I have also argued in previous publications that art can create room for autotelic speculation where we can simply stay with our thoughts and feelings for a while (Kraatila). As such, it can perhaps be of some help in learning to tolerate epistemic uncertainties and entertain contingent ideas. If we got comfortable with that manner of being in the world, maybe there would be more room for recognizing and evaluating speculative knowledge creation in other, more instrumentally oriented contexts as well.

**Sarah**

I’d like to build on your ideas that embracing speculation could open doors to new perspectives and increase the tolerance of uncertainty, and connect them to the current challenges our planet faces. We are witnessing a series of
interconnected crises, both ecological and psychological. In this context, speculation takes on a dual role: it is a factor contributing to our predicament, and a potential solution to it. While speculation plays a significant role in commodity markets, it also has a crucial role in philosophy and literary studies, where it serves as a tool for pushing boundaries, provoking new thinking, and exploring the seemingly impossible. Understanding this dual nature of speculation is essential as we seek new ways to address and overcome the ongoing crises.

As we’ve already discussed, speculation enables us to extend our perception, granting us the capacity to eventually comprehend and grasp what is not immediately visible. We could think of it as a forward-facing torch that illuminates a cross-section of the unknown, dark territory ahead. As we wield this torch, we have the freedom to direct it in various directions, but we can only glimpse one slice at a time. If we want to make the partial picture whole, we need informed speculation. This entails probing how our windows into our immediate surroundings connect with the broader global landscape and understanding the long-term repercussions of our actions. Speculation thus assumes a temporal extension. To harness its full potential and to ensure its quality, we must direct the torch in multiple directions, exploring various slices of what the world is and what it can be.

Speculation can help us move beyond ego-centric and even anthropocentric perspectives, and adopt, instead, a multi-perspectival lens. Literature operates according to these speculative logics. Through writing, speculation becomes a way of engaging, one sentence at a time, with what eventually turns into a narrative composed of various parts. These narrative components can be put together in diverse ways, contingent upon the direction of the torch. Notably, not all narrative configurations are equally compelling.

Speculation also liberates us from feeling tethered to the present moment by drawing on timescales that extend beyond it. In writing down possible futures, individual experiences become shared, and they can thus serve as a substrate for further speculation. The social and accumulative nature of speculation is crucial: collective speculation within a community enables comparison of different slices of possible futures. That is to say, literature serves as a sublime resource for coordinating speculative thinking on societal scales.

Hanna
I think the paradox that speculation is both a contributor to our current problems and a key to solving them is a crucial observation. In their manifesto *Speculate This!,* a collective of writers dubbed “uncertain commons” argues that the future is increasingly “imported into the present, bundled up, sold off, instrumentalized. Some eagerly buy into these futures markets, placing their bets; others imagine things differently. All in all, nothing more than speculation and nothing less.” (n.pag.) This sheds light on some highly powerful ways speculation is used today. We could even say that we are living in the world shaped by speculation, or at least by strategies and methods close to it. In addition to commodity markets, there are all sorts of probabilistic sciences (e.g. risk analysis, predictive genomics), anticipatory techniques (e.g. technological forecasting), and various powerful forward-looking institutions (e.g. the Intergovernmental Panel on Climate Change).
Furthermore, digital technologies are steadily occupying more and more space in our culture and society. It is crucial to keep in mind that the design goal driving the development of these technologies boils down to the ideal of not only being able to predict all stable processes but also being able to eventually control all the unstable ones. This is yet another use of speculation, a form of imaginative thinking — “a process for envisioning possible futures and bringing them into greater possibility through implementation”, as Ed Finn (185) puts it. In this sense, algorithmic technologies, with their goal of anticipating our needs and desires, seek to end our explorative search for meaning and direction and, instead, (pre-)determine them for us. This affects the futurity of our thinking, our capacity to imagine what is possible for us, both as individuals and as societies. To use the form of speculative experiment myself: if this goes on, how narrow might the space for open-ended, free speculation become? This is one of the reasons why we need to understand speculation and other forms of imaginative thinking better; we must try to understand their differences and structures, and where they might lead to.

Importantly, speculation — in the sense we have been sketching out in this dialogue — is very different from what contemporary digital technologies, such as OpenAI’s ChatGPT and other large language models are doing. In his recent *The New Yorker* essay, science fiction author Ted Chiang describes ChatGPT as “a blurry JPEG of all the text on the Web”. In other words, ChatGPT effectively “rephrases the Web”: it interpolates and estimates what should come next or what is missing, by looking at what is on either side of the gap. Chiang’s illustrative example of this is what ChatGPT does when it is asked to combine two different kinds of texts, such as generating a description of losing a sock in the dryer in the style of the Declaration of Independence: “it is taking two points in ‘lexical space’ and generating the text that would occupy the location between them”. As our dialogue has made clear, speculation is not about interpolating or estimating; rather, it attempts to extend our understanding and come up with something new or unexpected.

Thus, maybe we should not attempt to make more and more use of speculation in our culture and society but to increase our understanding of it and its uses. Perhaps, we can find uses for speculation that do not contribute to selling off our futures or add to our current crises in an unsustainable way. The writers of *Speculate This!* manifesto suggest abandoning firmative speculations, which cling tightly to the unsustainable petroculture, and instead, devoting our time to what they call affirmative speculations. This would mean imagining futures and alternatives while “refusing the foreclosure of potentialities”; holding on “to the spectrum of possibilities while remaining open to multiple futures whose context of actualization can never be fully anticipated”. For uncertain commons, affirmative speculation “embraces way of *living in common*”. This is certainly a form of imaginative thinking that literature can also participate in.

**Elise**

“Affirmative speculations” appear quite similar conceptually to what Genevieve Liveley and her co-writers have taken to calling “futures literacy”. A crucial part of it is the ability and inclination to think about future as a set of open possibilities, rather than as something singular that can be captured into a neat narrative, packaged, and sold. These days (and maybe to a greater extent than
before?), it is a common practice in marketing, politics, and journalism alike to build scenarios and present intricate visions that seek to consolidate a particular version of the future. Companies like Meta and Apple offer exhaustingly long and involved techno-utopian visions in their recent promotion videos, in which they are not only claiming to be in the process of building the futures they present to us but also inviting the audiences to “participate” in that journey, whatever that is supposed to mean. Political parties from left to right paint their own pictures of the future, competing with the visions of others and selling themselves as either the builders of a utopian future or (more often, perhaps) as the only ones truly committed to preventing a dystopian one. Meanwhile, journalism, especially after the pandemic, frequently engages in those epistemically suspect clickbait speculations I mentioned earlier. All these future speculations are, in effect, attempts to sell a certain version of reality that is – inescapably – in and of the present. All of them are also engaging in a decidedly “firmative” speculation that doesn’t leave much space for the audience to do their own imaginative work. Nor does this type of speculation encourage critical reflection on its epistemic value or motivations – that is to say, it doesn’t promote audiences’ futures literacy or skillful future-oriented thinking.

I would say that this kind of speculation is, in essence, covert, inclined to downplay its speculativeness. “Abandoning” it would entail replacing it with more overt speculation, the kind of speculation that is more reflective and transparent about its own epistemic limitations and geared towards encouraging readers’ agency in making their own interpretations or even imagining their own alternatives. This is the kind of co-constructive speculation that, arguably, speculative fiction excels in (Kraatila). However, I wonder what moving from covert to overt speculation would entail in practice – and, most importantly, who are the nebulous “we” who should make the switch? Would a shift from firmative speculations to more open and affirmative and playful ones ever be in the interests of the actors who are currently making money and gaining influence from covert and firmative speculations?

It seems, at any rate, that we are coming back again to the importance of reflection, awareness, and mindfulness when it comes to speculations, whether our own or those of others. So, rather than it being a matter of “us” abandoning harmful forms of speculation for more sustainable ones, maybe the road towards better speculative practices entails promoting more critical recognition of, assessment around, and engagement in speculative thinking from audiences constantly bombarded by speculative narratives. This, of course, would require the kind of nuanced understanding of speculation as a practice – an epistemic, rhetorical, and cognitive practice – that we are aiming to grasp here, and then popularizing that understanding in some way.

Essi
So, to sum up: speculation offers itself as a more open-ended, flexible, explorative, and creative ally to positivist thinking, whose narrow definitions, near-mathematical operationalizations, and drive for final, indisputable knowledge reflect the kind of ideologies that are becoming increasingly obsolete in the course of our millennium. In science as well as in society, we are starting to understand that the world is a much messier place than exact and orderly measurements and taxonomies can ever hope to describe. Human perception
is not limitless, our brains are not computers, and we live in the midst of constantly changing spectrums, entanglements, and complexities we cannot control. What is more, we are coming to realize that hubris-driven attempts at such control can do more harm than good. If we say that we want to understand something completely, are we really any better than all the colonial, patriarchal, and anthropocentric instances seeking to have mastery and, thus, power over the Other, negating its right to agency and change? If we believe that the sole purpose of all research is to finally arrive somewhere, to produce something, to be useful, or even monetizable to someone – are we not parroting the logics of internalized capitalism?

