Exchanges

The Interdisciplinary Research Journal

Volume 8, Issue 2 (Winter, 2021) - Special Issue

Issue Highlights:

- Ecological destruction and consumerist society
- Lessons, lenses & learning from climate fiction literature
- Mainstream representations of environmental crisis
- Radical environmental activism and green utopianism
- Reflections on the Utopian Studies Society conference

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Exchanges is a scholar-led, peer-reviewed, diamond open access, interdisciplinary, online-only journal dedicated to the publication of high-quality work by researchers in all disciplines for a broad scholarly audience. No author fees or subscription charges are levied, and contributors retain their author rights. Since 2013, the title has attracted innovative research articles, critical essays and interviews from emerging domain experts and early career researchers globally. The title also publishes scholarly work by practitioner authors and independent scholars.

A Managing Editor-in-Chief based at the University of Warwick oversees development, policy and production, while an international Editorial Board comprised of early career researchers provide advice and practically contribute to editorial work. Associate editors are recruited to participate in producing specific special themed issues. Exchanges usually publishes two issues annually, although additional special themed issues are periodically commissioned in collaboration with other scholars.

Exchanges' twin missions are to encourage intellectual exchange and debate across disparate research communities, along with developing academic authorial and editorial expertise. These are achieved through providing a quality assured platform for disseminating research publications for and by explicitly cross-disciplinary audience, alongside ensuring a supportive editorial environment helping authors and editors develop superior academic writing and publishing skills. Achieving enhanced contributor esteem, visibility and recognition within these broader scholarly communities is a further goal.

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A Change in the Wind: Editorial, Volume 8, Part 2

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> *In the third millennium, the world changed. Climate, nations, all were in upheaval. The Earth transformed into a poisonous, scorched desert, known as 'The Cursed Earth'. Millions of people crowded into a few Megacities, where roving bands of street savages created violence the justice system could not control. Law, as we know it, collapsed. From the decay rose a new order, a society ruled by a new, elite force. A force with the power to dispense both justice and punishment. They were the police, jury and executioner all in one. They were the Judges.* (**Judge Dredd, 1995: Prologue**)

Introduction

Welcome to the seventeenth edition of *Exchanges: The Interdisciplinary Research Journal*, and the second of our special issues. This issue we are especially pleased to be able share with you a collection of work which was inspired by and from the *20th International Conference of the Utopian Studies Society*, hosted in Prato, Italy in Summer 2019 (**USS, 2019**). If this is your first issue of *Exchanges*, then welcome, it is always lovely to have new readers. Conversely, if you are one of our growing number of regular readers, then you are equally welcome back with us once again!

Blowing in the Wind

It is difficult to imagine a more different environment to be writing this editorial today to that experienced around the Prato conference in 2019. Climate, socio-political and public health realties have diverged considerably from what was the norm not so many months ago. Working from home, I am looking out at a grim, rain lashed rural British landscape on the day a new US president is being inaugurated, while a pandemic continues to rage, alongside the ongoing debacle of 'Brexit dividend', for those of us in the UK. A salutary lesson for a volume focussing on climate fiction (cli-fi) on how fast and hard the winds of change can blow across the lands. Change remains the only constant.

Back eighteen months ago though, in the mid-summer European heat wave, I recall enjoying an untroubled evening stroll in the light and warmth of an Italian town. There was no thought given to now routine experiences like social distancing' or furtively dodging local inhabitants while exploring

the picturesque streets either. If you have never visited Prato, perhaps dashing onward to nearby Florence, I would strongly encourage you to take the time to visit this glorious locality, with its fascinating streets, foods and warm, welcoming people. Our venue for the conference itself, at the Monash University's Prato Centre, was a similarly hospitable environment.

Attending this conference remains then in memory a gloriously sun-drenched vignette. While the pressures of work dictated I was only able to briefly attend to contribute to a workshop and promote the call for this issue (**Johnson, 2019**), it was still an experience I will continue to treasure. I hope the same may be said of the work we are presenting for your edification, information and delight in this cli-fi special issue too.

This too is an issue of *Exchanges* which back in the pre-COVID days we had intended have ready to share with our readership in the latter half of 2020. Sadly, early last year as circumstances changed around the globe, seemingly on a daily basis, it rapidly became obvious to myself, the Editorial Board and our wonderful team of associate editors how this wasn't likely to be possible. Speaking with the authors and reviewers, labouring away around the world helping to create this issue, it was clear some were experiencing some very intense personal and professional challenges. These variously impacted on their abilities to contribute, write or even respond to enquiries, as new home-life and work-time challenges came to the fore. For others, difficulties were even more existential, in terms of career and personal life.

