British Society for Literature and Science

2021 Conference

With the coronavirus continuing to interfere with in-person academic events, we are once again holding our annual meeting online. This year's conference has been organised by the BSLS committee directly rather than through a hosting institution. There are no keynotes, but there is a live plenary panel as well as the AGM, and several social events will be held across the three days.

We are delighted to have received around sixty papers this year, which are presented asynchronously online either as videos, powerpoints, or PDFs. These can be accessed at via the BSLS website. Each panel has a corresponding Teams channel where you can ask presenters questions.

We hope that you remain safe and well in this difficult time, and that something of the Society's conviviality has translated to the online format!

Will Tattersdill
Communications Secretary

Schedule of live events (all times are BST)

Wednesday 7th April

7pm PGR/ECR show and tell session (Wonder) [Come along with one image or short text which you're working on and find interesting. You have two minutes to introduce it to the group and say why you like it.]

Thursday 8th April

9am Asynchronous papers will be available on the conference website (they will remain so until 30/4)
3pm Welcome from the BSLS Executive Committee (Teams)
8pm Virtual pubs and quiz (Wonder)

Friday 9th April

11am Coffee morning (Wonder)
2.30pm AGM - reports will be circulated beforehand (Teams)
4pm Book Prize Winners' Roundtable, followed by Book Prize Announcement (Teams)
5pm Virtual Pubs (Wonder)
8pm Live movie watch-along

Saturday 10th April

11am Virtual coffee free-for-all (Wonder)

Panel Details (asynchronous papers)

Animals

- Will Abberley, 'The Naturalist as Connoisseur: Aestheticism and Wildlife Conservation in W. H. Hudson's Late-Victorian Nature Writing'
- Janette Leaf, 'Big Bug Metamorphoses in the Fictional Environments of Richard Marsh and Franz Kafka'
- Will Tattersdill, 'Science, Fiction, and Museum Objects: the case of Russell's dinosauroid'
- Nina Torquato, 'Humans portrayed as animals in Brazilian 19th and 20th-century literature'

Bodies and minds

- Laura Gibbs, 'Phenomenology Through the Speculum: James Joyce and the Gynaecological Philosophy of Finnegans Wake'
- Kinga Jęczmińska, 'Neuroscientific explanations of the mind in Ian McEwan's Saturday'
- Vicky Lord, 'Gothic Disability, Monstrosity and Linguistic Ability'
- Douglas Morgan, 'Phenomenological Descriptions and Radial Empathy in Autistic Life Writing: Deconstructing Diagnostic Discourse and Developing the Neurocosmopolitan Reader'
- Fiona Schroeder, '"To exist upon air and perfume": Odoriferous Diets and Alien Nutritional Science in Sydney Whiting's Heliondé (1855)'
- Sara Wasson, 'Waiting, strange: temporality in life writing by transplant recipients'

Botany

- Emily Alder, 'The Entangled Terrestrials: Mapping E.T.'s Ecological Web'
- Chloé Germaine Buckley, 'Arboreal Agency: On the Possibility of Terrestrial Games'
- Jennifer Leetsch, 'Sympoeisis and/in Anna Atkins' Algae Cyanotypes'
- Ros Powell, 'Plants and Perfection in the Eighteenth Century'

DNA, genetics, inheritance

- Jerome de Groot, 'The Public Life of DNA'
- Julia Gatermann, 'Groomed for Survival - Queer Reproductive Technology in Larissa Lai's The Tiger Flu'
- Paul Hamann-Rose, 'A New Poetics of Postcolonial Relations: Global Genetic Kinship in Zadie Smith's White Teeth and Amitav Ghosh's The Calcutta Chromosome'
- Zoe Lehmann, 'Narratives of Human Inheritance in Adrian Tchaikovsky's Children of Time and Children of Ruin'

Infestations and contagions

- Gemma Curto, 'Constructing the Superorganism in Margaret Atwood's MaddAddam Trilogy'
- Aureo Guerios, 'Literature as a way to prevent or induce contagion during the Cholera Outbreaks of the 1830s'
- Sofia Varino, 'Viral Activity: Biomedical Imaginaries of Prevention & Contagion in a Pandemic Anthropocene'

Literature, Science, Policy

- David Calder, 'Science Fiction's Critical Utility in a Military Context'
- Sarah Dillon, 'Decolonising the Sociotechnical Future'
- Genevieve Liveley, 'Narratology and Cyber Security Policy'

Medical Spaces and Localities

- Meredith A. Conti, 'Ether, Flesh, and Sweat: The Dramaturgy of Smells in Victorian Operating Theatres'
- Rosalind Crocker, '"Bring in the professionals" – Doctors, Clinical Spaces and Problems of Autonomy in Susanna Kaysen's Girl, Interrupted and Elizabeth Wurtzel's Prozac Nation'
- Graham Matthews, '"That damned nationalised medicine": NHS Narratives in Mid-Century British Literature'

Medicine – people and practices

- Reham Almutairi, '"First, do not harm." Exposing the Hegemony of the Medical Model of Obesity in Vaught's My Big Fat Manifesto and Kann's If It Makes You Happy'
- April Thant Aung, 'Illness and Theatre in Singapore: Cultural Interpretations of Sickness'
- Doug Battersby, 'Medical Responses to Sensation Fiction: John Milner Fothergill and the Late Victorian Novel'
- Helena Ifill, 'Doctors and Patients, Scientists and Subjects: Agency and Control in Fin-de-Siècle Popular Fiction'

Physics

- Emma Felin, '"MS. Found in a Bottle": The Mind as Maelstrom'
- Sophie Heuschling, 'Poems As "Broadening Event Horizons": Astrophysics and Formal Experimentation in Amy Catanzano's Starlight in Two Million'
- G. T. Ryoo, 'Image as Energy: Ezra Pound and Electromagnetism'

Race, Ethnicity, and Culture

- Max Chapnick, 'Pauline Hopkins's Pseudo-Science: The Unclassified, "Wild Facts" of Race in Of One Blood'
- Michael Hedges, 'Haunting Recordings in White Tears by Hari Kunzru and Slumberland by Paul Beatty'
- Melissa Ho, 'Stigma and the Loss of "Face" in Singaporean Autism Narratives'

Science and Performance: BSLS/TaPRA Roundtable (convenors: Paul Johnson and Carina Bartleet)

This joint roundtable with the Science and Performance working group of the Theatre and Performance Research Association (TaPRA) will explore current and future key issues and debates in the field, addressing the following questions: How can scientific knowledge be interrogated by performance practices? How can performance explore the human implications of scientific knowledge and practices? How can scientific practices be understood through performance theories? How are scientists or scientific practices and ideas represented in performance?

Science Discourse and Archives

- Rachel Crossland, 'Letters from "a partial Editor": Periodical Science in the Archives'
- Sarah Fruehwirth, 'Discourses of Determinism in British Sensation Novels of the 1860s and 1870s'
- Jenni Halpin, 'Poetical Science, from Theology: Ursula K. Le Guin's "A Cento of Scientists"'
- Sharon Ruston, 'In Defence of Science: Humphry Davy's Notebooks'
- Eric Swartz, 'From Foundation to Demolition: Andrei Platonov, Adrian Duncan, and the Engineering of a New World'

Scientific Knowledge, Culture, and Identity

- Jordan Kistler, "'I cannot tell you all the story": The failures of the museum in H.G. Wells' The Time Machine'
- Eva Charlotta Mebius, 'Apocalyptic Air – H. G. Wells's Time Traveller and Catastrophic Consumption'
- Krutika Patri and Fabian Hempel, 'Manu Joseph's "Serious Men" as a Subaltern Prism on Modern Science and Indian Society'
- Michael Whitworth, 'Situating Selfhood in a Scientific Universe, 1925-1931'
- Yi Zheng, 'Practical wisdom in literary studies'

Subjects of Human Knowledge: Anthropology in Contemporary Fiction

- Anna Auguscik, 'Relations of Observation and the Formation of the Anthropological Subject in Lily King's Euphoria'
- Anton Kirchhofer, 'Human Knowledge and Machine Anthropology in Ian McEwan's Machines Like Me'
- Karsten Levihn-Kutzler, 'Hanya Yanagihara's The People in the Trees as Epistemological Allegory'

Technology, cognition and perception

- Patrick Armstrong, 'Fibre Optics: Extensions and Limitations of Vision in Virginia Woolf's Prose Fiction'
- Claudine Bollinger, 'Extended Minds in Aliette de Bodard's Xuya Universe'
- Alessia Pannese, 'Surrealism as mediator between mechanicism and vitalism'
- Martin Willis, 'Contemporary Sleep Science and the Technological Imaginary'

Time

- Catherine F. Belling, 'Horror Time'
- Melanie Bonsey, 'Looking Back at/from the Future: A Study of Narrative and Time in P. D. James' The Children of Men and Margaret Atwood's The Testaments'
- Richard Luke Fallon, 'Coroner of Creation: George McCready Price (1870–1963) and the Unwriting of Deep Time'
- Billie Gavurin, "'A thousand weary centuries": a palaeontological reading of Oscar Wilde's "The Sphinx"'
- Karina Mathew, 'The Archaeology of Extraterrestrial Communication: Monoliths, Artifacts, and Encoded Objects in Contemporary Science Fiction and NASA Missions'

Animals

Will Abberley, ‘The Naturalist as Connoisseur: Aestheticism and Wildlife Conservation in W. H. Hudson's Late-Victorian Nature Writing’

The heritage of British nature writing has often been associated with a conservatism that is, supposedly, as much formal as political. Although, in recent decades, authors and critics have sought to develop a 'new nature writing' (Smith 2017) identified with radical environmentalism and a commitment to social justice, such declarations have also reflected a persistent view of the genre's history being marked by pastoral nostalgia, quietist escapism and nationalist myth-making (Cowley 2008; Castellano 2013; Smyth 2018). This view is captured in popular images of Gilbert White cheerfully watching birds' nest in his parish while, across the Channel, France was being rocked by revolution (McCrum 2017). This paper will argue that work by the late-Victorian nature writer William Henry Hudson upsets this stereotype. Hudson's writing celebrated England's countryside with a style and intellectual orientation that owed much to cosmopolitan aestheticism and appropriated that movement's critiques of bourgeois values to advance an early environmentalist agenda. Further, I contend that Hudson's writing fashioned an intellectual identity that challenged the authority of professional laboratory and museum science by identifying this authority with philistinism. In contrast to these institutions' technical expertise, Hudson presented his knowledge and insights into England's wildlife as a kind of connoisseurship in which understanding was bound up with aesthetic appreciation. His refusal to separate the facts of non-human life from the pleasure they offered to the sensitive observer was central to his arguments for the conservation of Britain's avian species and his protests against their destruction by hunting. The paper will develop this thesis through close readings that will focus on Hudson's books *Birds in a Village* (1893) and *Nature in Downland* (1900).