Speculation, ultimately, is about creating a space of spectral, multifarious possibilities – a space where we can recognize the narratives born of such ideologies, imagine possible consequences for them, and also – crucially – come up with entirely new alternatives, the kind of affirmative speculations Hanna mentions. In this sense, speculation is also an alternative to reactivity: it is not about committing to a single viewpoint or ideology. It’s about stopping to examine a whole constellation of them – so that we could commit to the most suitable one with true conviction and understanding (cf. Varis “Strange Tools and Dark Materials”). In my humble opinion, this, and only this, is the true meaning of choice. If we want our opinions, responses, and views of the world not to be manufactured by habit, tradition, markets, or algorithms, we must have the awareness and the imagination to speculate, not only about the future but also about the paths not taken. It is in that space of open, curious non-commitment that individuals can reclaim their agency and true democracy becomes possible.

It’s surely no coincidence that we keep bringing up literature here, because speculative fiction have always known this: Ursula Le Guin notes that “dictators are always afraid of poets” (Conversations 86) because, as Neil Gaiman says, “[o]nce you’ve visited other worlds, like those who ate fairy fruit, you can never be entirely content with the world you grew up in” (8). He adds that being discontent is actually a good thing: “people can modify and improve their worlds, leave them better, leave them different, if they’re discontented” (ibid.) – and, I would add, if they have the ability of imagine their way toward those changes.

To me, the best way to do that is, specifically, speculation, because successful speculation marries the very best qualities of rational and imaginative thinking: it is based on some logic and fact and is deeply engaged with reality – but in a way that also holds space and remains open to everything that isn’t reality, at least not yet. The fact of the matter is that humankind will always have to grapple with the unknown, whether it be the future, the minds of our fellow creatures, the undisclosed logics of the algorithms and stock markets, or the depths and mysteries of the universe. No amount of science or belief will ever fully get rid of all the unknowns. And so, the real question becomes: how do we face the unknown? Reacting out of fear and terror; disappointed or in denial of the limits of our systems of understanding; or open to its untold possibilities?

Let the conversation continue!
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BOOK REVIEW:

Science Fiction and Psychology

Alicja Jakha


In his book, Miller juxtaposes the literary history of science fiction with the history of psychology to discuss their influence on each other. To this end, he presents analyses of texts that explore the impact of psychology on science fiction and the role of science fiction in portraying psychological theories. Miller examines the overlap of psychology and science fiction by turning to texts written by authors not trained academically in the field of psychology, arguing that these kinds of works yield interpretively more engaging analyses than works whose authors do have psychological training and expressly seek to use it in their fiction. Since research on fiction can always benefit from an interdisciplinary approach and psychological research addresses similar issues (such as perception, cognition or behavior), Miller's book seems a useful addition to the existing scholarship on science fiction.

As an introduction, Miller defines psychology as a group of research areas that arose during the industrialization of the West and focused on methods of understanding the soul, the self, and the psyche by going beyond already known scientific practices. According to him, psychology plays five roles in science fiction texts: (1) didactic-futurological, (2) utopian, (3) cognitive-estranging, (4) metafictional, and (5) reflexive. By the didactic-futurological role of psychology in science fiction, Miller means that its narratives can be used to convey scientific knowledge, including human sciences. In this function, science fiction stories are a source of futuristic speculation on how our lives may someday be. Miller agrees with Joanna Russ's view that the didactic and futurological functions of psychology in science fiction are marginal and argues that the reliability of such forecasts is irrelevant. Considering the utopian role, Miller sees more use for predictions in cases where they confront the present
with ideas of a better or a worse imaginary world, noting that the overall aim of utopian science fiction is to express a dissatisfaction with the world we are living in now. Then, the cognitive-estranging function of psychology in science fiction relies on Darko Suvin’s concept of defamiliarizing the world we know by showing it in a different light while its metafictional role is to facilitate the aesthetic self-consciousness of the genre. Finally, the reflexive function of psychology is to make the reader reflect on claims of psychological knowledge in science fiction, for example, to criticize psychoanalytic therapy.

With these categories, Miller shows that science fictional narratives lay the ground for psychological theories and practices; an observation which has already been made by psychologists such as Sandra and Daryl Bem, Randy Thornhill and Craig Palmer, and Steven Pinker who “invoke different speculative narratives of the future as a way to legitimate their particular psychology claims” (44). Miller further explores this notion through the analysis of science fiction texts which demonstrate a variety of psychological theories.

The book is divided into five chapters, each discussing a different psychological school – evolutionary psychology, psychoanalytic psychology, behaviorism and social constructivism, existential-humanistic psychology, and cognitive psychology. The amount of space devoted to individual schools is more or less the same, and overall, the composition of Miller’s monograph follows the structure of psychology textbooks, determined by the history of successive schools of psychology. Each chapter consists of theoretical background and analysis of chosen science fiction texts.

In Chapter 1, Miller focuses on evolutionary psychology. He introduces the basic claims of this school, starting with Social Darwinism and its main figures such as Herbert Spencer and William Graham Summer. The chapter then covers the rise of sociobiology and the late 1980s advent of evolutionary psychology and its key propagators – Leda Cosmides and John Tooby as well as Steven Pinker. Miller highlights the criticism of idealistic programs that involved creating a perfect society based on ideals of compassion and fellowship, discusses how they were interpreted as utopias, and concludes that the presence of evolutionary psychology in science fiction has an anti-utopian background. For his analysis, Miller chooses H. G. Wells’s anti-utopian texts *The Time Machine* (1895) and *A Modern Utopia* (1905), which employ the concepts of evolutionary psychology. Juxtaposing this discussion with utopian novels such as Octavia Butler’s *Parable of the Sower* (1993) and *Parable of the Talents* (1997) that stand against its ideas, he provides an insight into two different approaches to evolutionary psychology in science fiction.

Proceeding to another psychology school, Miller begins Chapter 2 with the origins of psychoanalytic psychology in the 1880s and presents its main concepts and figures – the unconscious theorized by Sigmund Freud and Carl Jung and the influence of Nietzschean discourse on both of them. The first part in the analytical section is devoted to a discussion of H. G. Wells’s *The Island of Doctor Moreau* (1896) and *The Croquet Player* (1936), which present the journey into the unconscious and the return of the repressed. Adding to his discussion of Freudian psychoanalysis, Miller focuses on George Orwell’s *1984* (1949) and Aldous Huxley’s *Brave New World* (1932), which “present a cruel dialectic in which the creation of self-conscious subjectivity is also the destruction and self-alienation of that same subjectivity” (95). Moving from
Freud’s theories to Jung’s, Miller provides an analysis of Ursula K. Le Guin’s interest in Jungian psychoanalysis, mainly the notion of the shadow self and the collective unconscious that is made up of archetypes. However, as Miller notices, Le Guin does not follow Jungian concepts blindly, but rather transforms them for her own use. With his analysis of Josephine Saxton’s *Jane Saint and the Backlash* (1986), Daniel Keyes’s *Flowers for Algernon* (1966) and Frederik Pohl’s *Gateway* (1977), Miller further discusses transformed ideas of the collective unconscious. At the same time, what seems to be missing from this chapter on psychoanalytic criticism in science fiction is the figure of Jacques Lacan. Having adapted Freud’s ideas and incorporated them into poststructuralist theories, Lacan is one of the most discussed theoreticians of psychoanalysis in literary studies. Because of this, applying his ideas to the reading of science fiction would definitely be a valuable addition to the book.

Focusing on behaviorism and social constructionism, Chapter 3 also starts with a theoretical introduction and Miller’s explanation, in this case, of the fact that he put these two schools together because they both share “a progressivist ambition to intervene in the social and cultural plasticity of human life” (127). Within this discussion, he takes up John B. Watson as a pioneering behaviorist alongside Ivan Pavlov and Edward Thorndike, all of whom believed that psychology should focus not only on introspection, but also on the outside world. According to Miller, behaviorist tendencies in science fiction come across mostly in utopian/dystopian works, and he considers B. F. Skinner’s *Walden Two* (1948) as the starting point of this tendency. Miller argues that Skinner points out the ethical problem of the conflict between “the desires of the individual and the supply of societal roles” (137). Linked to this analysis of *Walden Two*, he brings in works critical of behaviorist concepts, such as *A Clockwork Orange* (1962) by Anthony Burgess and *The Lathe of Heaven* (1971) by Ursula K. Le Guin. Alongside his discussion of behavioral psychology in science fiction, Miller also invokes the concept of social constructionism exemplified by the role of constructing variants of sexuality in the creation of fantastic worlds. Both paradigms seem to correspond with science fiction’s role as a method of organizing knowledge due to their emphasis on the social dimension over the personal.

In the final two chapters, Miller introduces existential-humanistic psychology as shaped by the influence of European existential philosophy and discusses psychologists who were dissatisfied with already existing psychological approaches. He mentions Rollo May, Erich Fromm, and Abraham Maslow as the most prominent figures in this discourse, among others. Analyzing novels such as Vincent McHugh’s *I Am Thinking of My Darling* (1943), Miller provides science fictional examples of conforming to the existentialist idea of authenticity, corresponding with existentialist concepts, and reflecting the critique of the biomedical psychiatry of the 1960s. In his interpretation, the existential-humanistic perspective is reflected in science fiction’s didactic and prophetic aspects.