It is why, considering those pieces we have managed to include, I could not be prouder of everyone whose efforts have contributed in some way to realising the goal of creating this special issue. There are, regretfully, more than few promising manuscripts which we have had to discount from inclusion, mainly where their authors became unable to continue developing them with us. That many of these 'lost works' were well on their way towards being exceptional pieces of research communication means I genuinely mourn their loss. Certainly, *Exchanges* wishes these authors every future success, and hopes their working and life experiences are on the road to a better place. Moreover, we sincerely hope these manuscripts or versions of them will flower again, albeit in some other organ or format, as the authors each had much of worth to share.

It is though, a truth rarely publicly acknowledged, that not everything an editor works on will see the light of publication. It does not diminish the considerable personal effort deployed by the editors themselves, simply because a piece they have guided and nurtured for many months fails to reach the finish line. It can be a frustrating and perfunctory outcome, although, something editors will encounter throughout their professional career. As such, before we give full bloom and celebrate those authors

whose works comprise this volume, I would like to pay particular tribute to my associate editors who contributed their time, labour and enthusiasm to realise this, our second special issue.

Alongside their efforts for *Exchanges* each associate editor has each had the opportunity to gain a, hopefully, valuable learning experience within the arcane arts of the academic editor. I have discussed the outcomes elsewhere at some length (**Johnson, 2020 & 2021**), and they also feature as the central topic for discussion in our most simultaneously launched podcast episode (**Exchanges, 2021**). Hence, I'll not belabour them here and will move swiftly to the heart of this issue in a moment. Nevertheless, I will fully acknowledge the old aphorism has held true, in that myself and the journal have probably learned as much from the experience as an editorial community, as have our post-graduate associate editors.

Amul, Giulia, Lorenzo, Melissa and Nora have not only been fine, insightful and good-humoured co-workers, they have also helped us develop as an academic journal title. In part, this has been in the clarity imbued through revisiting our protocols and processes, as one must when training new team members, and seeing them afresh. Their involvement too has helped the title grow in recognition, has been professionally satisfying for myself as the editorial lead. Moreover, it has been a most positive experience in terms of rationalising and delineating the practical issues underlying the development of future special issues. Crucially, they have helped more clearly reify, professionalise and evolve what was our nascent associate editor programme, for which I am personally extremely grateful.

Theme: Climate Fiction, Friction & Fact

> *Empathy, he once had decided, must be limited to herbivores or anyhow omnivores who could depart from a meat diet. Because, ultimately, the empathic gift blurred the boundaries between hunter and victim, between the successful and the defeated.* (**Dick, 2009**)

Having dispensed with the preliminaries, let us move on to the articles which comprise the core of this special issue. As our call for papers read, these are each inspired by or derive from the *Utopia, Dystopia and Climate Change* conference (**USS, 2019**), meaning as befits an interdisciplinary journal, the topics are fairly wide ranging. Given the considerable positive reaction we experienced with our very first special issue, as reflected in how frequently many of those articles have been downloaded over the past year, I would anticipate a similar reaction for many of the pieces which follow.

Introduction

We are grateful to Ian Farnell for providing our opening piece for this volume, and especially in offering us some personal critical reflections and insights into the 2019 Uptoian Studies Society conference itself. *In Things are Heating Up* Farnell provides an overview of the 'hot topics' residing at the conference discourse's heart, exposing themes of scepticism, change, resistance and activism threaded throughout the event. At the same time the piece considers how 'utopian principles' can be deployed to examine the conference, society and the workings of utopian studies itself. As a piece, it provides an ideal contextualisation of for the other articles in this volume, while also offering the reader a taste of the event itself (1).

Articles

Moving to the main articles, we begin with Heather Alberro in a piece entitled *In the Shadow of Death*. Here, Alberro examines how the diverse socio-ecological crises which typify the Anthropocene have given rise to a new form of green utopianism. Beginning with a succinct definition of this epoch, Alberro continues to explore how this 'ecotopianism' has shaped the modalities and activities of radical environmental activists (REAs). Drawing on empirical work centred on interviews with selected activists, the article offers some authentic insights into the REAs thinking, motivations, hopes and fears alike with an eye-opening and intriguing frankness (8).