Nina Torquato, ‘Humans portrayed as animals in Brazilian 19th and 20th-century literature’

This presentation focuses on the analysis of 19th and 20th-century Brazilian literary texts that portray humans of different racial and social background using animal characteristics. The people who are often referred to as animals in literature are black, *caboclo*, indigenous, *pardo*, and inhabitants of the Brazilian inlands. Animal characteristics appear as a menas to depict people as less human or even *inhuman*. This study focuses on the analysis of the following literary texts *O Cortiço* (1890) by Aluísio de Azevedo, *Vidas Secas* (1938), *O Quinze* (1931) by Rachel de Queiroz. The representation of humans as animalized beings is a response to the racial theories that rapidly spread around Brazil and the world at the time. These theories entailed the idea of biological determinism, superiority and inferiority of races, as well as cognitive and genetic supremacy. Racial theories rapidly infiltrated Brazilian universities, anthropological societies and other scientific institutions and also the fictional world. Works by Francis Galton, Johan Friedrich Meckel, Louis Agassiz, Joseph Arthur de Gobineau, and Raimundo Nina Rodrigues which advocate racial superiority and eugenics are examined as part of the proposed study. In addition, we address the time that Gobineau spent in Brazil and his comments on Brazilian racial panorama that followed his visit.

Will Tattersdill, ‘Science, Fiction, and Museum Objects: the case of Russell’s dinosauroid’

If the asteroid hadn’t hit the Earth and dinosaurs had carried on evolving, could they have ended up looking – and behaving – something like human beings? This was the daring question which lay behind Dale Russell’s ‘dinosauroid’, a sculpture created with the taxidermist Ron Séguin in the early 1980s. Since its controversial debut in the non-peer-reviewed journal *Syllogeus* and the sci-fi magazine *Omni*, the proposed sapient descendant of *Stenonychosaurus inequalis* has continued to capture public imagination and provoke speculation about convergence and chance in evolutionary history. It is frequently discussed – most recently by Jonathan Losos – as an exemplary, if flawed, instance of a thought experiment gone rogue. Yet to speak of it this way is to ignore the fact that the dinosauroid was *not* an abstract theoretical proposition, but a physical object created with an artist and displayed as a museum piece – not just in the Canadian Museum of Nature (where it was created), but at virtually every famous natural history museum in the anglosphere. In this paper, I discuss the dinosauroid’s provenance as a museum object, the better to understand the relationship between science fiction, the museum space, and human locutions of deep time. This paper draws on work I have been doing on museum representations of dinosaurs with the literary critic Verity Burke and on Dale Russell’s archive with the palaeontologist Darren Naish.

Janette Leaf, 'Big Bug Metamorphoses in the Fictional Environments of Richard Marsh and Franz Kafka'

The insect life-cycle of complete or incomplete metamorphosis inspires imagery in the Gothic, Modernist and Post-Modern literary traditions, and this paper contrasts how the literary trope of human becoming insect is deployed by Richard Marsh in his 1897 bestseller, *The Beetle* and by Franz Kafka in his 1912 novella, *The Metamorphosis.* In both texts the transformed corpus of the central figure is that of an unnaturally large bug out of scale and out of place in its environment. This paper explores the extent to which the dominant perspectives within the narratives - scientific, cultural or personal - are linked to contrasting emotional reactions to the entomological shapeshifters. There may be physical similarities between the big bugs, but Linnaean precision and taxonomic evasiveness in their respective depictions impact on receptions of otherness manifested in the insect forms. This presentation queries whether either author is encouraging fellow feeling to penetrate the newly acquired exoskeletons or if one is deliberately denying entry to that emotion. This research emerges from the fifth chapter of Janette Leaf's doctoral thesis: 'Locating the Sympathetic Insect'. No prior knowledge of the texts is required for BSLS viewers or listeners.

Bodies and minds

Laura Gibbs, 'Phenomenology Through the Speculum: James Joyce and the Gynaecological Philosophy of *Finnegans Wake*'

According to Vike Martina Plock, when Nora Joyce fell pregnant in Trieste in 1904, James Joyce 'wrote to Stanislaus with an unusual request, asking him and Vincent Cosgrave to read books on midwifery and embryology and to send him "the results"'. Having expanded his knowledge on scientific and medical theories of the female body in relation to Nora's experience, Joyce eventually used these frameworks to add depth and complexity to *Ulysses* (1921) and *Finnegans Wake* (1939).

This paper interrogates how Joyce's focus on gynaecology and the female body in *Finnegans Wake* provides fertile ground for a feminist phenomenology to emerge in the text. Analysing the dynamic between female genitalia, womb and speculum in the *Wake*, I will demonstrate how Joyce's use of the female body subverts traditional notions of the *Wake* as a male-dominated text. I will begin by dissecting Joyce's interest in obstetrics and the female reproductive system in *Ulysses*, through close readings of 'Oxen of the Sun' and 'Penelope', to demonstrate Joyce's awareness of the history of the gynaecological field. This will be used as a framework for reading female philosophy in *Finnegans Wake* through Joyce's use of the speculum. Together these threads will consider how a medical and philosophical examination of female body can help us to uncover the *Wake*'s female philosophical influences.

Douglas Morgan, 'Phenomenological Descriptions and Radial Empathy in Autistic Life Writing: Deconstructing Diagnostic Discourse and Developing the Neurocosmopolitan Reader'

My paper will explore how Donna Williams' *Nobody Nowhere* and *Somebody Somewhere*, Tito Mukhopadhyay's *The Mind Tree* and *How can I Talk if my Lips don't Move*, and Amanda Baggs' 'In my Language' use phenomenological descriptions of autistic embodiment to problematise diagnostic discourses of autistic empathy and develop neurocosmopolitan readers by exposing them to neurodiverse phenomenological and empathetic stances.

I will draw on Matthew Ratcliffe's work on phenomenology and 'radical empathy' and Drew Leder's on phenomenological 'absorption' to read how these texts construct what I term 'radial empathy', wherein empathetic intentionality radiates out from the embodied autistic to form intersubjectivities with objects and entities rather than being confined to interpersonal interactions. I will demonstrate how these accounts of 'radial empathy' engage with, deconstruct, and develop a counter-discourse to diagnostic and psychological accounts of autism, from the 1940s through to the 2010s, that characterise both autistic empathy and phenomenological embodiment as deficient.

Additionally, I will integrate Ratcliffe's work with Ralph Savarese's notion of 'neurocosmopolitanism' to show how these phenomenological descriptions challenge neurotypical readers to examine their own

phenomenological ‘taken-as-givens’ whilst opening alternative ‘possibility spaces’ for them to inhabit and empathise with, allowing these readers to cross cognitive boundaries and become ‘neurocosmopolites’.

Vicky Lord, ‘Gothic Disability, Monstrosity and Linguistic Ability’

As author Jen Campbell's established harmful correlations between signifiers of villainy and disfigurement, particularly ectrodactyly, in *The Witches* (2020) she acknowledged the consistency of this conflation in literature. Similarly, Boris Karloff's mute creature, except for grunts and growls, contrasts the originally articulate creature. Examining Quasimodo, Erik, and Frankenstein's creature as disabled figures, rather than only visibly differentiated Gothic monsters, emphasises the vitality of their linguistic abilities. These abilities directly impact their narrative roles, deaths, and relationships with the able-bodied and ultimately alter the traditional construction of monstrosity in *Notre-Dame de Paris* (1831), *Le Fantôme de l'Opéra* (1910) and *Frankenstein* (1818).

Their dialogue simultaneously vocalises self-perceptions of disability and establishes agency to directly challenge both the ‘twisted mind in a twisted body’ trope (Margolis and Shapiro) and the construction of monstrosity as a purely public reaction to disability. Rather than dismissing mute characters, dialogue specifically measures these self-perceptions against previously centralised able-bodied reactions to disability. This cohesion of individualistic disability and constructed monstrosity complicates labelling the death of the monster as heroic, outlined by Jeffrey Jerome Cohen. Therefore, instead of Disability Studies’ purely social focus, my paper also engages with anatomical documentation of disability and Sara Wasson’s Transplantation Gothic.

Sara Wasson, ‘Waiting, strange: temporality in life writing by transplant recipients’

The dominant narrative of transplant in transplantation journals and hospital communications (both clinical and patient-facing) presents surgery as a heroic, healing event, even while acknowledging that the recipient will need to follow a pharmacological regimen of immunosuppressants and monitoring for organ rejection. This article examines three late twentieth-century texts that challenge that narrative of organ transfer by dramatizing disjunction between practitioner and patient experience of the temporalities of illness. While the medical narrative of transplant focuses on the heroic event of transplantation, these texts record the surgical event as a radical absence, gap and rupture; further, they construct post-surgical temporality as still profoundly structured by waiting, expectation, suspense, and dread, the transformed body less ‘healed’ than permanently contingent and fragile in additional ways. The chapter analyses how these texts construct carceral heterotopias of treatment within which heterochronies operate in the Gothic mode, in which these recipients’ post-transplant labour comprises a tortuous, embodied enduring. Texts include Slavenka Drakulić’s *Holograms of Fear* (1992), Robert Pensack’s *Raising Lazarus* (1994, 2005), and Richard McCann’s ‘The Resurrectionist’ (2000).