Miller ends his overview of psychological concepts imported into science fiction with cognitive psychology, which, to him, is a discourse closest in its assumptions to the genre of science fiction since it explores mental, schematic, and socially motivated processes and representations. Miller examines these ideas through works such as Jack Finney’s *The Body Snatchers* (1955), which discusses “the effects of stereotypical schemas upon perception, knowledge,
and memory” (206). In addition to this, he turns to Walter Lippmann’s idea of a blind spot – a gap between the external fact and the internal mental representation – and discusses the role of language in creating illusions and establishing reality as well as the way it problematizes psychological processes in works such as Samuel Delany’s *Babel-17* (1966).

Overall, I found Miller’s arguments compelling. He not only presented ways in which particular psychological orientations can be applied to the literary analysis of science fiction, but he also introduced works which distort popular psychological concepts and suggest new ways of understanding them. Because of its structure, *Science Fiction and Psychology* serves as a good introduction to the most important psychological schools and their applications in science fiction, which could prove useful to both literature and psychology students and scholars. What makes Miller’s book stand out is the focus on a variety of psychological schools, which enables him to go beyond the psychoanalytical readings that have often been seen as the most significant approach to applying psychological theories to literary studies. Importantly, the author not only provides analyses of science fiction texts that adapt crucial psychological concepts, but he also discusses works that use psychology to examine and challenge the field’s most popular ideas. While the chapter on cognitive psychology could have been developed further since as Miller himself stated, it is currently a dominant psychological school, he is successful in presenting the significance of science fiction for psychology and vice-versa. In addition to this, Miller’s research could have been extended to include the areas of neuropsychology and parapsychology, which require further research. Nonetheless, the book is definitely a useful foundation for those interested in intersections of psychology and science fiction.

*Biography:* Alicja Jakha is a PhD Candidate at the John Paul II Catholic University of Lublin, Poland. Currently she is writing her dissertation on the representation of postcolonial trauma in Afrofuturist and Indigenous Futurist texts of N. K. Jemisin and Rebecca Roanhorse. She is the author of the article “The Spectral Presence of (Un)dead Mother in Shirley Jackson’s Short Stories” published in *Annales Universitatis Mariae Curie-Skłodowska* (2020). Her scholarly interests are Native American studies, African American studies, trauma studies, and speculative fiction.
BOOK REVIEW:

*Nólë Hyarimenillo. An Anthology of Iberian Scholarship on Tolkien*

José Manuel Ferrández Bru


The title *Nólë Hyarimenillo*, meaning “Lore from the South” in the High Elven language Quenya, created by renowned author and philologist J.R.R. Tolkien, aptly describes this collection of essays, and the subtitle *An Anthology of Iberian Scholarship on Tolkien* clarifies that most of the book’s nine essays were written by authors from Spain and Portugal. Metaphorically, the expression *Nólë Hyarimenillo* also brings attention to the issue of whether academic studies on Tolkien from outside the Northern (European), or specifically the Anglophone world, are deemed valuable, emphasizing the question of whether scholars from other cultures, backgrounds, and languages can contribute anything of value regarding his work, sources, or influences. The issue of diversity and representation in the field of Tolkien scholarship has recently become a concern on a global scale. Professor Martha Celis-Mendoza highlighted the linguistic barrier as a major obstacle, particularly focusing on the dearth of translations of Tolkien’s works beyond the most well-known ones. This problem is further exacerbated when it comes to the majority of...
Tolkien’s [sic] criticism which rarely gets translated into other languages based on the partial misconception that all scholars of an English language author must be proficient enough to read their work in the original language, but also all the major works of criticism around it.... Unfortunately, this poses a two-way challenge since works of fiction inspired by Tolkien’s work and especially academic research and criticism, works written in other languages, rarely reach English-speaking fandom and scholars (Celis-Mendoza 3:08–4:14).

In addition, there is a prevailing belief that English has attained a status of near-universal recognition as the preferred mode of communication for scholarly discourse. As a result, academic discussions of Tolkien in languages other than English may have substantially diminished effectiveness as publications, and the most established academic circles may not even be aware of the existence of this scholarship. Hence, it appears that the true intent of Nólë Hyarmenillo is to promote the works of non-Anglophone scholars, especially those from the Iberian Peninsula, by publishing an English edition that can reach a broader readership. However, it is important to emphasize that nearly all of the essays are originally written in Spanish or Portuguese, and, paradoxically, some of them have deficiencies in their own English translation.

As this collection highlights the valuable contributions of non-Anglophone scholars from various backgrounds, it exemplifies the need for inclusivity in the field. Indeed, the book presents a wide-ranging and varied selection of themes and topics, united mainly by the commonality of the authors’ geographic origins. In the introductory section, the editors offer a comprehensive overview of Tolkien scholarship in Spain and Portugal, providing both a valuable introduction to the field as well as a list of pioneering scholars. However, it is worth noting that the significance of fan communities as important sources of academic inquiry is sometimes overlooked, particularly with regard to Spain, where the Tolkien Society of Spain has played a crucial role in promoting the study of Tolkien’s works. Structurally, the book is divided into two parts, featuring four essays by Portuguese and five essays by Spanish scholars. While this organization does an admirable job of highlighting the breadth and diversity of Tolkien scholarship in southern Europe, it does also result in a lack of coherence between the individual essays. Furthermore, one third of the essays focus on Peter Jackson’s film adaptations rather than Tolkien’s original works. While these adaptations have undoubtedly contributed to the popularity of the literary works on which they are based, it is important to note that the interest in Tolkien’s writing in southern Europe predates the release of these films. Despite these limitations, the collection presents a valuable contribution to Tolkien scholarship, showcasing the unique perspectives and insights of scholars from this geographic region. It covers a wide range of subjects, including but not limited to semiotics, sociology, comparative mythology, and rigorous literary analysis. The essays are characterized by their nuanced understanding of Tolkien’s writing as they draw on a variety of disciplinary approaches and cultural contexts. These approaches range from the analysis of secondary works derived from Tolkien’s creation (such as films, songs, and posters) to the societal responses to the literary phenomenon across a variety of domains as well as comparative studies with other traditions and mythologies. Readers will undoubtedly find a wealth of
interesting and diverse contributions within this volume, making it an important and enriching addition to the field of Tolkien studies.

As previously noted, several essays in this collection focus on the film adaptations of J.R.R. Tolkien’s works by Peter Jackson, specifically The Lord of the Rings (2001–2003) and The Hobbit (2012–2014) trilogies. In their essays, Miguel Monteiro Marques, Ana Daniela Coelho, and Amaya Fernández Menicucci examine various elements of the films that extend beyond Tolkien’s original work. Monteiro Marques’s analysis of the posters that were used to promote Jackson’s The Lord of the Rings trilogy in the essay “I didn’t see the films, but I read the posters” adopts a narrative and conceptual approach, following the ideas of Kress and van Leeuwen’s Reading Images – The Grammar of Visual Design (2006). In turn, Coelho’s essay “I See Fire: Adapting The Hobbit beyond the Image” explores the significance of the song “I See Fire,” composed and performed by British singer Ed Sheeran for The Hobbit: The Desolation of Smaug soundtrack (2013), after providing an introduction to the importance of music in film adaptations. Lastly, Fernández Menicucci’s essay “Aren’t You Going to Search My Trousers?: Gender and the Representation of the Dwarves in Peter Jackson’s Adaptation of J.R.R. Tolkien’s The Hobbit” looks into the representation of gender and dwarves in Jackson’s adaptation of The Hobbit with particular attention to the character of Tauriel, who was not created by Tolkien. In contrast to the orthodox approaches often taken in the Tolkien scholarship focused mainly on his books, these essays offer perspectives that delve into the adaptation of Tolkien’s works into cinema. Since the title of the volume suggests a focus on the scrutiny of Tolkien’s written oeuvre, it seems appropriate to point out that the essays that explore film adaptations may not entirely reflect this purpose.

Despite its apparent similarity, Monica Sanz’s contribution, titled “Shadows of Middle-earth: Tolkien in Subculture, Counterculture, and Exploitation,” is not thematically related to the previous essays. Instead, Sanz is concerned with the influence of Tolkien’s own primary work on contemporary popular culture and offers a unique perspective on the impact of Tolkien’s creation on social trends beyond Peter Jackson’s films. Sanz’s essay explores the varied and often bizarre references to Tolkien found within underground cultures, including the hippie movement, graffiti art, pro-fascist groups, drag performances, and non-mainstream cinema. The compilation of these cultural phenomena provides a fascinating insight into the widespread influence of Tolkien’s work on diverse artistic and social expressions. Sanz also offers an insightful and nuanced examination of the various ways in which the process of adaptation and interpretation has given rise to a plethora of critical and creative responses, ultimately resulting in a multifaceted and dynamic field of inquiry that continues to shape the trajectory of Tolkien studies. It is noteworthy that this essay was nominated for the best article category in the annual Tolkien Society awards.