Our next article comes from Clarisa Novello, and is entitled *Ecological Destruction and Consumerism*. The piece commences from a consideration of literature which centres on themes concerning anthropogenic climate change. It argues such literary works will likely awake the curiosity of readers, through their articulation of the urgent and unpredictable nature of the climate crisis. Taking as its main text Trojanow's novel *EistTau*, the article progresses to examine how such works can aid in individuals developing a greater attentiveness to nature, while also examining the exposed socio-political and cultural power-relationships. The article concludes by exploring how such reading such literature can, arguably, lead to beneficial, behavioural modifications leading to positive lifestyle changes (28).

We progress from considering written narratives to mass media portrayals of environmental collapse. In *Climate Fiction and its Narratives*, Ana-Clara Rey Segovia considers contemporary dystopian cinema, in an exploration of imagery, plot and structure of *The Day After Tomorrow* (2004) and *The Day the Earth Stood Still* (2008). Rey Segovia postulates that such mainstream representations of environmental crisis are perhaps fickle in any consciousness raising outcomes in that they typically and knowingly sidestep authentic examinations of causative agencies. Instead, they

underscore how these works instead draw more clearly on more Judaeo-Christian tropes of guilt and redemption, in their representation and resolution of apocalyptic events (47).

Returning to novels, Adrian Tait shares with us a piece entitled *Environmental Crisis, Cli-fi, and the Fate of Humankind in Richard Jefferies' After London and Robert Harris' The Second Sleep*. Separated in publication by over a century, at the crux of both of these novels are post-technological collapse civilisations existing in a natural world now undergoing a resurgence. Resonating with other climate fiction (cli-fi) publications, these books are each concerned with the unanticipated global impacts that modern, industrialised societies create. However, Tait firmly stresses that neither spotlighted novel grieves for what was nor act as warnings to the reader. Rather they postulate questions as to whether the risk and uncertainty emanating from the respective prior technologically-derived civilisations' legacy are something which successor societies can ever truly escape (69).

Next, Robert Horsfield offers us a close reading of Phillip K Dick's seminal novel *Do Androids Dream of Electric Sheep? Borders in the Anthropocene*, Within it, Horsfield provides the reader with what they term an 'ironic' consideration of the Anthropocene, and especially how this can be deployed as a lens to explore Rick Deckard's world, shorn as it is of living, organic animals. Drawing on Nick Land's work on Kant, the article further considers balancing the metaphysical conundrums against the material practicalities within the novel's protagonists' lifeworld (84).

Our final article, entitled *Climate Fiction and the Crisis of Imagination* is from Chiara Xausa and is concerned about the work of Alexis Wright. Focussing on Wright's books *Carpentaria* and *The Swan Book*, it examines how each represents elements of environmental and climate crisis. Xausa's thesis is that Wright's work offers essential insight to exposing hidden elements of the climate crisis while also supporting global conversations about the Anthropocene. They argue too that Wright's writing can contribute great value when analysing other literary representations of this epoch (99).

Critical Reflection

Our very final entry in this climate fiction special issue, is a very personal critical reflection from cli-author Sarah Holding. In *What On Earth Can Atlantis Teach Us?*, Holding presents and contextualises her recently published novel *Chameleon*, which set against a pre-historic period of extreme climatic shift. In this way, they argue that events from antiquity have direct relevance and lessons for surviving and adapting to the devastation from climate change. Ending on a hopeful note, Holding

suggests that cli-fi narratives help through demonstrating how the planet, and our successors, may well yet survive the coming climatically challenging era (120).

Current Calls for Papers:

If all these papers have whetted your appetite to consider contributing to *Exchanges*, then you will be pleased to know we have a number of currently open calls for submissions. As this is a special issue there are naturally no new calls for papers. However, we would remiss if we didn't take this opportunity to remind our readers, old and new alike, of our current calls.

A.I. – Panic or Panacea

Launched last issue we announced a call, which if the discussions we've already enjoyed with potential authors are anything to go on, is a timely one. The use of artificial intelligence (A.I.), algorithms and machine learning have become increasingly mainstream, as recognised by the increasing discussion of its use and abuse within the public media sphere. Taking as its inspirational starting point the somewhat reductionist 'good or bad' media lens, this call asks for scholarship, original research or thinking which touches on any areas of this complex domain. From novel applications, through legitimate concerns or ethical quandaries, to serendipitous discoveries all are welcome.

Hence, we invite manuscripts for consideration as peer-reviewed academic articles, along with interviews (conversations) with significant figures along with critical reflections and explorations of this domain of increasingly important human experience. The full details of the call giving more details can be found on our website (Exchanges, 2020a)

Deadlines:

Peer-reviewed articles: **1st May 2021**.

Conversations or critical reflections: **31st August 2021**.