Kinga Jęczmińska, ‘Neuroscientific explanations of the mind in Ian McEwan's *Saturday*’

The paper analyses descriptions of the mental states and their connections with the brain states as well as the style of narration in Ian McEwan's *Saturday*. By representing how the fictional Henry Perowne, a renowned specialist in neurosurgery, analyses the workings of the human mind, the novel reveals obstacles faced by neuroscientific explanations of the relation between the mind and the body. It is claimed that *Saturday* may be interpreted as describing subjective human experience with reference to issues discussed in contemporary cognitive science and analytic philosophy of mind, such as David Chalmers's hard problem of consciousness, Daniel Dennett's criticism of the model of the Cartesian theatre and Thomas Nagel's knowledge argument. The problems addressed by the narrative also contribute to the debate on the relation between science and literature in the context of “two cultures” defined by C. P. Snow. The paper presents McEwan's *Saturday* as a novel that manages to bring together both the scientific and the humanist perspectives in a way that shows how the two cultures need each other to offer a more authentic account of the human experience.

Fiona Schroeder, ‘“To exist upon air and perfume”: Odoriferous Diets and Alien Nutritional Science in Sydney Whiting’s *Heliondé* (1855)’

This paper traces the influence of scientific discourses on nutrition on mid-Victorian interplanetary fiction. By reading Sydney Whiting’s *Heliondé; or, Adventures in the Sun* (1855) within the context of nineteenth-century

debates concerning food chemistry and dietetics, it will consider how popular fiction was engaging with contemporary anxieties regarding food purity, nutrition, and physical and moral health. Bee Wilson (2008) suggests that adulteration had become ubiquitous within British food markets by the 1850s, all the staples of the grocer shop being "routinely falsified" (99). Indeed, in Whiting's popular satire *Memoirs of a Stomach* (1854) the narrating organ rails against "adulterated abominations" and the "nefarious system" by which they are produced (113). *Heliondé*, which has been largely overlooked by scholarship, builds on the themes of this earlier novel: here, the odoriferous diet of the Helionites, who subsist upon the "delicate exhalations of flowers and fruits" rather than solid foods (67), presents a restorative nutritional system, which precludes adulteration and curtails unhealthy habits of consumption. In describing this utopian mode of subsistence, Whiting not only speculates upon contemporary advances in food chemistry, but also anticipates both the advent of the "New Nutrition" (Levenstein 2012) in the 1880s, and the "culinary modernism" (Belasco 2006) of the early twentieth century. *Heliondé* foreshadows the ways in which the interplanetary genre intersects with discussions on diet and food security in the late-Victorian period, as this paper will show.

Botany

Emily Alder, 'The Entangled Terrestrials: Mapping *E.T.*'s Ecological Web'

Steven Spielberg's *E.T. The Extra-Terrestrial* (1982) has accrued an eclectic but small body of scholarly criticism. With this paper I contribute an ecocritical analysis of the film, suggesting that the disruption to Elliott's schoolboy life caused by E.T.'s arrival exposes the web of interdependencies in which he, and the other children, exist with each other, adults, the more-than-human world, and technology. In particular, I examine the relationship between E.T., Elliott, and a rather marginalised household plant. The function of this flowering pot-plant (which has been identified both as a geranium and a chrysanthemum) as an indicator of E.T.'s health, as well as the bond of wellbeing between E.T. and Elliott, is obvious in the film and unlikely to go unnoticed even by a casual viewer. However, the pot-plant rewards closer inspection. It is not merely a symbol, but possesses its own kind of narrative agency, prompting crucial acts by Gertie, Michael, and Elliott on which the plot depends. As a household plant, neither artificial nor natural, it also problematises some of the apparently simple contrasts the film sets up between adults and children, urban and rural, technology and 'nature', us and them. Focussing our attention on the pot-plant, I argue, leads to a reappraisal of *E.T.*'s ecological values, exposing both the problems and the necessities of recognising that we live entangled with the rest of the world.

Chloé Germaine Buckley, 'Arboreal Agency: On the Possibility of Terrestrial Games'

In the face of the climate crisis, ecological thought must reorient itself toward the 'terrestrial' (Latour 2019; Haraway 2016). This paper examines how board games might contribute to this shift. The arboreal-themed abstract strategy game *Photosynthesis* (Blue Orange, 2017), for example, invites players to take on the role of a particular species of tree in a growing forest. Boasting eco-friendly production and an ecocentric perspective, *Photosynthesis* is a timely game. Trees are being recognised as vital actors in the climate crisis. However, beyond first impressions, the logic of *Photosynthesis* has little to do with the interspecies collaboration being uncovered by ecologists (Simard et al 2015; Wohlleben 2017) and the game quickly becomes a quest for territorial expansion. Reflecting on the failure of *Photosynthesis* nonetheless allows me to theorise how gameplay entangles humans with other-than-human agencies and to consider what properly 'terrestrial' games might involve. Indeed, in *Photosynthesis* the de-subjectivisation of trees is not entire and other-than-human presences remain co-actors despite the positioning of the player as forest manager. Thinking through these entanglements suggests the potential of gameplay to act as what Tim Morton (2016) names *subscendence,* a downward movement that connects us with 'the Lego brick, the lichen, the activist network, the microbiome, the melting glacier' - with the earth itself. *Photosynthesis* represents a new trend in gaming and my reading explores further possibilities for designers seeking a meaningful connection with the terrestrial in troubled times.

Jennifer Leetsch, 'Sympoeisis and/in Anna Atkins' Algae Cyanotypes'

Taking one of the core tenets of material ecocriticism as its starting point, namely that all materials – be they organic or inorganic – possess agential, relational and generative capabilities, this talk will move beyond the usual discussion of nineteenth-century botanist Anna Atkins' innovations in an emergent form of photography, the cyanotype, and link her feminine-coded cultural techniques of ornamental arrangements of plant material to Donna Haraway's notion of sympoiesis developed in *Staying with the Trouble*. As Haraway argues, sympoiesis is a making-with, a "worlding-with, in company. Sympoiesis enfolds autopoiesis and generatively unfurls and extends it" (2016, 58).

Applying this approach to an example of nineteenth-century experimental marine botany, I propose to trace the embodied, material and affective histories of Atkins' work as a generative story of connection and co-creation of the world and its natural and cultural environments. Instead of following a logic of human mastery over nature, the multi-forked life cycles of Atkins' seaweed cyanotypes speak of connectivities, communities and relationalities between humans and plants as environmental agents, between chemicals and the weather, between the photo laboratory and littoral locations, between different texts and textures, between archives and publishing avenues, and between humans themselves.

Ros Powell, 'Plants and Perfection in the Eighteenth Century'

What happens if you treat the body as a plant? Taking as its focus Vincent Miller's mock scientific treatise *The Man-Plant* (1750) – which depicts the process of growing a fertilized egg in a 'hot-house' as one might an exotic vegetable – this paper will explore the relationship between eighteenth-century man-plant analogies, dietetics, and the concept of human perfection. Miller's model of the man-plant will be contextualized with reference to Stephen Hales' account of plant fluids and nutrition in *Vegetable Staticks* (1727) and George Cheyne's dietary guidelines combining an iatromechanical account of the body with an exploration of the relationship between food and sensibility in *The English Malady* (1734). The paper will close with a consideration of the *mimosa pudica*, or sensitive plant that demonstrates the limits of drawing comparisons between botanical and human bodies.

DNA, genetics, inheritance

Jerome de Groot, 'The Public Life of DNA'

This paper explores how genetics and history are combined in the communal imagination by focusing on the public iteration of DNA. The paper considers the 'public history' of DNA, that is, the ways in which the molecule manifests in the wider historical imaginary. Some of the most high profile public events of the past two decades relating to DNA and genetics have themselves had an historical aspect: the discovery of Richard III; the revelation of Thomas Jefferson's relationship with his slave, Sally Hemings; the African Burial Ground project; Henry Louis Gates, Jr's use of DNA; the use of genetic technologies to investigation historical war crimes and genocide. These cases have served to intertwine genetics and historical investigation in the public imagination, and DNA has become associated with understanding the past, to the extent that an entire fictional genre (cold cases) has evolved to reflect this. DNA has changed the way the historical imagination works, contributing a new, material aspect to investigation of the past. At the same time, telling the story of (and with) DNA involves an intervention into the space of public history. The way that we imagine DNA and the way that its history is told demonstrates something about the way that we choose to remember as a society.

Julia Gatermann, 'Groomed for Survival - Queer Reproductive Technology in Larissa Lai's *The Tiger Flu*'

Women's reproductive rights continue to be highly contested ground where ideological battles are being waged. While advances in reproductive technology have created a lot of freedom, especially with regards to non-heteronormative forms of family planning, they also have generated new cultural and political anxieties, resulting in an increasing use of technology to monitor and police women's bodies. Taken outside of the 'natural', normative procreative context, with the technological possibilities of cloning and genetic engineering, what will the future of the human species look like and who will control it?

In my video contribution, I analyze how Larissa Lai's novel *The Tiger Flu* (2018) envisions alternative reproductive technologies from a marginalized, queer and subaltern point of view. Her dystopian world is rendered inhospitable by climate change, scarcity, and a global pandemic called the tiger flu that has brought humanity close to extinction. Lai critically questions the sustainability of a Western, patriarchal, neo-liberalist system that, if left unchecked, will only lead to the destruction of our planet and all life on it. From a feminist, posthuman perspective, she critically observes how the gendered and racialized bodies especially of people from the Global South are culturally marked as ultimately expendable and exploitable, and suggests that, in order to survive and adapt to a rapidly changing world, we need to radically rethink what it means to be human, and achieve a profound transformation, both of the body and the mind.

Paul Hamann-Rose, 'A New Poetics of Postcolonial Relations: Global Genetic Kinship in Zadie Smith's *White Teeth* and Amitav Ghosh's *The Calcutta Chromosome*'

Conceptions of genetic kinship have recently emerged as a powerful new discourse through which to trace and imagine connections between individuals and communities around the globe. This paper argues that, as a new way to think and represent such connections, genetic discourses of relatedness constitute a new poetics of kinship. Discussing two exemplary postcolonial narratives, Amitav Ghosh's *The Calcutta Chromosome* (1995) and Zadie Smith's *White Teeth* (2000), this paper argues further that literary fiction, and postcolonial literary fiction in particular, is uniquely positioned to critically engage this new biomedical discourse of global and interpersonal relations. As both novels oscillate spatially between the West and a postcolonial Indian subcontinent, the texts' representations of literal and figurative genetic relations become a vehicle through which the novels test and re-configure postcolonial identities as well as confront Western genetic science with alternative forms of knowledge. The emerging genetic imaginary highlights – evoking recent sociological and anthropological work – that meaningful kinship relations rely on biological as much as on cultural discourses and interpretations, especially in postcolonial and migrant contexts where genetic markers become charged with conflicting notions of connection and otherness.