The rest of the essays in this anthology, in turn, center their focus upon the figure of Tolkien and the manifold influences that informed his work. To this end, in her essay “Facing Hope: The Lord of the Rings, Beowulf and the Anglo-Saxon Elegiac Tradition,” Angélica Varandas explores the intricate links between The Lord of the Rings and the heroic-elegiac poetry of Anglo-Saxon literature, particularly the epic poem Beowulf. Varandas deftly analyzes how the motif of the cycle of life and death, along with other hallmarks of Anglo-
Saxon culture, permeate Tolkien’s tales. However, she is careful to note that this does not reduce Tolkien’s work to an elegy as his vision transcends the fatalistic worldview of his Anglo-Saxon predecessors. Similarly, Hélio Pires’ essay “Asgard and Valinor: Worlds in Comparison” offers a comparative analysis of Tolkien’s legendarium and the Norse mythology of Asgard, as recorded in the Poetic Edda, and the prose works of Snorri Sturluson. Pires discusses how Tolkien drew on these sources to create his own mythology and how certain elements of Asgard recur in Tolkien’s depiction of Valinor, the realm of the Valar. As a comparative examination between Tolkien’s legendarium and other distinct literary and mythical contexts, Alejandro Martínez-Sobrino’s “Boromir: A Character Doomed to Die” establishes a connection with the previous essays, presenting an in-depth exploration of the factors that resulted in the tragic fate of Boromir, a prominent figure in The Lord of the Rings. Through a close reading of the text, Martínez-Sobrino argues that Boromir can be viewed as a tragic hero, driven to his downfall by his own flaws and the inexorable forces of fate. By tracing these intertextual connections, all three essays enhance our understanding of Tolkien’s creative process and the complex web of cultural influences that shaped his work.

The collection also includes two essays that focus on one of Tolkien’s fundamental concerns: the complex interplay between human beings and the natural world. Andoni Cossio, in “The Voice of Nature in Middle-earth through the Lens of Testimony,” examines the character of Treebeard in The Lord of the Rings, emphasizing his role as a witness to the story. Cossio analyses the theoretical background of testimony and links this to how Treebeard becomes involved in the narrative by leading the revolt of the Ents, who symbolize nature in Tolkien’s work. Treebeard is a being belonging to past times, but living in the present world (of the narrative), and he becomes a chronicler of the passage of time. Meanwhile, in “Nevertheless They Will Have Need of Wood: Aesthetic and Utilitarian Approaches to Trees in The Silmarillion and Unfinished Tales,” Martin Simonson, a Swedish scholar based in Spain, examines the concept of utilitarianism in Tolkien’s work. Analyzing how characters such as Aulë and Yavanna from Valinor and Aldarion and Erendis from Númenor seek to appropriate and dominate nature, specifically trees and forests, Simonson offers an insightful exploration of how trees are viewed in Tolkien’s work. Both essays share a common thread in their exploration of themes related to nature, which was one of Tolkien’s core preoccupations.

Overall, the collection covers a wide range of topics that approach various aspects of J.R.R. Tolkien’s work. While the thematic diversity of the essays provides a multifaceted view of Tolkien scholarship, it also results in an unbalanced work with some texts standing out more than others, such as the essays by Sanz or Simonson. In addition, there are noticeable areas that would have benefited from improvement, such as the uneven levels of English proficiency across the essays and some minor layout issues. As for the target audience, this anthology seems to be aimed at those interested in all phenomena related to J.R.R. Tolkien in all of their nuanced complexity, particularly those seeking fresh perspectives on the author’s oeuvre. It is suitable for both scholars and general readers interested in Tolkien studies. Furthermore, the fact that these essays come from southern Europe adds a unique cultural and geographical perspective to the collection, perhaps not in the discovery of unknown connections, but certainly in the demonstration that
talent is not limited by borders or cultural traditions. This makes it particularly appealing to those interested in exploring diverse academic contributions in the field. On the whole, it represents an important stepping stone towards greater recognition of academic contributions in Tolkien scholarship from this underrepresented region.

Biography: José Manuel Ferrández Bru has spent the past thirty years researching the life and work of J.R.R. Tolkien. He founded and served as the first chairman of the Tolkien Society of Spain and has since published numerous articles and essays on the subject. His book, El Tío Curro. La Conexión Española de J.R.R. Tolkien, was originally published by Editorial Csed and has been reissued in both Spanish and English by Luna Press Publishing as Uncle Curro. J.R.R. Tolkien's Spanish Connection, as well as in Italian by Terra Santa Edizioni. Recently, he also published the book Las Vacaciones de un Hobbit with Legendaria Ediciones. Ferrández Bru’s essays have appeared in publications such as Estel magazine (Tolkien Society of Spain), Mallorn (Tolkien Society), and Tolkien Studies (West Virginia University Press). Notably, he curated “La Fortaleza del Anillo” (Alicante 2015-2016), the largest exhibition focused on Tolkien ever organized in Spain and has presented his work at various conferences on Tolkien in Spain and abroad.

Works Cited

BOOK REVIEW:

The Rise and Fall of American Science Fiction, from the 1920s to the 1960s

B. L. King


Gary Westfahl, one of SF’s best scholars, asserts a wide array of evaluations on SF’s most beloved and prolific historical time periods through his book, The Rise and Fall of American Science Fiction, from the 1920s to the 1960s. Westfahl engages with many aspects of Golden Age science fiction, including its authors, well-known texts, subgenres, art, trends, and most notably its success and decline. Through a series of article-like chapters, Westfahl covers a lot of ground. He acknowledges that Hugo Gernsback cultivated and established modern science fiction, but eventually circles back to his main argument: it was Robert A. Heinlein who shaped the course of the genre.

To inform this argument, Westfahl posits that in order to understand the full extent of American SF history, it must be taken into account that the SF community has been divided into two groups: the visible fandom that attends conventions, builds networks, and reviews SF, and the silent fandom, which is composed of readers that passively and individually indulge in SF as observers and consumers. Even as Westfahl argues that the rise of paperback SF novels and the splitting of the SF community resulted in the death of SF magazines, he conditions this position by pointing out that he will only be focusing on American SF, which he considers to have been the most influential and important. While this could be taken as slightly ethnocentric, the entire world history of SF could not be adequately commented in just 250 pages.

Leading into the first chapter, Westfahl details the success of SF and its metamorphosis from an obscure genre to a pop-culture fixture. As science
improved the lives of 20th-century Americans through various inventions, it was embraced and valued more as part of our culture, and it is this acceptance that opened the door for SF’s literary success. Westfahl argues that as the genre introduced ideas and inventions that became reality, SF grew through Gernsback’s push for scientifically accurate stories. Within this development, Westfahl credits Gernsback with the cultivation of educational value in SF and relies heavily on his opinion that Hugo Gernsback is the sole founder of SF (38). He also points out that Gernsback facilitated the emergence of SF fandom, relating back to his argument of the two sides of fandom. While Westfahl claims that “Most discussions of science fiction before Gernsback had been imperfect, hesitant, even flippant” (9), he does acknowledge John W. Campbell Jr.’s subsequent role in shaping early SF, as well as the impact of space opera, which he elaborates on in later chapters.

In the second chapter, Westfahl contends that while the launch of *Amazing Stories* in 1926 represents SF’s first birthday, the August 1928 issue of *Amazing Stories* marks the “Second Birthday of SF” because of its tremendous impact on the rest of the genre’s history. This proves to be the case as this issue of *Amazing Stories* is a coveted prize possession of pulp and SF magazine collectors alike. As further support of his argument on the origins of the genre, Westfahl outlines the importance of Edward E. “Doc” Smith’s *The Skylark of Space* (1926) and Philip Francis Nowlan’s *Armageddon 2419 A.D.* (1928). These two stories represent the birth of the space opera, one of SF’s most successful subgenres. However, although Westfahl acknowledges space opera’s impact, he claims that it lacks literary and scientific value because its quality of writing was influenced by half-a-cent-a-word pay rates and its “super science” inventions and novums.

Following this discussion on points of origin, in chapter three Westfahl shifts his consideration to SF art by suggesting that the value of the content inside the books and magazines was reflected by the literally out-of-this-world cover art. He argues that instead of approaching the visual SF arts through art history, in the case of SF, artwork can be best understood by examining it in tandem with SF literature. In doing so, he places the birth of SF art around the same time that “Hugo Gernsback gave birth to the idea of science fiction,” (78) in 1926 with the launch of *Amazing Stories*. Westfahl argues that when John Campbell takes over *Astounding Stories* around 1938, Howard Browne starts making art that changes the perspective of SF from emphasis on a human accomplishment to our frailty and insignificance in the context of the universe. In this development, Westfahl sees SF art as heavily intertwined with realism and linked to how Edmund Emshwiller from the early 1950s onwards became the jack of all trades in terms of SF art. “Emsh,” as he is often named in the fandom, made complex art by playing on previous archetypes of the genre. He turned away from the flat, dark portraits of planets and their heroes by accentuating their bold colors and other-worldliness, often creating unexpectedly hyper-realistic cosmic scenes. Westfahl closes this discussion by arguing that the cover art of texts correlates to their genre identity, providing an insightful and useful observation for scholars to further research.

In chapters four and six, Westfahl argues that pulp magazine SF has literary value that cannot be ignored. At the same time, however, he excludes space opera from this consideration and notes that it needs to be academically investigated further because its works have not been included in science fiction
college curriculums, even though they are similar in literary quality to the classics that are being taught. Still, as he frequently does throughout the chapters, he also leaves this conversation mostly open ended for future researchers and students to consider. In a similar vein, Westfahl then discusses young SF readers’ relationship to SF pulps, including his own experience, which is a delightful, personal touch. At the same time, he points out other useful avenues of scholarly exploration, for example, suggesting that young scholars may compare Asimov’s *I, Robot* to its antithetical 2004 film adaptation to answer the question: Why, if SF has matured, has it become less attractive in our technologically advanced Hollywood?