Open Call for Papers

Alongside our regular themed calls, *Exchanges* welcomes submissions throughout the year on any subject, with no deadline. Articles which are accepted will be subsequently published in the next available issue of the journal. We are happy to consider research focussed or review articles which will undergo peer-review. We also welcome submissions of interviews with key scholars or critical reflections on important scholarly events, conferences or crucial new texts, which undergo internal (editorial

review) scrutiny only. There are no deadlines for these kinds of submission, which may be on any topic, theme or discipline of prospective interest to our readership (see below for more guidance).

Advice for Prospective Authors

As an interdisciplinary journal with a wide scholarly readership, authors should seek to write their manuscripts to be suitable for a general academic audience. Wherever possible, consideration should be given to unpack, delineate and expand on any potentially 'disciplinary niche' language, terms or acronyms used. Ideally, authors should seek to incorporate some element of interdisciplinary thinking or perspectives, or outline the broader scholarly relevance of their work, within the manuscript.

Exchanges has an expressly multidisciplinary, global and largely academic readership, and as such, have strong interests in work which encompasses or straddles disciplinary boundaries. Manuscripts providing an introduction, overview or useful entry point to key disciplinary trends, discovery and discourse are often among the most frequently accessed publications in the journal. Therefore, prospective authors are strongly encouraged to consider tailoring their manuscripts, narrative, thought and analysis in a mode which addresses this broad audience. For interviews and critical reflections, authors are especially advised to highlight the importance of disciplinary discourse or interviewees' scholarly contributions to the global academy, society and the public at large.

The Editor-in-Chief welcomes approaches from authors via email, or video-call, to discuss prospective submissions. However, abstract submission or editorial discussions ahead of a submission are not a requirement, and authors are welcome to formally submit their full manuscript without prior communication. Wherever possible, authors should include a note to editor indicating the kind of article they are submitting.

As *Exchanges* has a core mission to support the development and dissemination of research by early career and post-graduate researchers, we are especially pleased to receive manuscripts from emerging scholars or first-time authors. All submitted manuscripts will undergo editorial review, with those seeking publication as research articles additionally undergoing formal peer-review by external assessors. Editorial decisions on manuscript acceptance are final, although unsuccessful authors are normally encouraged to consider revising their work for reconsideration at a later date.

More information on article formats, word counts and other submission requirements are detailed in our author guidelines (**Exchanges, 2020c**). All manuscript submissions must be made by their lead author via our online

submission portal. *Exchanges* is a diamond open access (**Fuchs & Sandoval, 2013**), scholar-led journal, meaning there are no author fees or reader subscription charges. Authors retain copyright over their work but grant the journal first publication rights as a submission requirement.

Forthcoming Issues

The next issue of *Exchanges* is scheduled for spring 2021 and will hopefully contain works inspired by our *Challenge and Opportunity* call for papers (*vol 8.3*). While the deadline for article contributions has passed, critical reviews, essays or conversations (interviews) for potential inclusion may be submitted up to mid-March. Hence, there is still some time for readers to contribute to this issue.

This will be shortly followed by our next special issue (*vol 8.4*). This volume will draw on the work of students and scholars who have been exploring the history and student experience relating to the arts faculty, and is being produced in collaboration with the *Then and Now: Arts at Warwick* research project and exhibition (**Warwick, 2020**).

Beyond these issues, we are already looking towards our regular Autumn issue (*vol 9.1*) and our final anticipated special issue, for the time being, focusing on papers relating to cultural representations of nerds. I've already had the opportunity to review the abstracts for the pieces under consideration for this latter volume and confess to a fair degree of excitement with the scope, scholarship and international contributors who will hopefully be represented in its pages. There is a tie in event planned for later in 2021 too, at which many of the authors for this volume will be speaking about their work. For more on this, keep following our various social media channels as we will be sure to highlight developments in this respect.

So, as you can see 2021 is shaping up to being *Exchanges* busiest year to date. It is too early to say what 2022 has for us, beyond the beginning of the countdown to our tenth birthday in 2023! I do hope you'll be joining us for that, and all the issues in between.

Acknowledgements

As always, my thanks to our authors and reviewers for their vital intellectual labour contributions towards creating this issue. Without you, the ability to produce a quality-assured, peer-reviewed, scholar-led publication would quite simply not be possible. Thanks also to our reader community, who play a key role in developing the debates and insights raised in each issue. I hope you find this issue as informative as previous volumes.