Zoe Lehmann, 'Narratives of Human Inheritance in Adrian Tchaikovsky's *Children of Time* and *Children of Ruin*'

Children of Time (2015) and *Children of Ruin* (2019) are a pair of novels which tackle themes of interplanetary exploration and bioengineered evolution. Each novel follows a small group of human beings from Earth on a mission to find potentially habitable planets to terraform, including a plan for bioengineering to allow for accelerated evolution. In the first novel, the inheritors of this bioengineering are not the primates that had been planned, but arachnids, and in the second octopodes. Later narrative threads follow humankind many thousands of generations later, to be confronted by 'descendants' that are human in intellect and society, while startlingly alien in their physical form.

In depicting a proposed course of evolution in which the inheritors of humanity defy categorisation as 'human', the ontology of evolutionary narratives is at once challenged and reinforced. I follow Misia Landau in proposing that accounts of human evolution are intensely narratological, and that on this basis science-fictional depictions of 'future' evolution do not so much imagine outcomes for human development, but rather reveal (and sometimes challenge) the narratological framework with which our understanding of the evolutionary process takes place. Moreover, this has implications for ongoing discourse surrounding astrobiology and exoplanetary research. Science-fictional imaginings for the future of human expansion pose challenges to notions of human inheritance, and interrogate the narrative constructs through which we understand our own evolutionary history.

Infestations and contagions

Gemma Curto, 'Constructing the Superorganism in Margaret Atwood's *MaddAddam* Trilogy'

This paper will consider the experience of infestation, bee behaviour and collective responsibilities through the lens of the superorganism theory in the *MaddAddam* Trilogy. I draw on Margaret Atwood's father's career as an entomologist, and the shift between entomological theories, particularly from the superorganism to

sociobiology, especially in the 1960s and the 1970s. I will explore how the superorganism theory provides us with a framework to discuss complex responsibilities, collective effort and total agency in Atwood´s *MaddAddam* Trilogy. The superorganism theory advocates for the whole as larger than the sum of its parts, as the system self-organises and has a type of conscience or direction. The way superoganisms are constructed resembles the behaviour of complex systems, in which we have organised complexity, as Warren Weaver (1949) identifies, and emergence theory. In the *MaddAddam* Trilogy, transcendence associated with the superorganism may come through the dissolution of the self, as well as through artistic expression. A self-sustaining biological unit can also be viewed as a disguised way of promoting a totalitarian, collectivist system; especially when the words ´control' or 'collective' are immediately associated with Stalinism and the a suppression of individual autonomy. While this can be the case, I argue that the superorganism theory is a framework that enables Atwood to discuss complex responsibilities in relation to climate change. This paper will close by considering colonies in the *MaddAddam* Trilogy, in which collective efforts and notions of agency are discussed.

Aureo Guerios, 'Literature as a way to prevent or induce contagion during the Cholera Outbreaks of the 1830s'

Medical thinking in the 1800s often ranked fear as a predisposing factor to disease. During the Cholera Pandemics, physicians and sanitarists would advise the public to avoid preoccupations, because fear would increase the chances of contagion as well as the severity of infection. As declared Mark Twain: "for every person who died of cholera, three died of fright." That entailed a change in the perception of literature's social role. During cholera outbreaks, fear-inducing texts such as horror stories or narratives about disease became harmful to one's health and, consequently, should be avoided. On the other hand, humorous and entertaining literature was valued for relieving stress and, thus, conferring protection.

This paper explores the role of literature as a way to – paradoxically – prevent and induce cholera. For such, it analyses short literary texts and memoirs produced during the outbreaks of the 1830s: a letter by Goethe, Heinrich Heine's *Cholera in Paris*, Chateaubriand's *Memoires d'Outre-tombe*, and newspaper articles by Jules Janin and Parker Willis – who served as a source for Poe's *The Mask of the Red Death*. These works are interpreted in comparison to medical treatises published at the time.

Sofia Varino, 'Viral Activity: Biomedical Imaginaries of Prevention & Contagion in a Pandemic Anthropocene'

According to Puar and Clough (2012), "[t]he viral is transformative; it has an open-ended relation to form itself" (14). Indeed, the viral has historically occupied a vast range of western technocultural imaginaries, highlighting how language and metaphor operate in scientific knowledge production. As a viral phenomenon, the current coronavirus pandemic is also a crisis of deforestation and habitat loss, as well as a global public health and financial crisis highlighting racial and economic disparities in access to healthcare across what has been controversially classified as the geological age of the anthropocene.

My paper examines how recent literatures on the novel coronavirus and on Covid-19 mobilize a vast viral archive of immunological concepts, metaphors, models and techniques. Predicated on a foundational separation between inside and outside, or between the internal, vulnerable, visceral space of the individual(ized) human body and an externalized, hazardous, contaminated environment, strategies for avoiding exposure became paramount, reciting a viral genealogy of preventative logics that encompass distancing, protection, containment and isolation. Engaging with the transdisciplinary methodologies of feminist technoscience studies, in particular authors like Evelyn Fox Keller (2000, 2002), Susan Squier (2003), Emily Martin (1994), Margrit Shildrick (1997, 2002), Karen Barad (2007), Michelle Murphy (2006) and Mel Chen (2012, 2020), my paper historically engages with scientific articles about the novel coronavirus and Covid-19, ranging from the fields of biomedicine, virology, immunology, biochemistry and genetics, alongside scientifically informed governmental and media reports. I seek to examine how older, influential or obsolete, viral models, metaphors and techniques animate cutting-edge biomedical research about the coronavirus pandemic and the vast range of embodied social practices they elicit.

Literature, Science, Policy

This panel explores contemporary thought and practice around the intersection of literature, science and policy. The objective is to present current work taking place at this intersection in order to prompt collective discussion about the challenges and opportunities for literature scholars, and literature and science scholarship, to interact with science policy and policy-makers. In this context, the papers focus in particular on science fiction, narrative, and the future.

Genevieve Liveley, 'Narratology and Cyber Security Policy'

This paper synthesizes the research findings from work in collaboration with the UK's National Centre for Cyber Security (NCSC), and the Research Institute in Sociotechnical Cyber Security (RISCS). Successfully managing risk in these contexts involves particular expertise in thinking about the future using "future-based information [and] acting in the present" (Poli 2017, 260; cf. Miller, Poli, and Rossel 2017; Miller 2018; Poli 2018). FL – defined here as "the capacity to think about the future" – is particularly important in the domain of security (including cyber security) because it helps to clarify the knowledge and understanding needed in order to achieve optimal risk assessments and plans for resilience. This paper offers fresh narratological insights into FL informed by an investigation into the ways in which we might better understand futures thinking by recognizing the impact of narrative frames upon our anticipation of future storyworlds, taking as an example of one such framing heuristic "the principle of minimal departure" – the cognitive bias that suggests we assume the conditions of any (future) fictional or possible world we encounter to resemble closely a (past or present) world with which we are already familiar.

David Calder, 'Science Fiction's Critical Utility in a Military Context'

Science-fiction uses allegory to provide insight, commentary, and criticism to challenge contemporary mind-sets across social, political, technological, scientific and military domains. My research uses science-fiction as a social tool for understanding politico-military issues. Such non-traditional approaches are actively investigated by the British military, especially as it seeks to improve its strategic decision-making after the Iraq and Afghan conflicts.

Literary theories linked to science-fiction suggests its main value lies in social criticism rather than prediction. That said, its critical utility enables it to challenge, at a philosophical level, our attempts to predict the future. As military practitioners and policy-makers seek to understand what conflicts in the future will look like, the lessons we glean from science-fiction can highlight flaws in our predictions and acknowledge where bias is present.

Working on the premise that science-fiction's social value is universal, it is possible to use it to interrogate culturally dissonant traditions and add depth to our understanding of strategic competitors. For example, much can be learned from examining China's science-fiction tradition which can help build towards mutual understanding across science, politics, culture and more. This is particularly critical as the UK's relationship with China evolves and a requirement to minimise strategic miscalculation grows.

Sarah Dillon, 'Decolonising the Sociotechnical Future'

The Western, colonial philosophical underpinnings of contemporary futures thinking – in academia and science policy – establishes a linear understanding of temporality, the social, political and epistemological consequences of which decolonial theory and southern epistemology (e.g. Sousa Santos 2016; Dussel 1993) expose. These include the exclusion of other understandings of time, the dependence of the story of scientific, technological and social progress on exploitation and violence, and the restrictions the idea of linear temporality places on the imagining of possible futures. This paper argues that attending to stories can also play an important role in the necessary process of decolonising futures thinking in order to make better decisions in the present about sociotechnical futures. Taking N. K. Jemisin's Broken Earth trilogy and climate change science and policy as a case study, the paper shows how the trilogy deploys its literary techniques (split narrative, geological temporal structure, capabilities of the trilogy as form, immortal narrator) in order to demonstrate an alternative conception of time to linear temporality, and to offer a narrative model that can contribute to public reasoning and science policy making about the types of societal structures and organisation needed in order to live in an era of recurrent climate risk.

Medical Spaces and Localities

Meredith A. Conti, 'Ether, Flesh, and Sweat: The Dramaturgy of Smells in Victorian Operating Theatres'

Historians of medicine and performance have long characterized audience-attended operations as theatrical events, their analyses relying largely (though not exclusively) upon the graphic optics of nineteenth-century surgery: trays of serrated instruments, bulbous tumors being excised from necks or thighs, effusive jets of blood spurting from a newly amputated limb. In doing so, contemporary scholarship partly reflects nineteenth-century positivist medical science's prioritizing of sight as the most crucial of the five human senses, as well as the ocular-centric written accounts of operating theatre procedures by Victorian physicians and medical students. And yet, allusions to the operating theatre's distinctive sounds and smells pepper these period accounts, gesturing toward a multi-sensory experience of performed surgery. I therefore would like to move beyond the operating theatre's landscapes and soundscapes to analyze its smellscapes, which continually transformed throughout the period thanks to scientific discoveries, technological innovations, medical theories of disease and putrefaction, and sanitation reforms. In this paper, I will assert that the smells of the operating theatre crucially contributed to a scriptive dramaturgy of Victorian surgical performance, explicitly marking the operations' stages (much like the popular theatre's segmented evening programs), cueing audience responses, and providing olfactory clues about the surgery's progress or the patient's condition.