Disrupting his pattern of suggestions and questions, in chapter five Westfahl disputes Patricia Monk’s article “Not Just ‘Cosmic Skullduggery’: A Partial Reconsideration of Space Opera,” in which she surveys the popularity and survival of space opera in the current SF literary environment and argues that an attitude of bias has persisted within the literary field. Westfahl agrees with Monk’s approach, but not her conclusion, and claims she lacks “an overarching knowledge of the general critical heritage of modern science fiction” (77). As a response to Monk, Westfahl argues that although space opera is a subgenre of SF, its qualities do not make it highbrow; however, he admits that space opera’s success stems from its abundance of exhilaration. He further investigates the historic disapproval of space opera while acknowledging it has since evolved to include more scientific attributes. This leads him to the complex and nuanced conclusion that while space opera was and is seen as juvenile, the escapism it offers is often considered the element by which the subgenre earns its inclusion in SF literature.

Furthering Westfahl’s studies of space opera, chapter seven points out a fork in the road of SF history, that stems from two of SF’s greatest space opera writers. Westfahl suggests that SF could have gone in two different directions: The Heinlein path or the A. E. van Vogt path. Westfahl uses the two authors to represent different early styles of SF and space opera. Overall, it seems that Westfahl has a tendency to interpret SF as a series of binary relationships. In this particular dichotomy, the Heinlein path of SF writing emphasizes hard science and its social impacts, while the Van Vogt way emphasizes thrilling, fast-paced stories of aliens and destruction. In Westfahl’s view, SF from the 1920s through the 1960s adhered more to Heinlein’s style, and this is something that he also presents as superior to what he considers the pulp action variety.

In chapter eight, Westfahl expands upon his definition of space opera by locating its origin in the 1940s and examining specimens and characteristics of the subgenre. Upon further dissection, he theorizes that there are three types of SF: the pulp classics that shaped the genre, the space opera, and lastly, the conspiracy theorist SF regarding ancient aliens and UFOs. As a sub-argument, he uniquely argues that since conspiracies cannot be proven as real, but are still “scientific,” they must be regarded as science fiction, another interesting avenue, he proclaims, for further research. This chapter, however, perhaps could have been placed earlier in the book since it clarifies the qualities he uses to argue against Monk.

After the back and forth regarding space opera, one of the most useful examinations of the history of SF lies in chapter nine. Westfahl discusses in great detail the shortcomings and successes of SF anthologies along with their
different methodologies and contents, and in so doing, he presents a quintessential historical research opportunity for future scholars and anthologists. In Westfahl’s view, anthologies went out of fashion because they lacked consistency of character and world-building. While one could dispute his claim, considering that anthologies such as the successful line of *The Year’s Best Science Fiction* volumes and *The Wesleyan Anthology of Science Fiction* are doing quite well, his research on anthologies will be of great academic use.

In the later chapters, Westfahl explores the maturing and expansion of SF into new mediums like comics, films, and television while the staple authors like Isaac Asimov expanded into other literary genres. Westfahl briefly mentions the impact of SF on cartoons and the DC comics; however, he spends the majority of the chapter recounting the multiple tales of the *Superman* comics and their impact on the genre. For Westfahl, the editor Mort Weisenger had the greatest influence on Superman, and in his view, the impact of comic books on the greater genre of SF has been underrated, a point many would agree with. He also briefly mentions the impact of SF art on vinyl record covers and the emergence of SF merchandise as a type of three-dimensional SF, which is a much-needed analysis that could very well deserve its own field of research. Westfahl also briefly mentions the role of *Rod Sterling’s The Twilight Zone* on SF television, but unfortunately does not dig deeper into this topic. For the majority of the chapter, Westfahl brings comics into the discourse mostly to provide avenues for other scholars to continue his examination through other impactful comic book characters, although the move is also a much-needed extension of his argument.

Westfahl concludes his overall argument by discussing SF’s fragmentation between novels, paperbacks, comic books, video games, TV series, and movies. Making this more specific, Westfahl documents the roles of individual authors in the decline of the SF magazine, noting how some sought to distance themselves from the magazines and others could not afford to continue. Westfahl also suggests that as New Wave SF did not situate itself within SF magazines, this furthered the decline. While the idea of the publishing industry forcing the SF magazines into scarcity is not a new theory, Westfahl’s discussion of the fragmentation of SF into TV, video games, and so on does present potential for a more complete understanding as to why the classic SF literature of the 1920s to 1960s came to an end.

The biggest strength of Westfahl’s book is the degree to which it presents new opportunities and questions for younger scholars to explore. As such, Westfahl’s questions and presentation of these new directions helps to further develop scholarship, and he does strongly encourage scholars to persist in these inquiries through his suggestions and advice. However, one of the hinges of Westfahl’s argument is that Hugo Gernsback is the sole founder of SF (38). This claim is problematic since it negates the work of figures like Jules Verne, Johannes Kepler, Mary Shelly, Edgar Allan Poe, and others. He also dismisses SF art made before Gernsback’s time, such as the various paintings of constellations and planets, and even cave drawings that have been considered as early SF art by some scholars. What is more, the organization and tone of the text makes it seem that the book serves as a collection of Westfahl’s opinions and views on certain aspects of SF instead of a recounted history. Because of these reasons, I would not consider this one of Westfahl’s best works, which is not especially heavy criticism since he has
authored many quintessential pieces and contributed to the SF field in irreplaceable ways. At the same time, in his usual character, he does conduct and present many aspects of research that prior scholarship has not accomplished and makes this book an efficient supplemental text to scholarship of SF history.

Overall, *The Rise and Fall of American Science Fiction, from the 1920s to the 1960s* holds up Westfahl’s intentions to provide an overview and supplementary material to the history of SF. Within his discussion, Westfahl points to important conversations regarding SF’s history, and although this does not represent his best work, Westfahl quite impressively engages with all of the most prolific topics within SF scholarship that one could hope to investigate in 250 pages.

*Biography:* Bryce King graduated in 2022 with her English MA from Florida Atlantic University with a concentration in SF and Fantasy. Her master’s thesis is an ecocritical look at *The Witcher* series, and she is a proud working member of Heartwood Books and Art, an antiquarian and rare book seller. Bryce has presented at the ICFA, PCA, and SFRA conferences amongst others between the years of 2021 and 2023. She has also proudly published three book reviews and one research journal article.
BOOK REVIEW:

Sideways in Time: Critical Essays on Alternate History Fiction

Soni Wadhwa


Alternate history is a relatively understudied subgenre within speculative fiction as it tends to be subsumed by broader themes of time travel. Additionally, it is often dismissed by historians and scholars of historical fiction as rather far-fetched and by scholars of science fiction as mainstream historical fiction. However, given its ubiquity in television, cinema, and literature, alternative history deserves to be seen as a distinct subgenre with a distinct literary history. To this end, in Sideways in Time: Critical Essays on Alternate History Fiction, Glyn Morgan and C. Palmer-Patel identify the contours of alternate history as a subject deserving of critical inquiry and contextualize its critical discussion, history (literary as well as literary critical), and defining features. The individual chapters engage in critical readings of one or more texts of alternate history. The editors’ introduction works as a good resource for those interested in the subject, while the chapters represent diverse entry points into texts with macro and the micro levels of historical change.

In their introduction to the volume, the editors attempt a coherent narrative of the knowledge around alternative history as a genre – which works very well for those new to the way this domain has been studied so far. Also known as allohistory, parahistory, uchronia, or secret history, alternate history is discussed by the editors as a form of (history) writing that goes back to Livy’s ninth book of Ab Urbe Condita, written around 35-25 BCE, in which Alexander is portrayed as expanding his empire to include the West. However, they also see Geoffroy-Château’s Histoire de la Monarchie universelle : Napoléon et la
conquête du monde (1812–1832), translated as History of the Universal Monarchy: Napoleon and the Conquest of the World, as the first work of alternate history fiction and consider Murray Leinster’s short story “Sidewise in Time” (1934) a central classic of the genre. Indeed, the prestigious award in the genre is called “Sidewise Award for Alternate History.” While these details may sound like commonplace historical points on alternate history, they help clarify the first principles behind the study of the subgenre as a whole and also frame the individual chapters in the volume as exercises in close readings of the texts chosen for the study.

In addition to providing the abovementioned overview, the editors point out that there have not been many investigations into formal aspects of the subgenre or into how it interacts with larger questions of literature and popular culture. The editors also note the sparse but theoretically significant body of scholarly work undertaken prior to this volume. This includes book-length studies by Karen Hellekson, Kathleen Singles, Derek J. Thiess, and Catherine Gallagher, who have contributed to the theorization of the field by identifying subgenres within alternate history, raising questions of free will, interrogating the relationship between truth and history, and distinguishing between nonfiction and fiction. While the studies cited and discussed by the editors seem to contradict their argument that the subgenre remains understudied, they also point towards the various questions that still need to be explored, especially as the subgenre has gained new popularity and the concepts of alternative history can be used to examine all kinds of cultural texts. Through the introduction, Morgan and Palmer-Patel further seek to stimulate debates and discussions in the subject, an intention visible in the chapters they include in the volume.