As I alluded to in the introduction, not all the effort in producing this journal is entirely visible in the final issue published. Many, many hours of editorial blood, sweat and tears have been expended by members of my Editorial Board, but principally for this issue, by my cli-fi associate editors. Hence, a very special thanks must be given to **Amul Gyawali, Dr Giulia Champion, Dr Lorenzo Serini, Melissa Pawelski** and **Nora Castle**, without whom this volume would not have been possible. In particular, I would like to thank Giulia, who in early 2019 set the ball rolling for not only this special issue of *Exchanges* but also the Cannibalism one published in early 2020. To each of my associate editors, I hope this will not be the end but the beginning of many future collaborations and exchanges, no pun intended, within the academy. Our thanks as well to the *Utopian Studies Society, Europe* and the *Monash Warwick Alliance* for their support for this project.

Practically, as always, my continued thanks to **Rob Talbot** and **Dr Julie Robinson** at the Warwick University Library, and **Fiona O'Brien** of the *Reinvention* journal for their continued insights, technical support and conversations. My thanks as well to **Dr John Burden** of the IAS as my regular sounding board, source of positivity and moral support, along with effective line management too.

Finally, my grateful thanks to our publisher, the Institute of Advanced Study at the University of Warwick for their ongoing financial and strategic backing for *Exchanges*. In particular, I'd like to acknowledge their financial support enabling me to attend the *Utopia Conference* on behalf of the journal.

Continuing the Conversation

Exchanges has a range of routes for keeping abreast of our latest news, developments and calls for papers. In-between issues you may wish to listen to our growing range of podcasts or read our regular blog posts, to continue the interdisciplinary exchange of experience underlying our operations. Please do contribute to the conversation whenever and

wherever you can, as we always value hearing the thoughts of our author and readership communities.

Editorial Blog:	blogs.warwick.ac.uk/exchangesias/
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Podcast:	anchor.fm/exchangesias
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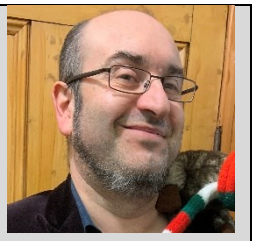
As Editor-in-Chief I am also pleased to discuss potential publications, collaborative opportunities or invites to talk further about *Exchanges* and our activities. Contact me via the email or via the social media platforms, or arrange a video-consultation.



Gareth has been the Editor-in-Chief of *Exchanges* for three years. Along with holding a doctorate in cultural academic publishing practices (Nottingham Trent), he also possesses various other degrees in biomedical technology (Sheffield Hallam), information management (Sheffield) and research practice (NTU). His varied career includes extensive experience in academic libraries, project management and applied research roles. Currently, he is also the Chief Operating Officer of the Mercian Collaboration academic library consortium, and a Fellow of the Higher Education Academy. His professional and research interests focus on power-relationships within and evolution of scholarly academic publication practice, viewed from within social theory and political economic frameworks. He is an outspoken proponent for greater academic agency through scholar-led publishing, and an expert in distributed team management and effective communication practices.

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Things Are Heating Up: Reflections on *Utopia, Dystopia and Climate Change*, the 20th International Conference of the Utopian Studies Society, Europe

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Abstract

This article offers a short scholarly reflection on the 20th international conference of the Utopian Studies Society, themed around utopia, dystopia and climate change, and hosted by Monash University's European centre in Prato, Italy. Engaging with numerous threads which emerged organically across multiple panels, this article positions the notions of change, resistance, and activism within the heart of the conference's focus. In doing so, it relates the implications of these discussions to the wider ecological future of the planet, asking how utopian ideals are enacted, challenged and expanded in a time of global crisis. Simultaneously, it turns its gaze inwards, applying its thinking to the structures of the conference and Society itself, asking how utopian principles may be practised within the workings of utopian studies itself, as well as the wider academic field.

Keywords: utopian studies, conference, reflection, climate change

Hot on the Heels of Climate Action: Reflecting on utopia

Today is Friday, 20th September 2019, and I find myself drafting this conference report as Greta Thunberg and her fellow pupils lead marches on the streets of cities across the globe, in an inspiring day of climate change activism. An opportune moment, then, to reflect on the Utopian Studies Society's annual conference, themed around utopia, dystopia and climate change, and held this year between July 1st and 5th at Monash University's European base in Prato, Italy.[i] A five-day event cannot really be given the justice or detail it deserves, especially from the perspective of one single attendee. What follows, then, is an interpretation of the conference's major leitmotifs; a tracing, and tying together, of its most resonant issues and impassioned ideas.