Rosalind Crocker, '"Bring in the professionals" – Doctors, Clinical Spaces and Problems of Autonomy in Susanna Kaysen's *Girl, Interrupted* and Elizabeth Wurtzel's *Prozac Nation*'

Issues of narrative authority, authorship, and bodily and creative autonomy arise as central concerns of autopathographies (patient stories of illness). In terms of the treatment of mental illness, these concerns are further complicated, as decision-making abilities are doubted and authority shifts in favour of the clinician. This might explain why a genre ostensibly concerned primarily with personal experience and subjective interpretation continually revisits this dyadic doctor/patient relation.

Elizabeth Wurtzel's *Prozac Nation* and Susanna Kaysen's *Girl, Interrupted* consider the implicit power imbalances of the doctor/patient dyad in the context of perceived psychological incapacity, and within a period of adolescence in which the unruly, or 'chaotic', body reigns. Utilising key Foucauldian and Kantian theory around autonomy, I argue that by elevating the doctor figure to narrative prominence in this way, these autopathographies compromise aspects of the genre's supposedly autonomous imperatives, returning to what Kant considers 'immaturity' by deferring to institutional authority. I trace these narratives as part of a narrative, and medical, cycle in which reason is undermined, decision-making is deferred to 'capable' others, and continuing clinical dependence is ensured.

Graham Matthews, '"That damned nationalised medicine": NHS Narratives in Mid-Century British Literature'

Since the publication of A.J. Cronin's *The Citadel* (1937), the concept of a national health service (NHS) that is free at the point of entry has enjoyed lasting popularity. Yet, following its inception in 1948, the NHS faced a marked tension between provision and financing, and received vocal criticism in medical journals. The general practitioner, R.A. Murray Scott, complained in the *BMJ* that "our status in the social scale is going down week by week" while the Chairman of the Council of the British Medical Association obnoxiously stated that the "more unintelligent members of society […] regard the doctor almost as their servant, on tap at any time like water and electricity". Others dismissed the service as "a vote-catching piece of political propaganda". Several literary writers offered surprisingly negative representations of the nascent service and attempted to sway public opinion, especially among those who had not actually made use of it. This paper investigates the often partisan representation of the NHS in mid-century British novels by Evelyn Waugh, Nevil Shute, Margaret Drabble, Iris Murdoch, Richard Gordon, and Brian Aldiss alongside contemporaneous debates in the *BMJ* and *The Lancet*. These novelists attempted to shape perceptions of welfare and dramatised complex shifts in doctor-patient relations during a period which saw significant advancements in scientific medicine and the institutionalisation of healthcare.

Medicine – people and practices

Reham Almutairi, '"First, do not harm." Exposing the Hegemony of the Medical Model of Obesity in Vaught's *My Big Fat Manifesto* and Kann's *If It Makes You Happy*'

Despite the differences between fatness and disability, they share a history of being socially constructed and stigmatized by similar institutions, namely the medical institution. Therefore, approaching fatness using the social model of disability and Foucault's concept of the medical gaze, I will analyze Susan Vaught's *My Big Fat Manifesto* and Claire Kann's *If It Makes You Happy*, two YA novels featuring fat female protagonists, Jamie and Winnie, respectively. Throughout the story, Jamie and Winnie actively expose the contradictory nature of the medical model of "obesity," thereby deconstructing the myths and stereotypes surrounding fatness and fat bodies. I choose these two novels because they present detailed patient-doctor scenes that give the reader access to the experiences of a fat character who exists under the medical gaze and narrates her own story. Using these scenes, I will examine Jamie's and Winnie's encounters with healthcare providers in medical institutions in order to demonstrate the power of the medical gaze, one that produces a hierarchy of bodies with fat patients occupying the bottom rung.

April Thant Aung, 'Illness and Theatre in Singapore: Cultural Interpretations of Sickness'

To date, studies on theatre and medicine have primarily focused on Western plays and the corpus of more than thirty Singaporean illness plays have yet to receive critical examination. As a cosmopolitan city-state and international financial hub, Singapore is no longer composed only of diasporic Chinese, Malays and Indians; a diverse and heterogeneous culture now coexists alongside the three major groups. Diverse stories of sickness expose us to various cultural myths, attitudes and assumptions that provide a wider understanding of the phenomenology of the illness experience.

In this paper, I argue that the heterogenous performance of illness in Haresh Sharma's *Off Centre* (1993) and *Good People* (2008) and Paddy Chew's *Completely With/Out Character* (1999) reveals the ways in which illness is shaped by heterogeneous cultural discourses of Singapore. *Off Centre* sheds light on stigma and social attitudes towards mentally illness in Singapore and Chew's pathographic performance depicts the inscription of social conventions and stigma onto the bodies of HIV/AIDS patients. Meanwhile, *Good People* illustrates the ways in which the patient's ethnic background and religious beliefs shape her perceptions of illness and death. Overall, these texts make significant contributions to the field of medical humanities by providing crucial insight into the cultural understanding of sickness in Singapore.

Helena Ifill, 'Doctors and Patients, Scientists and Subjects: Agency and Control in *Fin-de-Siècle* Popular Fiction'

This paper explores the representation of the GP, or family doctor, in late-Victorian Gothic fiction. While the "mad scientist" (in the mould of Mary Shelley's Victor Frankenstein) continued to be popular, manifesting in *fin-se-siècle* literature as Dr Moreau, amongst others, this less prominent, but equally pervasive man of science started be a regular feature in Gothic fiction. While mad scientists are obsessive, hubristic and intellectually idealistic, the GP is opportunistic, manipulative and practical. Both types are morally detached, and take advantage of their patients/subjects for personal gain, but while the one is driven by a desire to further their own scientific knowledge, the other acts on far more mundane motivations, often financial. I suggest that the rise of the Gothic GP is a response to the changing professional status of Victorian men of science in general, and medical men in particular, but also to an associated power-shift in the doctor-patient relationship and a new cultural focus on medical ethics (and their openness to abuse). I will show how stories by Mary Braddon, Florence Marryat, and others reflect cultural anxieties about the growing specialist knowledge and social power of men of science and medicine, and a perceived lack of patient agency, particularly in relation to consent.

Doug Battersby, 'Medical Responses to Sensation Fiction: John Milner Fothergill and the Late Victorian Novel'

It has long been recognised that contemporary critics of 1860s "sensation fiction" frequently framed their critiques in a physiological or socio-medical idiom. What has been remarkably under-explored, however, is how practicing physicians responded to the phenomenon. This paper considers the medical and non-medical

writings of the prominent physician and onetime novelist, John Milner Fothergill (1848-88), illustrating how social anxieties about sensation fiction at once permeated and were amplified by medical discourse. From his first book onwards, Fothergill repeatedly warned of the dangers "the sensational character of modern fiction" posed to the sexual health of female readers. Yet Fothergill also employed conspicuously novelistic, even sensational, strategies to describe those dangers, producing allegorical narratives that were less etiological explanations than quasi-ethnographic descriptions of cultural ecologies that arouse deleterious forms of sexual desire. Indeed, it was both the literariness and luridness of Fothergill's medical works that divided his contemporaries, with one obituarist lamenting his "tendency to employ language of a more racy than scientific character." What emerges from the tension between Fothergill's explicit proscriptions and his own stylistic commitments is a surprising ambivalence, at once an apprehensiveness about sensation fiction's potential to stimulate intense affect and a tacit recognition of the effectiveness of its rhetorical strategies in attracting and sustaining readerly interest.

Physics

Emma Felin, '"MS. Found in a Bottle": The Mind as Maelstrom'

The second half of the nineteenth century saw the beginning of a wide-spread fascination with the vortex in science. Eager to abandon the rigid models of classical science, nineteenth-century physicists applied the flexible structure of the vortex to their theories of the atom and the ether. But by the time that Hermann von Helmholtz introduced the vortex into physics in 1858, Edgar Allan Poe had already experimented with the vortex as a way to better understand the nature of both mind and matter. Drawing on the theories of Arthur Eddington, Karl Popper, and others, I trace how Poe's work anticipated rapid shifts in nineteenth and twentieth-century science and beyond. I consider the unstable epistemological grounding of modernity, the destruction of empirical discovery, the role of the human observer, the 'insubstantiality' of physics, the heterogeneity of vortical space, and the impossibility of omniscient knowledge in an endlessly emergent universe. With a particular focus on 'MS. Found in a Bottle' (1833), I explore how the vortex mind fuses such binary oppositions as fullness and hollowness, fixity and flux, destruction and production, and concentration and diffusion. As we plunge into the depths of Poe's vertiginous world, we discover an authentic (albeit blurry) representation of the mind's encounter with matter.

Sophie Heuschling, 'Poems As "Broadening Event Horizons": Astrophysics and Formal Experimentation in Amy Catanzano's *Starlight in Two Million*'

Starlight in Two Million: A Neo-Scientific Novella was published in 2011 by American artist and poet Amy Catanzano. The book combines poetry with prose in a surrealist tale set in a faraway future, which employs staple science fiction tropes, such as intergalactic travel and virtual reality. In this novella, Catanzano references developments in twentieth-century astronomy and cosmology and plays with the image of black holes and Einsteinian physics in her experimental explorations of literary form and love. In my paper, I intend to explore the implications of as nihilistic a metaphor as the black hole to describe an emotion like love, which is shown to be outside of language, as even the scientific language of mathematics breaks down when it comes to describing the inside of a black hole. Moreover, I intend to show how Catanzano plays out the metaphorical and allegorical relations between a black hole and the romantic bond between two characters on the level of form: the fabric of her novella is twisted and almost torn around the two central protagonists of her love story, just like space-time is bent and distorted around a black hole.