The chapters dealing with macro views of history present an anti-white and anti-patriarchal stance to mainstream history as reflected in the works of alternate history chosen for study. Some of these chapters unpack non-Western views (albeit not necessarily written by non-Westerners), such as Jonathan Rayner’s chapter on Japanese film and anime dealing with alternate Pacific War histories, in order to critique Western hegemony over history. Others look at specific events, such as the era of space exploration or the 9/11 attacks, to examine gender or emotions as areas impacted by historicizing. Anna McFarlane’s chapter on Lavie Tidhar’s 2011 Osama: A Novel is an engaging example of the latter. As the editors put it, these chapters “redistribute spheres of narratological power (from west to east, from male to female) by literally rewriting the historical narrative” (24). The concerns of these readings are informed by large-scale events, and thus the treatments of these themes are informed by what is referred to as the “great men” notion of history. MacFarlane, for instance, proposes a way of reading the text through the invocation of affect. She notes that the novel’s focus on fantasy and pulp fiction evoke affect in ways that “a jaded realism” cannot achieve. Citing the work of Lauren Berlant, Brian Massumi, and Sara Ahmed on emotion, she locates the discussion of the form of an alternate history text in the contemporary political dilemmas around post-truth.

However, the volume also addresses the somewhat opposing conception of history that looks at past events not in terms of great personalities, but in terms of socio-cultural forces. Several contributors to the volume discuss a variety of works through the lens of the ordinary, or the individual, to tease out how this conception of history lends itself to fictionalizing. Some readings
explore the relationship between the historical and the apocryphal, a formal innovation of weird fiction that uses secret history as a literary technique. Similarly, other chapters demonstrate how the location of intimate relationships (as opposed to larger political events) can be examined as moments worth dwelling on in fiction. These chapters present “a metatextual leap and challenge the conventions of alternate history whilst continuing to problematize historical narratology” (25). The editors group the first set of chapters, part one of the book, as ideas that challenge historical narratives while the second set, in part two, challenge the conventions of alternate history as a genre.

In the first part of the volume, Adam Roberts’s “Napoleon as Dynamite: Geoffroy’s Napoleon Apocryphe and Science Fiction as Alternate History” begins with the observation that Geoffroy’s 1836 novel *Napoleon et la conquete du monde (1812-1832)* might be the first alternate history novel that sought to re-imagine the French Revolution. Roberts goes on to contrast Geoffroy’s work with Tolstoy’s *War and Peace* to note that history, as Tolstoy saw it, cannot be re-imagined: it is simply too huge a task for an individual. Chris Pak discusses Kim Stanley Robinson’s 2002 novel *The Years of Rice and Salt*, an alternate history that spans from the aftermath of the Black Death plague in the 14th century to today, suggesting that the future is shaped and structured by individuals and societies alike. Jonathan Rayner’s chapter on the Japanese battleship Yamato that was sunk by American bombers at Okinawa in 1945, on the other hand, looks at multiple texts (Japanese as well as American) that reimagine the event. The different treatments of the history of the ship, Rayner argues, contest the idea of past as a fixed entity. After this, Brian Baker’s reading of Ian Sales’s series *Apollo Quarter* (2012-2016) revisits the time of NASA’s inception. In his analysis, Baker examines the deeply male-centric history and discourse of space exploration. Finally, Anne Macfarlane’s chapter on *Osama: A Novel* (2011) highlights the use of the register of “emotional historiography” by its author Lavie Tidhar. This kind of historiography is rich for its genre-bending style, in that it intertwines alternate history with detective fiction, humor, and steampunk to convey the trauma unleashed by 9/11.

While these chapters from part one explore how the texts chosen for study challenge the idea of mainstream history through eastern or female perspectives, the second part of the volume takes a formalist view in examinations of how selected texts manipulate the genre of alternate history. Reflecting on Alfred Bester’s oeuvre, Molly Cobb argues that his work needs to be seen in terms of “anti-alternate histories” because they convey that history cannot be altered. In a way, they speak about the ridiculousness of the project of reimagining or rewriting history. Similarly, thinking about the ontology of the genre of alternate history, Derek Thiess argues that it needs to be seen in the light of secret history or the apocryphal. Paying attention to Juan Miguel Aguilera’s Spanish work *La locura de Dios* [“The Madness of God”] (1998), he makes a case for looking at history as storytelling to explain how events that do not fit such narrative needs get left out and acquire the status of the apocryphal. This connection of the genre of alternate history with the apocryphal is further explored by Chloe Germaine Buckley, who looks at the anthology *Shadows Over Baker Street*, which is a collection of stories featuring an alternate Sherlock Holmes who deals with cases that are a blend of H. P. Lovecraft’s cosmic-horror mythology and rational detection fiction. Andrew M. Butler’s
discussion, on the other hand, locates the genre of alternate history in the personal space; that is, history is not seen as something to do with politics but with interpersonal relationships. His focus is on John Wyndham’s short story “Random Quest” (1962) and its adaptation Quest for Love (1962). The final chapter by Karen Hellekson examines how the genre of alternate history has expanded from print towards the mushrooming of televisual texts. Thus, Hellekson explores the way alternate history has found a far wider audience in its televisual than its literary form.

Molly Cobb’s chapter on Alfred Bester’s stories, especially “The Men Who Murdered Mohammed,” is part of this microhistorically oriented section of the book, and it is the strongest one in the volume. However, unlike the other chapters that are dedicated to identifying the ways in which the individual and the historical intersect, Cobb suggests that alternate history is too complex to fit within the micro/macro binary. Bester’s story is about a scientist who wants to kill his wife when he discovers her extramarital affair. However, he is unable to wipe out her existence in spite of killing her grandmother and going even farther back in time to kill several real historical persons. At the end, the scientist learns that he has not been able to murder anyone because one can only travel back into one’s own timeline and killing anyone in it does not have consequences on the universal past. In her discussion of the story, Cobb points out that Bester uses the individual to suggest that alternate history is a project impossible to attain. Examining the text in the context of alternate history, she finds it “a failed alternate history” (122), an idea that runs contrary to the approaches taken by Bester’s contemporaries, who were quite excited by the possibilities of alternate history.

Thus, given the diversity of themes and texts in the volume, Sideways in Time maps the area of alternate history for further critical reflection with questions pertaining to tensions among past, present, and future. For instance, instead of seeing alternate history only as a niche, one might feel further empowered to ask larger questions of the grand narratives of time and history themselves. In this way, the subgenre could actually activate mainstream political questions asked of history. For instance, in South Asia, the Islamic past is viewed as that of intruders and invaders who desecrated temples. The minority communities in India continue to bear the brunt of accusations and hatred aimed at Muslim dynasties. It is in such issues that the questions of human agency vis-à-vis history, as raised by the editors of the volume, make sense. For instance, can one intervene in the timeline as we largely know it today? Would that intervention translate into a parallel world? And more importantly, will such texts questioning mainstream narratives of history change anything about the prejudice against any communities?

These are important questions raised by the editors in their afterword to the volume. Together, they present further possibilities of inquiry for scholars to interrogate when conducting further, newer, and more context-specific investigations not covered in the volume (such as postcolonial contexts and writers). For instance, though there is a discussion of eastern texts (such as the Japanese anime) in the book, there is hardly any focus on South Asian writers talking about time and history. There are no takeaways from the perspective of Afrofuturism, either. Given that history itself is such a contested domain where narratives about truth and power are constantly challenged, the task of writing alternate histories and engaging with them may seem daunting. In presenting
these questions, however, the editors point towards the moral and intellectual compass to which researchers need to hold themselves accountable. The central takeaway from the book is that alternate history is a vibrant niche that intersects with history, science, and literature in interesting ways. At the same time, the mostly Western focus of this volume makes it clear that it needs to be supplemented with more in-depth studies from the non-Western world. The audience the editors have in mind for the volume – researchers as well as students who are interested in exploring the genre – are likely to welcome this setting of new discussions in motion. Because the range of texts represented in the collection is diverse, one is very likely to find critical commentary on a text one has read while also being stimulated to explore something previously unread. Further, considering that there have hardly been any book-length studies on alternate history since the publication of *Sidewise in Time* in 2019, readers may appreciate the challenges involved in organizing a detailed study of this subgenre that is characterized by strong ties to politics, history, and science fiction. Especially ties that vary in nature and intensity from one region to another may prove fruitful avenues for future research.