As evidenced from the barrage of references, alternately comical and despairing, made during keynote speeches, panel discussions, and lunch breaks, the background commentary to the conference was its (un)fortuitous coinciding with an extended European heatwave. Featuring record-breaking temperatures, governmental warnings, and numerous heat-related deaths, the news offered attendees an unavoidable, and sweltering, reminder of the immediacy of the climate breakdown crisis; July 2019 is now on record as the hottest month in recorded global history (**Letzter 2019**). Climate change thus surrounded and penetrated the conference, as both theme and mood. This meant that, along with the heat, certain questions became pressing: in an age of anthropocentric climate collapse, what value is utopia? How might utopian processes contribute to arresting environmental decline? Is utopian thought in of itself a valuable pursuit, or should the field be tied to a more direct activism? These issues were threaded throughout many of the reflections and responses offered during the conference: if the future is truly at stake, then this conference implicitly attempted to locate utopia's place in addressing that imperilment and assess its ability to help build a better tomorrow.

Hot Topics: Community, capitalism, and countering bias

Proceedings began in a manner of which Thunberg would doubtless approve: we listened to the science. Jacqueline Dutton (*University of Melbourne*) opened the conference with a warm and genuine greeting to all attendees, before introducing David Holmes (*Monash University*), who delivered a welcome address that was rooted in empirical data and lived experience. Directly referencing the unprecedented heat, he situated the conference's current climate in relation to patterns of increasingly extreme weather, and explained in detail many of the myths, mysteries and mutations of ecological collapse. Turning to his own work as Director of the *Climate Change Communication Research Hub* [ii], Holmes introduced his audience to the model of interpretive communities, analysing the public's response to the threat of climate change. Citing Hine (**et al, 2013**), Holmes highlights the diversity of opinion on climate science, positioning public responses into descriptive groups such as *alarmed*, *concerned*, and *dismissive*, before discussing how each of these positions may be influenced, positively or otherwise, by various media. Aside from a relative degree of nausea at the scale of both the crisis itself and the lack of understanding in certain communities, often underpinned by economic factors reinforcing poverty and suspicion, the recurring message in Holmes' opening address was one of optimism, and an appraisal of climate change fiction as a potent delivery system for educative and emotive ideas which might shift the balance of understanding in favour of positive change. While the efficacy of utopian literature over, or versus, direct

activism would be frequently debated over the coming week, Holmes' introductory remarks helpfully intertwined the concept of utopian thinking with the realities of climate change, encouraging attendees to continually interrogate how the former might impact the latter.

Such ideas resonated throughout the conference, not least in the succeeding keynote talks, first by Lisa Garforth (*Newcastle University*), who argued in favour of utopia's relevance and malleability, and second by Darko Suvin, whose landmark publication *Metamorphoses of Science Fiction* (1977) legitimised the field of science fiction studies. A highlight of the week and presented to standing room only, Suvin gave an impassioned and wide-reaching keynote speech, which touched on several underlying questions emerging from the conference by re-asserting the primacy of utopian thinking in challenging both climate and cultural collapse. Following Jason Moore's rejection of the term *Anthropocene* in favour of *Capitalocene* as the label best suited to capture the pervasive system of 'power, profit and re/production' that exacerbates climate collapse, Suvin indicted neoliberal, Western economic practices which have fuelled environmental catastrophe (**Moore, 2017: 594**). He also interlinked personal experiences of mid-twentieth century fascism with a resurgent 'fascism 2.0', towards which he believes capitalism is inevitably sliding; for Suvin, there can be no capitalist utopia.

This critique of capitalism was echoed and expanded upon across numerous panels: Nicole Pohl's (*Oxford Brookes University*) fantastic talk on the transformative power of utopian literature highlighted the role of the Global North in encouraging climate breakdown while simultaneously being more inured against its effects in comparison to third-world countries; similarly, in a panel on climate literature and indigeneity, Kirsten Bussière (*University of Ottawa*) brilliantly noted that for indigenous communities, ecocatastrophe contains different connotations due to a history of apocalyptic change via imperialism and oppression. For both her and Pohl, utopian storytelling provides vital pathways for both transmitting and critiquing knowledge and ideas, especially in relation to ruined futures.

In other talks, the value of utopian thinking was more overtly challenged. In a lively discussion, Darren Webb (*University of Sheffield*) made the case against the domestication of utopia: for him, utopia has been tamed, its framework directed primarily towards analysis as opposed to transformation: as he put it, 'a once dangerous creature has become a pet'. The only appropriate utopian response to climate change, he argued, is an activist response. Webb's indictment of the field prompted significant discussion: while some agreed with his assessment, others defended the value of academic study, praising its capacity for independent, rigorous

analysis to enrich public engagement. Others, including Siân Adiseshiah (*Loughborough University*), leading the charge in a well-received and insightful contribution on the same panel as Webb, challenged the language of domestication, highlighting its negatively gendered connotations and calling instead for a reframing of the field in more inclusive terms.