G. T. Ryoo, 'Image as Energy: Ezra Pound and Electromagnetism'

Ezra Pound has an idea of poetry as a field of energy in which words interact with each other with kinetic energy. What Pound creates by juxtaposing words and lines is the poetry of 'field,' in which all discrete elements are joined and interrelated not by the connecting wires of syntax but by images or energies they carry with them. The energy field that Pound creates in his poem is analogous to the electromagnetic field introduced by Michael Faraday and James Maxwell, who look upon the space around magnets, electric charges and currents not as empty but as filled with energy and activity. Pound's concept of "image" as an "intellectual and emotional complex in an instant" is remarkably consonant with the confluence of electric and magnetic fields that are coupled to each other as they travel through space in the form of electromagnetic waves. This

paper explores how Pound's poetry reflects some principles of electromagnetism. Pound was aware of light and electricity fundamental to what he called his world "the electric world." His experiments in Imagism and Vorticism can be considered an attempt to (re)discover a place for poetry in the modern world of science and technology.

Race, Ethnicity, and Culture

Max Chapnick, 'Pauline Hopkins's Pseudo-Science: The Unclassified, "Wild Facts" of Race in *Of One Blood*'

The critical debate over Pauline Hopkins's 1902-3 serialized novel *Of One Blood* most often occupies the following binary: Hopkins is either complicit with or resistant to white middle-class ideology, and the latter view is winning. But what if we read this groundbreaking Black sci-fi novel as an early salvo against such binaries themselves; less Wonder Woman, and more Judith Butler? Without being ahistorical, I argue Hopkins fashions a sort of proto-post-structuralist examination of science and race that uses "wild facts" to undermine taxonomic categorization.

While the relationship between Hopkins and William James's essay "The Hidden Self" is well-trodden ground, further examination reveals how Hopkins extends James's anti-disciplinary intervention. No scholarship has yet taken a close look at James's opening section where he justifies deploying the dangerously unscientific concepts of animal magnetism and mesmerism as legitimate starting-points for investigating the unconscious. Hopkins, too, was a close reader of James, and in extending James's specific ideas about mesmerism, and more general intervention against categorization, Hopkins's particular form of resistance meant rattling, subverting, and otherwise messing with the increasing discplinization of science, and, in parallel, racial categories. Seeing how Hopkins undermines scientific boundaries, via her engagement with James in particular, will reveal how she undermines racial constructions.

Michael Hedges, 'Haunting Recordings in *White Tears* by Hari Kunzru and *Slumberland* by Paul Beatty'

This short video presentation explores mediated and unmediated sound as opposing manifestations of racialised haunting in *White Tears* (2017) by Hari Kunzru and *Slumberland* (2008) by Paul Beatty. The two novels construct very different models of acoustemology, or ways of knowing through/in sound. I argue that Kunzru and Beatty's texts are alive to the ongoing reappraisal of listening's role in knowledge production; I then go on to survey briefly how this reappraisal has inflected recent trends in the history of science (Bijsterveld 2018; Erlmann 2010), literary studies in general (Snaith 2020; Frattarola 2018), and my readings of *White Tears* and *Slumberland* in particular. In *White Tears*, two young musicians chance upon and record the ghostly blues of an unseen singer. This mediated voice awakens them to a lineage linking listening and aurality to black suffering and slavery (Smith 2001). In *Slumberland*, a Berlin-based African American DJ is blessed with a phonographic memory: because he remembers every sound he has ever heard, he experiences them without mediation. These novels detail how black experience becomes known through mediated and unmediated aural hauntings. This challenges the occularcentric bias of western modernity and Enlightenment science, which prioritise vision in the hierarchy of the senses.

Melissa Ho, 'Stigma and the Loss of "Face" in Singaporean Autism Narratives'

Autism research has largely focused on the Global North; the diagnostic criteria developed in those contexts and, in turn, the research based on the populations identified through these criteria have shaped how autism is understood globally. However, the social skills—or lack thereof—used to diagnose autism are not demonstrated in a vacuum; behaviours that might seem atypical in one cultural setting might attract less notice in another. In addition, other cultural factors—such as how collectivist or individualist a society is—have an impact on how disabling an apparent difference can be. Multicultural, multilingual Singapore provides a unique case for unpacking some of these factors: even with English as the *lingua franca* and easy access to other English-language cultural narratives, Singaporean society is not completely aligned with the Global North; inherited value systems and cultural norms persist in the face of this apparent openness to the rest of the world, and have a direct impact on local discourses about autism. Applying literary analysis to texts written

in Singapore can help shed light on the complex ways in which the stigma of being different is particularly disabling in a collectivist society. Through close reading three autism narratives, I explore how social embarrassment or loss of 'face' contributes to the difficulty in rewriting cultural discourses about autism in Singapore; extending these contextual considerations might help illuminate the diverse cultural receptions of autism in other parts of the world.

Science and Performance: BSLS/TaPRA Roundtable

Panel Convenors: Paul Johnson and Carina Bartleet

In the nine years since the last roundtable on Theatre and Science at the BSLS conference in Oxford and the *Interdisciplinary Science Reviews* special editions in 2012-13, there have been significant developments in research and practice exploring the interfaces and interplay between science, theatre and performance. This joint roundtable with the Science and Performance working group of the Theatre and Performance Research Association (TaPRA) will explore current and future key issues and debates in the field, addressing the following questions: How can scientific knowledge be interrogated by performance practices? How can performance explore the human implications of scientific knowledge and practices? How can scientific practices be understood through performance theories? How are scientists or scientific practices and ideas represented in performance?

These questions are increasingly urgent as we move through the 21st century, in terms of immediate challenges including climate change, energy and water security, data science, pandemic response, genetic engineering, and so on. Performance and science offer a range of ways of understanding and interrogating as well as communicating the implications for humanity and the planet of the choices that we make.

This roundtable will consist of eight pre-recorded 5-minute provocations, followed by a discussion with contributors from both the BSLS and TaPRA. This diverse roundtable will include the global south and non-Western traditions of medicine and science, and will bring together some of the contributors to new Routledge editions on Science and Performance and Performance and Medicine.

Science Discourse and Archives

Rachel Crossland, 'Letters from "a partial Editor": Periodical Science in the Archives'

Between 1903 and his death in 1908, chemist, senior science master at Clifton College and FRS W. A. Shenstone contributed eighteen articles to the *Cornhill Magazine*. Fourteen of these were collected in book form in 1906 as *The New Physics and Chemistry: A Series of Popular Essays on Physical and Chemical Subjects*, published, like *The Cornhill*, by Smith, Elder. Shenstone's popular expositions received high praise at the time for their clarity and accessibility.

There is very little archival information available on *The Cornhill* for the early twentieth century, but, in February 2020, a series of letters to Shenstone from *Cornhill* editor Reginald John Smith were purchased by Clifton College. In this paper, I will use these letters as a way of contextualising and filling in some of the gaps around Shenstone's popular science writings. Although these letters only provide one side of the conversation, we can see Smith's initial approach to Shenstone, his encouragement of Shenstone's 'most lucid' writing, and his suggestion that Shenstone include a 'unifying thread' in his articles in order to facilitate later book publication. Such archival sources add a new dimension to research on periodicals like *The Cornhill* in which the editor often remained hidden.

Sharon Ruston, 'In Defence of Science: Humphry Davy's Notebooks'

Sir Humphry Davy's notebooks, held at the Royal Institution, remain an underused and little known but very rich resource for Davy's thinking about the differences and similarities between poetry and chemistry. As a chemist who wrote poetry, Davy was ideally placed to compare them. This paper discusses Davy's implicit

competition with Wordsworth over whether science or poetry (two rival forms of 'invention') would be the dominant paradigm of the nineteenth century, a contest I argue that Davy ultimately won. I will examine the notebook in which Davy attempted a lyrical ballad that names 'the poet Wordsworth' on the same page as his nitrous oxide experiments and explore the synergies between the two. I then survey his candid, unpublished comments on poetry and science across his notebooks and his claims for the supremacy of the latter.

Eric Swartz, 'From Foundation to Demolition: Andrei Platonov, Adrian Duncan, and the Engineering of a New World'

This paper will outline the affinities between *The Foundation Pit* (1930) by Andrei Platonov and *Love Notes from a German Building Site* (2018) by Adrian Duncan that will form the basis of a more thorough study. Both Platonov and Duncan were engineers before they were novelists, and major characters in both novels are engineers assigned to a construction project with obvious political significance. One engineer, working in the early Soviet Union, digs the foundation for an ambitious public housing project; the other converts the shell of a concrete block in the former GDR into an electronics store. Broad parallels could be drawn between *Love Notes* and many dystopian novels, but the driving metaphors of both *The Foundation Pit* and *Love Notes* are rooted in the technical and procedural details of construction under different regimes and in different technological eras; in fact, like *The Foundation Pit*, *Love Notes* can be read as an ironic entry in the Soviet 'production novel' genre, which valorised the engineers and labourers working to rapidly industrialise the new state. In 2018, as in 1930, the material failures of a physical structure reflect scepticism about the character of the progress its engineers will finally achieve.

Sarah Fruehwirth, 'Discourses of Determinism in British Sensation Novels of the 1860s and 1870s'

In this paper, I would like to present the results of my PhD thesis, which deals with the influence of scientific discourses of determinism on selected sensation novels of the 1860s and 1870s: Nineteenth-century sensation novels are characterised by a strong emphasis on determinism. In order to rationalise the actions of their characters, sensation novelists tapped into a wide variety of scientific discourses of determinism, including medical and psychiatric discourses, discourses of sexual selection, discourses of heredity, discourses of environmental determination, discourses of adaptation/maladaptation and discourses of nurture (or education). As I argue in this paper, sensation novels proved to be the perfect vehicle for deterministic ideas. After all, "it was precisely the question of evil in the world that fuelled the free will debate in the nineteenth century" (John Reed, *Victorian Will* 36). Since sensation novels drew on a range of crimes and moral failings (like murder, forgery, bigamy and adultery), the employment of discourses of determinism enabled sensation novelists to negotiate matters of guilt and responsibility. However, as I am going to show, sensation novelists did not use discourses of determinism to exonerate their characters from responsibility. Although character in sensation fiction is to a large part moulded by the forces of the mind, heredity, education, and social and physical environment and although many events in sensation novels appear to be 'fated', the genre nevertheless advocates a compatibilist position rather than hard determinism.