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BOOK REVIEW:

*The Norse Myths That Shape the Way We Think*

Daniel A. Rabuzzi


Carolyne Larrington, Professor of Medieval European Literature at the University of Oxford, demonstrates persuasively in *The Norse Myths That Shape the Way We Think* that “the Norse gods and heroes ... are certainly having a moment, but it is a moment that has lasted a good 300 years” (287). In doing so, Larrington puts current literary, ludic, and cinematic adaptations of Norse mythology into a nuanced historical framework. Well organized and clearly written with many illustrations, a pronunciation guide, a useful index, and an annotated list of further reading in lieu of footnotes, *The Norse Myths That Shape the Way We Think* models how an academic can engage a broader public. Larrington wears her vast erudition lightly, ranges widely, and shares her excitement about the novels, games, and movies she discusses. Larrington expands here the scope of inquiry she began with *Winter is Coming: The Medieval World of “Game of Thrones”* (2015) and *All Men Must Die: Power and Passion in Game of Thrones* (2021), adding her thoughts to those proposed by other scholars of Norse myth adaptation, such as Neil Price, Heather O'Donoghue, Jón Karl Helgason, Tom Shippey, Tom Birckett, and Roderick Dale (all referenced by Larrington). While I will discuss the book’s relevance for scholars of fantasy literature and films, I note that *The Norse Myths That Shape the Way We Think* will also interest mythographers, and folklorists more generally; historians of ideas (especially those analyzing “medievalism,” “a usable past,” and “fakelore” / “folkloresque”); and researchers within media studies, genre and translation studies, and literary reception theory.
The book’s ten chapters each focus on one theme from Norse mythology and/or actual Viking history, presenting the original tales and histories and then analyzing their modern reception and interpretations. Larrington deploys the concept of myth both as a historical belief-system and as modern understandings based on spurious premises or misguided readings. As a result, the chapters focus on Yggdrasil (“A Green Myth”), Valhalla (“The Myth of Undying Fame”), Odin (“The Wanderer in Search of Wisdom”), Thor (“The Myth of the Superhero”), Loki (“The Monstrous Brood”), Vikings and Berserkers (“Myths of Masculinity”), Sigurd (“The Myth of the Monster-Killer”), Ragnarr Shaggy-Breeches (“The Myth of Viking Conquest”), Vinland (“The Myth of American Colonization”), and Ragnarök (“The Myth of the End”).

Larrington has a gift for condensing complex material without sacrificing necessary detail and documentation. She deftly describes how the Norse myths and legends were transmitted to the present-day, beginning with Adam of Bremen, Saxo Grammaticus, and Snorri Sturluson. She is especially insightful describing the European 18th century’s interest in “the Gothic” (e.g., Paul-Henri Mallet’s two works in French on Danish history and Scandinavian myth, Thomas Percy’s translation of these into English, and Anna Seward’s paraphrase of Hervör’s Saga) and the 19th century’s European and American attempts to restore an imagined, pre-industrial past (prominent among many others Larrington discusses Esaias Tegnér, George Webbe Dasent, Henry Wadsworth Longfellow, Richard Wagner, H. Rider Haggard, and William Morris). Larrington makes similarly salient points in her overview of how the Nazis misappropriated Norse mythology and in her suggestions on how best to contest its current misinterpretation and misuse. In each chapter, Larrington delves into several fantasy and/or historical novels, games, and films, analyzing how their authors reimagine Norse myths and how the myths play with or against modern sensibilities. She focuses on work by George R. R. Martin, Neil Gaiman, Joanne Harris, Melvin Burgess, A. S. Byatt, Diana Wynne Jones, Genevieve Gornichec, Francesca Simon, Amanda Knox, J.R.R. Tolkien, C.S. Lewis, and Douglas Adams, as well as Marvel comics and the Marvel Cinematic Universe (MCU). In addition to these, she refers also to authors such as Ursula K. Le Guin, Kevin Crossley-Holland, Alan Garner, K. L. Armstrong and M. A. Marr, Rick Riordan, and H. P. Lovecraft – and even brings in Assassin’s Creed: Valhalla and music by Sigur Rós, Led Zeppelin, and Wardruna.

Students of the fantastic will value Larrington’s many critical insights, especially those that highlight the meta-historical and the formation of identity. For instance, Byatt’s Ragnarok: The End of the World (2011) is “a complex meditation on memory, the natural world and environmental collapse, communicated through her adult revisiting of the book that awakened and shaped ...a strongly northern identity” (47). In another chapter, Larrington devotes 12 pages to Valkyries and shield maidens, cautioning against rash interpretations based on suggestive but still inconclusive archaeological evidence of women as warriors: “we now understand enough about the complicated social roles operational in Viking Age society to realize that social identities were not necessarily stable and fixed throughout a lifetime” (77). “For Gaiman and for the Marvel writers,” asserts Larrington, “Óðinn lingers as a relic from a time before men turned irrevocably to new gods...Óðinn speaks now to a patriarchal order that is played out, to a model of heroic masculinity...that no longer convinces” (103). As another example of this, she points out that “as a
director of Maori heritage, [Taika] Waititi was acutely aware of the symbolism of the hammer in contemporary ‘cosmic right’ circles and thus removed it from Thor’s arsenal” (120). Larrington supports her thesis that Loki “has become [i.e., in the past 40 years] a figure of sympathetic interest, capable of being imagined with an unusual suppleness” (127), with astute analyses of the MCU and of novels by Simon, Harris, Jones, and Gornichec, concluding that “Loki’s antihero status [and gender-fluidity], particularly as characterized against Thor’s brand of traditional masculinity, has generated an enthusiastic fandom that is deeply interested in gender identity and sexual difference” (146).

Most importantly, Larrington foregrounds how and why the claims upon Norse mythology made by racists and authoritarians are false. Throughout the book, she deconstructs the twisting of the myths to illiberal and misbegotten ends – and spotlights recent political misuse with a particularly effective section on the “Q Anon Shaman,” who was foremost among the January 6th, 2021, insurrectionists in Washington DC. She emphasizes that the “historically specific nature of various schools of thought about the corpus of Old Norse myths and legends” (26) reveals much more about present-day concerns and prejudices than about whatever the original mythmakers intended. As part of awareness for these instances of misuse, Larrington exhorts modern readers to avoid anachronism and ideological purpose:

The Norse myths have been used in both past and present to lend support to ideologies of racism, toxic masculinity and white entitlement. Those of us who love and study the myths must counter this by reminding those coming to them afresh that the myths are historically contingent .... They are supple, strange, radically different, and yet they engage ... with far larger questions than the limited and self-serving obsessions of far-right politics, nationalism and the ravings of conspiracy theorists. (287–288)

Larrington’s analysis would carry even more weight had she engaged with the work of more fantasy authors and with the robust body of scholarship on the fantastical. To be clear: she does not intend her work to be encyclopedic, and, as a scholar addressing modern fantasy from a medievalist’s perspective, she can hardly be expected to be fully conversant with fantasy research. Nevertheless, her history of the way myths have been transmitted to contemporary times lacks some of the most important English-language fantasy writers and texts that draw explicitly on the Norse legendarium, including E. R. Eddison, L. Sprague de Camp and Fletcher Pratt, Poul Anderson, Fritz Leiber, Jo Walton with Ada Palmer, Gene Wolfe, Guy Gavriel Kay, and Michael Moorcock (who makes a cameo appearance, but as a musician with his Hawkwind colleagues). For the same reason, her discussion of Burgess’ Volsunga Saga books would have benefited from comparison with similar ventures by Michael Swanwick and by China Miéville. Perhaps most surprising is the omission of Robert E. Howard, whose enormously influential Conan and Kull are thinly veiled Vikings, and who advocated fiercely for the Norse myths as possibly the most vital source materials for fantasy writing. Indeed, we have good reason to believe he read the sagas as translated by Dasent and by George Ainslie Hight since he refers in letters to Njals Saga, Grettir’s Saga, and Heimskringla. Along similar lines, in explaining the boom in Norse myth over the past several decades, Larrington understates the key role that new retellings
for children played, particularly those by Roger Lancelyn Green (1960) and by Norwegian Ingri d'Aulaire with her husband Edgar (1967; reissued in 2005 with an enthusiastic foreword by Michael Chabon). More generally, Larrington's reception history would have been bolstered by reference to similar histories laid out by scholars of fantasy genres such as Moorcock, Marina Warner, John Clute and John Grant, Terri Windling, Farah Mendlesohn and Edward James, and Brian Attebery.

Similarly, Larrington would have made The Norse Myths That Shape the Way We Think even stronger by connecting its important arguments against racist and authoritarian appropriation of Norse myths to the sophisticated and powerful critiques of said appropriation by fantasy writers and scholars. Over the past two decades, leading fantasy authors, such as N.K. Jemisin, P. Djèlí Clark, Sofia Samatar, and Nnedi Okorafor, have made essentially the same points as have scholars such as Dimitra Fimi (in Tolkien, Race and Cultural History, 2008), Helen Young (in Race and Popular Fantasy Literature, 2016), Paul B. Sturtevant (in “Race: The Original Sin of the Fantasy Genre,” 2017), and Ebony Elizabeth Thomas (in The Dark Fantastic, 2019).

Observing that Larrington would benefit by further immersion in fantasy literature and criticism is a hope that she will do so, given her formidable expertise and ability to translate between the academic and the vernacular. Equally, fantasy genres will be the richer for Larrington’s continued involvement. Fantasy authors, critics, and general readers should welcome The Norse Myths That Shape the Way We Think as an expert guide to both the myths and especially to the contingent ways in which the myths have been interpreted.

**Biography:** Daniel A. Rabuzzi (he / his) earned his BA in Scandinavian folklore at Harvard, was a post-graduate research fellow at the Institute for Folklore Studies at the University of Oslo, and earned his PhD in European history at Johns Hopkins. He has had two novels, five short stories, 30 poems, and nearly 50 essays / articles published ([www.danielarabuzzi.com](http://www.danielarabuzzi.com)). He lives in New York City with his artistic partner & spouse, the woodcarver Deborah A. Mills ([www.deborahmillswoodcarving.com](http://www.deborahmillswoodcarving.com)).