Adiseshiah's call to redefine and expand what we understand by utopia was revisited and reframed across several discussions, not least in her own paper in utopia and drama, where she argued for a reconsideration of the value of live performance to utopian thought, which has been typically ignored or even outright dismissed in favour of the literary mode. Similarly, Laura de Simoni (*University of Nottingham*) chose to centre her superb examination of dystopia in contemporary British theatre around the work of female playwright Lucy Kirkwood, while also directly countering the void of theatrical utopian dialogue by constructing her own terminology from dramatic and science fictional discourses. This thread of challenging utopian boundaries re-emerged in a particularly galvanising and collaboratively curated panel during the last day of the conference, with excellent collective contributions from Chelsea Haith (*Oxford University*), Rachel Hill (*Goldsmiths*) and Katie Stone (*Birkbeck*), who also consistently proved herself one of the conference's best and most prolific live-tweeters. [iii] Together, the panel placed influential female writers such as Margaret Atwood and Ursula K. Le Guin in conversation with their counterparts from indigenous, diasporic and African cultures, aiming to highlight the quality of feminist writing and critique that runs through utopian practice 'from margin to centre', as their joint abstract proclaimed. By my own subjective, and completely unverifiable measurement, the American, and Caucasian, male, author Kim Stanley Robinson remained the conference's most prolifically discussed figure; this panel offered a fresh perspective and welcome intervention, going some way to redressing the balance.

Hot Take: How (not) to conference during the climate crisis

Elsewhere, the very structures and practices of the conference were rightfully examined with a view to exposing and correcting bias: in response to previous events, this year the Utopian Studies Society attempted to address implicit imbalances within its own workings, by instigating guidelines for panel chairs to take questions in the first instance from female-identifying audience members. This seemed a necessary, if relatively simple, step towards more equitable, dare we say, utopian, academic discussions; however, its results occasionally made for grim reading. Monitoring discussion time via a website designed to track responses along gender lines [iv], Jac Cattaneo (*Brighton Film School*) noted

on Twitter that respondents to Suvin's keynote speech were skewed in favour of male speakers by a startling 97 percent (**Cattaneo 2019**). While the metrics of this measurement do not necessarily reflect engagement across the entire week, these results nevertheless point towards unresolved, even unregistered issues of academic bias; and in response, the steps already implemented by the Society should be explicitly regarded as the first of many.

Other conference practices offered similar food for thought: each morning began with the organising committee chair Andrew Milner (*Monash University*) delivering a humorous, if increasingly exasperated, update on the whereabouts of the attendants' name badges, which remained stubbornly absent from the conference, apparently en route to Prato, from Singapore via Lufthansa; paraphrasing the famous song, he repeatedly informed us that 'Yes! We have no nametags'. If one were being critical, one might speculate that the carbon footprint incurred by both printing and shipping these nametags from abroad was, in light of the conference's focus on climate change, perhaps an insensible choice. Indeed, if one were being particularly harsh, one might follow this argument to its logical end, and weigh up whether the cumulative effects of hundreds of attendees making cross-continental flights could be considered in direct opposition to their collective desire to tackle climate change. If utopian thinking is equated with radical thinking, or, as some attendees proposed, with radical action, then it would be beneficial to explore how the very fabric of conferences – their organisation, preparation and presentation – can be fundamentally reimagined. Indeed, if Thunberg is courageous enough to walk out of the classroom, perhaps we should follow in her footsteps and challenge our own practice, on every level, however ingrained.

Yet if one temporarily sets aside these reservations, it is not difficult to conclude that the conference and wider Society provide an engaging opportunity to continue pursuing utopian change, within both its own systems and across contemporary culture. For evidence of its success in these endeavours, one would only need to scan social media to find numerous positive responses, each viewing the conference as an essential re-energising of utopian discussion. This was perhaps best demonstrated through the welcoming atmosphere extended to postgraduate and early career researchers. As part of a dedicated postgraduate programme, Gregory Claeys (*Royal Holloway*) delivered a wide-ranging talk on academia, distilling for his audience a lifetime of experience regarding writing, editing, redrafting, presenting, and publishing. Joining him was Gareth Johnson (*University of Warwick*) who offered exciting provocations with regards to the publishing industry, challenging his audience to question and disrupt typical channels of knowledge-sharing. A final

postgraduate researcher event brought together the editors of several utopian studies journals, each of whom described their work in detail and encouraged attendees to both submit work and become involved in reviewing and editing processes. The spirit of these engagements was decidedly utopian: just as Garforth's plenary suggested that utopian ideals were always readily available, then it was an act of generosity by both the Society's postgraduate committee and assembled editorial teams to pass these ideals down.