Jenni Halpin, 'Poetical Science, from Theology: Ursula K. Le Guin's "A Cento of Scientists"'

"Science"—as a vague label for a kind of authority, process, epistemology, or ontology— tends to stand in contrast to various not-sciences, and these contrasts regularly become oppositional, even conflictual. In this presentation I will be reading Ursula K. Le Guin's "A Cento of Scientists," in which the quotations making up the poem are associated with Charles Darwin, Galileo Galilei, and Giordano Bruno, all of whose ideas about "science" have been frequently understood as challenges to Christian theology. My argument will develop through consideration first of how Le Guin's selective quotation and repetition works in relation to the language of divinity in the original sources from which she draws and then of how the cento, as a form, reinforces the status of the scientific language used here as poetical language. I hope to show this poem as an example of one way in which, in the interchanges among science, literature, and theology, theology gives way to the others. This case study is part of a larger project seeking to model reconciliations and productive interactions among two interdisciplinary fields often represented as bridging conflictual divides: science and literature and science and theology.

Scientific Knowledge, Culture, and Identity

Michael Whitworth, ‘Situating Selfhood in a Scientific Universe, 1925-1931’

This paper will consider three modernist long poems that are concerned, in different ways, with the growth of the self, and that situate that self in a wider material universe: Mina Loy's ‘Anglo-Mongrels and the Rose’ (written 1923-25), Richard Eberhart's *A Bravery of Earth* (1930), and C. Day Lewis's *From Feathers to Iron* (1931). Loy's and Eberhart's are autobiographical poems, while Day Lewis's concerns the conception and gestation of his first child. Though not immediately identifiable as epics, they derive from epic tradition, via Wordsworth's *The Prelude:* they are concerned not with the founding of a city-state, but, like Wordsworth, with the founding of a consciousness; they attempt to situate that founding in the material universe known to science. They are also epic in the sense that they situate individual agency in a cosmos ruled by larger forces, though the forces are not divine but material. In doing so, the poets may have been mindful of T. E. Hulme's anti-Romantic injunction against "dragging in the infinite", of the revival of metaphysical lyric poetry, and of the middlebrow scientific epic of Alfred Noyes, *The Torch-Bearers* (1922-1930).

Yi Zheng, ‘Practical wisdom in literary studies’

What does Gadamer mean when he says the “Geisteswissenschaften” have a special understanding of truth in contrast to the natural sciences? On the one hand, from the perspective of the history of philosophy, I argue that, according to Gadamer, this special understanding of truth is based on “phronesis”, or practical wisdom, which cannot be verbalized and thus can only be learned by practice. Practical wisdom, in Gadamer’s understanding, then becomes closely related to Michael Polanyi’s “tacit knowledge”, as he famously notes that “we know more than we can tell”, and Lorraine Daston’s “trained judgment”, which “relies on unconscious processes that cannot even be introspected, much less recorded”. On the other hand, from a contemporary perspective, I argue that instead of simply citing Aristotle (as Gadamer does) we need psychology and empirical experiments to prove that we indeed have this unique, unformalizable wisdom that can distinguish literary studies from the natural sciences. Gadamer often regards the natural sciences as an enemy or “hegemony” against the humanities, as if the humanities will lose its legitimacy if we consider them from the scientific perspective. However, the psychology of wisdom, a growing field of scientific study since the 1980s, actually partially supports Gadamer’s argument that knowledge or understanding is not always reducible to language. I thus aim to use the research from the psychology of wisdom and argue that one of the key differences between literary studies and the natural sciences is that practical wisdom plays a more important role in the former than the latter. While practical wisdom is also indispensable in the natural sciences, the scientists try their best to minimize its influence so that their knowledge can be easily transmitted and understood. The literary scholars, by contrast, cannot (and might not want to either)

Krutika Patri and Fabian Hempel, ‘Manu Joseph's "Serious Men" as a Subaltern Prism on Modern Science and Indian Society’

In our presentation we propose an intersectional reading of Manu Joseph's "Serious Men" to explore the relationship between modern science and Indian Society. The novel reflects, among other aspects, on the Janus-faced impact of the institutionalization of science in modern India from a subaltern perspective. In that regard, Joseph's contemporary story of a lower-class, Dalit assistant and an upper-class, Brahmin director of a fundamental research institute in Mumbai offers two interpretative angles:

1. A hegemonic position of collision avoidance as indigenous forces re-direct the organization of science to preserve/entrench the traditional social order.

2. A subaltern position that attempts to break the wheel of conservative and contemporary social stratification as characters excluded from institutional positions of power exercise their agency to manipulate the political strife within their workplace.

In the first reading, the autonomy of science degrades into social irresponsibility; in the second, the autonomy of science is used, for right or for wrong, as a weapon against multiple structures of oppression. Based on both angles, the novel sheds new light on the conventional view of an autonomous science as a self-evident component of the „package” of (apparently postcolonial) modernities.

Eva Charlotta Mebius, 'Apocalyptic Air – H. G. Wells's Time Traveller and Catastrophic Consumption'

Critics have long speculated and disagreed over the identity of the anonymous Time Traveller in Wells's *The Time Machine* (1895). Martin T Willis argued that Thomas Edison was the most likely inspiration, but also admitted that there was no consensus as to the Time Traveller's identity. Willis identified three schools of thought, as it were, 'those who see the Time Traveller as a poor example of the late Victorian scientist, those who view him as a scientific Everyman, and those who find him a reflection either of Wells himself or of some mythic precedent.' There is no doubt that Wells's iconic novella grew out of a rich panoply of sources. However, this talk will re-evaluate pertinent details from Wells's correspondence between the years of writing and publication of *The Chronic Argonauts* and *The Time Machine* respectively (1888-1895), which has been overlooked by critics in the ongoing debate over the identity of Wells's Time Traveller. In fact, as I will show, the novelist equipped the Time Traveller with an object directly associated with H. G. Wells himself, blurring fact and fiction, author and protagonist. More specifically, this talk will show how Wells drew on his own experience of consumption for his apocalyptic vision of the future.

Jordan Kistler, '"I cannot tell you all the story": The failures of the museum in H.G. Wells' *The Time Machine*'

The Palace of Green Porcelain in H.G. Wells' *The Time Machine* is as much a fantasy as any other element in the novel. A vast museum, it houses scientific collections – paleontological, geological, chemical – historical collections – military, ethnographic, classical – and a colossal library. In 1895, when the novel was published, no such museum existed in Britain. The Palace both represents and explodes the Victorian dream of universal knowledge, which was to be embodied in the 'universal survey museum'. Ironically, it was the very quest for universality which destroyed this dream; no one building can contain everything, and by the time Wells wrote his novel, the collections he places in the Palace were spread across London, from Bloomsbury to South Kensington. This paper will consider the downfall of the dream of universal knowledge—which would encompass both science and literature—at the end of the nineteenth century, dramatically enacted in *The Time Machine*'s Palace. The museum represents the foibles of Victorian historicism, with its claims to cohesion and universality, and is a material testament to its result: the mere fragments left behind.

Subjects of Human Knowledge: Anthropology in Contemporary Fiction

Anna Auguscik, 'Relations of Observation and the Formation of the Anthropological Subject in Lily King's *Euphoria*'

Karsten Levihn-Kutzler, 'Hanya Yanagihara's *The People in the Trees* as Epistemological Allegory'

Anton Kirchhofer, 'Human Knowledge and Machine Anthropology in Ian McEwan's *Machines Like Me*'

Over the past decade or so, a substantial number of novels featuring anthropologist protagonists have been published to wide-spread acclaim. Hanya Yanagihara's *The People in the Trees* (2013), Lily King's *Euphoria* (2014), both set in the south Pacific, and Ian McEwan's *Machines Like Me* (2019), set in an alternative-history London, all draw on phases in the twentieth century history of anthropology (from the 1920s to the 1980s). In addition, they share further characteristics. The novels all feature fictional – or fictionalised – anthropologists that are engaged in complex constellations of anthropological observation and situate anthropological inquiry in relation to other scientific disciplines as well as evolving cultural concerns. In all three novels, too, the production of anthropological knowledge coincides with the death or destruction of the beings investigated. Our three contributions will engage with such characteristic structural elements of the novels which recur with variations in all three novels (triangular character constellations, shifting subject-object relations, etc.). They will also explore how each novel addresses the history and internal fault lines of the discipline of anthropology, as well as anthropology's distinctive position in the knowledge discourses of modern societies. In a discipline precariously poised between the claim of scientific practice and cultural reflexivity, the problematization of the role of the observer has historically been a disciplinary hallmark, and so has the sense that it was describing objects constantly on the cusp of being erased by the tide of modernity. The panel will outline the complex

constellations of observing positions in the three texts and show how each revisits a moment in the history of anthropology in order to interrogate the entanglement of observation and destruction that became foundational for the modern understanding of the human – a conception which is also now at stake in the Anthropocene.

Technology, cognition and perception

Patrick Armstrong, 'Fibre Optics: Extensions and Limitations of Vision in Virginia Woolf's Prose Fiction'

Taking its cue from Virginia Woolf's discussion of Marcel Proust in her 1929 essay 'Phases of Fiction', this chapter explores the 'double vision' of 'The Searchlight' (c. 1929) and *The Waves* (1931), two texts that investigate the limits of observation and expression. I show how Woolf's interest in the extensions and limitations of perception, seen through the interrelated lenses of telescopy and microscopy, was stimulated by popular scientific and philosophical texts that she encountered in the 1920s and early 1930s. The twentieth-century discoveries of quantum mechanics resonated with Woolf's attraction to Lucretius's ancient atomism, facilitating analogously unstable and unsettling representations of the natural world. In the light of these cultural and historical contexts, both literary and scientific, I read *The Waves* as a text that fundamentally questions and tests the limits of extending imaginative vision shortly before the dawn of electron microscopy. Though it is widely recognised that Woolf broke down familiar ways of representing character and experience (thus rejecting the conventions of literary 'realism'), attention can be simultaneously directed towards her attempts to break down habitual ways of experiencing and solidifying the world around us, through a text that mediates and makes visible a newfound consciousness of the unpredictability and immeasurability of life and matter at a fundamental level.