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BOOK REVIEW:

Steel as the Answer? Viking Bodies, Power, and Masculinity in Anglophone Fantasy Literature 2006–2016

Elise Kraatila


Anna Bark Persson’s doctoral dissertation in the field of gender studies explores the popular Viking motif as it appears in contemporary fantasy fiction and the various ideas of masculinity that this motif embodies. Vikings and Northmen abound in 21st-century anglophone fantasy storytelling as the dissertation’s wide array of source material – 18 fantasy novels across five series by five authors – readily demonstrates. This invasion of spectacularly muscular, hypermasculine berserker warriors is by no means a new development in the genre. However, as Persson notes, usage of the Viking motif is implicated in various heated debates about the state of men and masculinity in today’s allegedly “postfeminist” society as well as in outright racist and white supremacist discourses. In the current media-cultural climate, where the popular image of the imposing, blonde Viking is commonly appropriated to glorify a violent, male-dominated and supposedly white European past, Persson’s nuanced take on the various meanings of the Viking in contemporary fantasy constitutes a welcome intervention.

While the Viking motif has received some prior scholarly attention, Persson argues that “previous research has focused on these images as aimed at and relating foremost to men” and “has not sufficiently taken these narratives or images into account as a wider commentary on power and embodiment – nor understood them as also possibly relevant to something beyond men” (40). To remedy this narrow focus, the dissertation presents queer-theoretical

In her comparative analyses, Persson points out various significances of the Viking motif beyond male power fantasy. These include ideas of the North and Northerners as a contrast to ostensibly more “civilized” pseudo-medieval fantasy lands, and the bodily and moral self-sufficiency of the Viking as a “fantasy of sovereignty” against the web of insidious, invisible power structures that characterize the modern, capitalist world order. Persson also explores the potential of the Viking body as an erotic object for both the straight and queer gaze, a subject of gendered and sexual violence, and as a site “to safely play out” feminist anxieties regarding bodily vulnerabilities and sexual autonomy. The “extreme masculinity of the Viking body,” she concludes, enables “these discussions of gendered power and powerlessness because it is constructed as not ‘weighed down’ by gendered, sexualized, or racialized discourses of constraint, bodily vulnerability, subjection, and dependence” (110).

As the choice of wording demonstrates here, Persson approaches the popular-cultural Viking motif as a constructed thing – a literary device rather than a (however unrealistic) representation of historical North European peoples. She rightly acknowledges that this “(post)modern” character archetype has been constituted and influenced just as much, or even more, by fantasy literature than by any actual historical knowledge. This framing of the Viking as a device allows for a fine-grained analysis of not only what the motif represents or signifies, but also – and more interestingly – to which uses it is put in contemporary fantasy literature. What I find particularly appealing in Persson’s exploration of the device is the way she intertwines her analysis of the Viking in fantasy with several approaches to the Viking as a fantasy. Whether the “hardbody masculinity” of the Viking comes across as a fantasy of simpler, precapitalist times (and, by implication, a world beyond capitalism), of bodily and moral autonomy, of sexual desire, or something else entirely, the thesis demonstrates the potential of this surprisingly versatile literary device to serve as a means for various forms of individual, social, and political dreaming.

Biography: Elise Kraatila, PhD, is a Postdoctoral Research Fellow at Tampere Institute for Advanced Study, Tampere University, currently working on a project titled “Age of Uncertainty: Speculative Narratives in 21st-century Fiction and Nonfiction” (2023–2025). Her present research interests include the roles speculative fiction has to play in contemporary society, storytelling as a heuristic practice, and future speculations in narrative nonfiction. She will start as an editor-in-chief for Fafnir in 2024.
BOOK REVIEW:

The Crisis of Representation and Speculative Mimesis: Rethinking Relations Between Fiction and Reality in 21st-century Fantasy Storytelling

Anna Bark Persson


What is the speculative use of fantasy – and why is fantasy growing in popularity at the very same moment as ‘the real world’ is understood to be increasingly ungraspable? Those are the major questions underpinning Elise Kraatila’s dissertation on contemporary fantasy storytelling in the ‘post-truth’ age. The dissertation, making contributions to the field of narratology and fantasy studies, asks what the current fantasy boom indicates in Western culture, if and how the speculative mode of fantasy tackles the ongoing crisis of representation, and how the concept of literary mimesis may be reconsidered in relation to fantasy storytelling.

The dissertation consists of two main parts, with the first serving to recontextualize the history of fantasy as a popular sibling genre to postmodernism, of sorts. Kraatila lays out a story of Western literary history and its changing relationship to reality via modernism, postmodernism, and whatever is now emerging – call it post-postmodernism or metamodernism. While she carefully notes that this periodization is a particular story in itself – a critical tool to make sense of these shifting developments rather than the truth writ in stone – her discussion reframes the development of fantasy as a modern genre by arguing that its emergence responds to much the same set of cultural
concerns that gave birth to postmodernism and later to metamodernism. In this rereading of the history of fantasy, she returns to three older major works – *The Lord of the Rings*, *Earthsea*, and *Discworld* – all of which are highly metafictional.

The centrality of metafictional elements returns in the second part, in which Kraatila considers what she calls speculative mimesis as central to understanding fantasy. In doing so, she also examines the challenge and, perhaps, solutions speculative mimesis may offer for the crisis of representation. Here, Kraatila reads Lev Grossman’s *The Magicians* trilogy, Kazuo Ishiguro’s *The Buried Giant*, N. K. Jemisin’s *The Broken Earth*, and Joe Abercrombie’s *The Shattered Sea*. These texts are chosen as a diverse and representative sample of modern-day fantasy that points to important current tendencies: “the mainstream prestige the genre is slowly gaining, the increasing generic self-awareness of fantasy works, and the commitment [...] to address burning present-day political and societal issues like global inequality and climate change” (27).

Kraatila’s reading centers on fantasy worldbuilding; in line with other researchers who have examined the narratology of speculative fiction, she considers the speculative fantasy world an imaginary artefact that is obvious in its fictionality and that readers interact with as such. Thus, Kraatila’s research is part of an ongoing attempt to grapple with speculative storytelling beyond a simple estranging or unnatural ‘break with reality,’ and she considers the meaningfulness of these worlds as obvious literary artefacts. As such, the dissertation provides an important contribution to this line of thinking that is specifically focused on fantasy.

In the second part of her dissertation, Kraatila is primarily concerned with how fantasy is read. Here she looks more closely at several important characteristics of fantasy literature: what she here coins as global-scale perspective-taking, metafictional aspects of fantasy, and the instrumentality and playfulness of fantasy world creation. Fantasy, according to Kraatila, privileges the global over the close and personal, often deals explicitly with the operations of narrative as a theme, and revels in the artificiality of its constructed worlds. She concludes that

> by foregrounding the world-creating side of its mimetic operations, laying bare its own artifice and encouraging the reader to engage in playful freeform speculation, fantasy fiction can show us how to read any kind of fiction as fiction – or how to approach mimesis as a matter of dynamic and creative interpretation, rather than static showing. (326, italics in original)

In short, the creation of fantasy worlds and the metafictional aspects thereof showcase world-building as a critical tool that makes it possible to partake in, shape consensus of, and affect reality. Far from the static mimesis of modernism or the detached deconstruction of postmodernism, fantasy storytelling simultaneously lays bare the constructed nature of world-making and the necessity of its function – in fantasy fiction and beyond.

At this point, however, the dissertation shows a curious lack of engagement with grimdark – in particular the reality claims made by certain texts, authors and fans – despite the close reading of Abercrombie. Kraatila understands the way fantasy can discuss the global-historical at a remove due
to its conspicuous artificiality as central to her analysis. While I agree with this, many fans of fantasy medievalism would not, and they would insist on medieval elements in fantasy as reflective of historical reality for specific political reasons. A discussion of research, such as Helen Young’s, on Eurocentrism and colonialism in popular fantasy would, in my opinion, have further developed the argument about how fantasy is read and used today in important ways.

Overall, however, the dissertation makes important contributions to the field of fantasy research by making use of and reworking previous critical engagements with fantasy literature as well as by aligning the narratological analysis with previous research on speculative fiction and its narrative affordances. It is a solid work that showcases the importance of grappling with fantasy in its various forms in the 21st century, and it also sheds light on what makes fantasy so compelling at this particular moment in time.

_Biography_: Anna Bark Persson is a postdoctoral researcher in English at Umeå University, Sweden. Her research interests include queer perspectives on speculative fiction, masculinity, and queer readings and temporality. She recently defended her thesis on Vikings, embodiment, sexuality, and masculinity in gritty fantasy literature and is currently working on a project about feminist and queer speculative visions of Mars and space exploration.
Call for Papers: Fafnir 2/2024

*Fafnir – Nordic Journal of Science Fiction and Fantasy Research* invites authors to submit papers for issue 2/2024. Research into any and all aspects of science fiction, fantasy, and other speculative genres is welcome from a range of disciplines.

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The submissions must be original works written in English, Finnish, or a Scandinavian language. Manuscripts for research articles should be between 20,000 and 40,000 characters in length. The journal uses the most recent edition of the MLA Style Manual (MLA 8). The manuscripts for research articles will be subjected to a double-blind peer-review. Please note that as *Fafnir* is designed to be of interest to readers with varying backgrounds, essays and other texts should be as accessibly written as possible. Also, if English is not your first language, please have your article proofread by an English-language editor. Please ensure your submission conforms to our journal’s submission guidelines, which are available at: [http://journal.finfar.org/for-authors/submission-guidelines/](http://journal.finfar.org/for-authors/submission-guidelines/)

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