Alessia Pannese, 'Surrealism as mediator between mechanicism and vitalism'

Early twentieth-century advances in physiology, following the discovery and characterisation of the autonomic nervous system as essential adaptive mechanism fully independent from volition, led to growing awareness of the central role of automaticity in human thought and behaviour. Reflecting this growing awareness, American philosopher and psychologist William James declared that 'nine hundred and ninety-nine thousandths of our activity is purely automatic'. This progressive understanding of the role of automaticity in physiology was mirrored by growing interest in the role of automaticity in modern art. Echoing James's claim that most human activity is 'purely automatic', French poet André Breton held Surrealism to be '[p]ure psychic automatism'. Surrealists strove to free their work from rational restraints by becoming spectators of their own subconscious, relinquishing control over their own selves, and turning into passive vessels for creative forces. To this end, they developed techniques of automatic drawing and painting, through which they sought access to the 'superior reality' of the automatic thought. In this paper I examine ways in which Surrealism both exploited physiological advances in the understanding of human automaticity, and challenged their significance for the understanding of the human individual as a free agent, wilfully in control of its own thoughts and actions. I argue that, by combining automaticity with creativity into artistic techniques (e.g. automatic drawing and painting), Surrealism positioned itself as mediator between philosophical vitalism and physiological mechanicism, because it implied an understanding of automatic and creative facets of human nature as mutually compatible.

Claudine Bollinger, 'Extended Minds in Aliette de Bodard's Xuya Universe'

Examples of technologically extended cognition proliferate in contemporary science fiction. No longer does the spaceship captain have to input commands vocally, but brain implants often enable them to communicate said commands via thought-transmitting devices. Similarly, memory can be extended with a direct link to databases or an AI. Such technology represents literal and amplified instantiations of Andy Clark and David Chalmers' Extended Mind Thesis, which posits that actual human cognition can extend beyond the body. What Clark and Chalmers propose as a complication of the limits of the self is intensified in these works of science fiction.

In her Xuya universe, Aliette de Bodard presents such an intensification that is defined by both machine- and corporeal bodies, as well as interpersonal relationships. Most of her Xuya short stories and novellas take place

in a far-future Vietnamese spacefaring culture and focus on family ties, obligations, and conflicts between characters. As a result, cognition-extending technology is heavily enmeshed in networks of bodies and familial ties consisting of, e.g., simulated ancestors as advice-giving brain implants, or sentient spaceships whose core was carried to term by human women that are considered to be their mother. Using Clark and Chalmers, as well as the concept of mindbodies (N. K. Hayles), the relevant Xuya technology can be shown to virtually collapse the mind-body problem in a manner specific to science fiction.

Martin Willis, 'Contemporary Sleep Science and the Technological Imaginary'

Contemporary sleep science has contributed to the production of a variety of technologies supportive of restorative sleep. These range from individual technologies such as sleep applications and wearable sleep devices to large scale sleep systems such as the sleep pods increasingly common on global corporation headquarters. These sleep technologies have become a common part of our recent somnoculture. In this conference paper I will examine how these sleep technologies both enhance and reify human sleep. I will consider the tensions that exist, for example, between the improved individual health that sleep enhancement devices can bring and the regulatory regimes in which they entangle their users, often to elicit increases in productive energy dedicated to the growth of capital production. To support this analysis I will consider both recent popular science writing and contemporary popular fiction. In these complementary narratives, in Matthew Walker's *Why We Sleep* (2017) and Jasper Fforde's *Early Riser* (2018), sleep's conflicted relation to bodily ease and productive energy is played out. I will conclude by arguing that contemporary sleep technologies produce a somnoculture where there is no opportunity to disaggregate the self from capital; that individual sleep is always polluted by capitalist desires for future energy.

Time

Catherine F. Belling, 'Horror Time'

This presentation considers relationships between time and horror (both affective response and the genre named for its efforts to generate that response). Where fear is proleptic, anticipating an unwanted future event, and regret is analeptic, wishing the past were different, horror is a present response to a present stimulus, both in the sense of immediate fright and as the recognition of an appalling truth that has always been continuously present yet hidden until now. In both forms of its presentness, horror challenges narrative time. The sympathetic nervous system's adrenalin flood freezes attention, and horror's anagnorisis ruptures the assumptions about change, causation, closure, and control that enable narrative to organize time. As illustration, I use two quite different texts. Psychiatry's *Diagnostic and Statistical Manual* used to use "horror" as a criterion for PTSD, but the chronology of trauma identification and treatment was thwarted by the perpetual present of the memory of horror. *The Third Day* (BBC TV 2020) is a folk horror series; one 12-hour real-time episode illuminates the genre's engagement with time and place in an archaeological revelation of culture's atrocity and nature's indifference. In both, horror points to a non-narratable substrate embedded in our bodies, histories, and environments.

Melanie Bonsey, 'Looking Back at/from the Future: A Study of Narrative and Time in P. D. James' *The Children of Men* and Margaret Atwood's *The Testaments*'

P. D. James' *The Children of Men* is set in 2021: a dystopian not-too-distant future from the vantage point of the early 1990s, when the novel was first published. As 2021 dawns in the real world, the reader's perspective shifts and James' novel becomes a narrative of the *now*. Like James' novel, Margaret Atwood's *The Testaments* is speculative fiction, and contemplates a world where human infertility is a threat to the future of the species. In a structural repeat of her 1985 prequel, *The Handmaid's Tale*, Atwood closes *The Testaments* with a framing narrative, which provides a future perspective on (probably, though not definitely) an imagined late-twentieth-century world.

This paper will argue that the use of framing devices and the resultant interplay between future and past impacts upon perceptions of events narrated in these novels. Reflecting twentieth-century developments in scientific thinking on the nature of time ('The laws of science do not distinguish between the past and the future,' says Stephen Hawking1), past and future become interlinked. Through the closing framing narrative of *The Testaments* – a future lens through which the reader views events – the narrative 'present' is recast as a distant past; one that has been reconstructed from historical fragments. Whereas, as 2021 rolls around, the

temporal setting of *The Children of Men* is on the brink of becoming a 'former future'2 - an imagined future transmuted into a version of the past. This is anticipated by the framing of the main events of the novel with entries from the protagonist's diary - a narrative mode that characteristically deals with past events rather than future ones.

Richard Luke Fallon, 'Coroner of Creation: George McCready Price (1870–1963) and the Unwriting of Deep Time'

Evolution and geoscience are two of the best-known subjects within literature and science studies, many scholars having explored how unintuitive concepts like natural selection and deep time were conceptualised, popularised, and reshaped in writing. It is interesting, therefore, to consider how these concepts were subsequently *unwritten* by Christian Fundamentalist authors. The Canadian-American Seventh-day Adventist George McCready Price is recognised as the effective founder of modern young-earth creationism. Price has received significant attention from researchers into science and religion, but his vast print output has not been examined by literature and science studies, despite its fascinating antagonistic relationship with classic books like Charles Lyell's *Principles of Geology.*

This paper examines the literary strategies of a range of Price's works, including *Illogical Geology* (1906), *The New Geology* (1923), and *The Phantom of Organic Evolution* (1924). I argue that in these works, typically published by evangelical presses, Price strategically upset familiar tropes of geological and palaeontological writings, including the 'romance' of science, the literary reconstruction of prehistoric scenes, and the use of theoretical diagrams. Instead, he fashioned himself into a sober geological coroner, throwing out almost all hypotheses and analysing the sparser evidence that attributed almost all fossils to Noah's Flood.

Billie Gavurin, '"A thousand weary centuries": a palaeontological reading of Oscar Wilde's "The Sphinx"'

In this paper, I will offer a reading of Oscar Wilde's 1894 poem 'The Sphinx' as participating in a nineteenth-century 'culture of excavation' that frequently elided palaeontological and archaeological fragments. I will begin by examining the more-or-less contemporaneous blossoming of interest in both geology and archaeology across the nineteenth century, and how the two disciplines were at that time regarded as closely linked, if not one and the same. As a result, ancient archaeological artefacts (in particular those of Egyptian origin) are frequently associated with ideas of 'deep time' or prehistory in nineteenth-century literature. I will go on to present a reading of Wilde's poem that links his references to the apparently mythical creatures with which his sphinx consorts – including 'dragons', 'giant lizards', and the biblical monsters Leviathan and Behemoth – with contemporary ideas surrounding dinosaurs and other prehistoric animals whose excavated remains were being newly understood and interpreted across the century. Ultimately, I hope to suggest that Wilde's 'The Sphinx', while superficially a poem dealing with purely fantastical themes, is in fact deeply influenced by contemporary palaeontology.

Karina Mathew, 'The Archaeology of Extraterrestrial Communication: Monoliths, Artifacts, and Encoded Objects in Contemporary Science Fiction and NASA Missions'

Studies of the "last frontier" of interplanetary and interstellar space--with its wilderness of mysterious worlds harboring potential lifeforms and intelligences--prompt an anthropological curiosity and archaeological investigation into the consequences of contact. From Arthur C. Clarke and Stanley Kubrick's *2001: A Space Odyssey* , to Arkady and Boris Strugatsky's *Roadside Picnic,* to Denis Villeneuve's *Arrival,* and Jeff VanderMeer's *Annihilation* , communication with intelligent extraterrestrials is fragmentary, scattered, and cryptic, but, most importantly, embodied. Such fictional found objects are echoed by initiatives in recent decades to send our own "message in a bottle" into interstellar space via the Voyager and Pioneer missions, awaiting decipherment--and response--by intelligences equal to our surpassing ours. And with the 2017 detection and controversy about the potential extraterrestrial artifact, Oumuamua, we may be on the verge of embarking on an astroarchaeology of interstellar objects. These imagined and potential futures, in which humans and extraterrestrials have breached the safety of cosmic silence, pose a daunting question: can communication be achieved without fundamentally transforming or displacing the human, or does the very process of understanding the extraterrestrial demand cognitive and biological entanglement?

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