A productive, occasionally problematised, but ultimately invigorating week, then: an opportunity to reassess and re-energise the field of utopian studies, and ready ourselves for the challenges of what Rob Nixon famously termed the 'slow violence' of climate change: just as the forces of ecological collapse are 'often not just attritional but also exponential', so too can utopian futures sustain and multiply themselves through the pooling and sharing of collective utopian thought and action, in contexts such as this conference (**2011: 3**). Recognised in 2014 for her lifetime contribution to American literature, Ursula K. Le Guin noted that 'we live in capitalism, its power seems inescapable – but then, so did the divine right of kings. Any human power can be resisted and changed by human beings' (**Guardian 2014**). If climate breakdown is similarly pervasive and tentacular, then utopian studies continues to offer a site of both reflection and resistance; a space in which radical change can be imagined and enacted.

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Endnotes

[i] https://utopian-studies-europe.org/conference/

[ii] https://monash.edu/mcccrh

[iii] https://twitter.com/cyborg_feminist/status/1145962730328903680

[iv] http://arementalkingtoomuch.com/

In the Shadow of Death: Loss, hope and radical environmental activism in the Anthropocene

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Abstract

This article posits that the myriad socio-ecological crises that mark the Anthropocene have generated a novel form of green utopianism or 'ecotopianism' in the form of contemporary radical environmental activists (REAs). Drawing on posthuman and green utopian theoretical tributaries, the article seeks to critically assess how the intrusion of crisis into the present influences REAs' modality of ecotopianism, in particular their relations to central utopian concepts of 'hope' and 'futurity'. REAs are embroiled in a fervent refusal of the 'present' of climate and ecological decline, frequently emphasizing the need to create micro-exemplars within the 'here and now' and evincing scepticism towards closure around particular notions of 'the better'. REAs' singular mode of 'hopeless activism' is not devoid of hope but rather disavows hope in its abstract and future-oriented modality, instead emphasizing a 'critical modality' of hope. The latter, stemming from REAs' post-anthropocentric worldviews and deep kinship bonds with the nonhuman world, is fuelled by grief over the extant widespread loss of cherished Earth kin and moulded by a desire to create a 'not-yet' devoid of the widespread absence of Earth others. The article concludes with reflections on the nature of hope, loss of life and the utopian imaginary amid times pervaded by crisis, and on the potential for co-constructing more liveable worlds with Earth others.

Keywords: Post-humanism; radical environmental activism; Anthropocene; ecotopia; hope

The Eco-Dystopian 'Now'

The current Anthropocene era of widespread and proliferating socio-ecological perturbations is one laden with paradoxes. It is marked on the one hand by the global ecological consequences of a runaway human agency (**Crutzen, 2006**), and on the other by often violent protests by recalcitrant entities – hurricanes, wildfires, droughts, novel infectious diseases, etc. – who no longer consent to being treated as mere inert objects for furthering human ends (**Latour, 2004: 156**). Our climate system is increasingly in disarray, with the latest IPCC report (**2018**) warning that the planet could reach 1.5 degrees of warming by as early as 2030 without urgent global political action and structural transformations. More problematically, we are now well into the planet's Sixth Mass Extinction event, wherein present rates of loss vastly exceed normal background rates of extinction (**Ceballos et al, 2020**). The WWF made headlines when it announced in its 2018 Living Planet Report that – as a result of human activities including the fragmentation, loss and degradation of habitat, pollution, toxification, climate change, and species overexploitation – we have lost a near incomprehensible 60% of monitored vertebrate species per 1970 levels (**WWF, 2018**). The extant widespread loss of Earth others is no mere existential crisis threatening the continuity of human life but, fundamentally, an ethical one implicating the steady erosion of intricate multispecies relations forged over vast spatial and temporal horizons.

This article seeks to shed critical light on radical environmental activists (REAs) as grounded ecotopian movements (**Price et al, 2008; Davis, 2012**) mired in a concrete[1] (**Bloch, 1986**) and multidimensional refusal of the myriad socio-ecological deficiencies that characterize the 'Now' of the Anthropocene, and as seeking to instantiate a future devoid of the widespread loss of life. REAs may be posited as utopian in the sense that they engage in multidimensional critiques and fervent resistance against the status quo of global capitalism and its ecological dislocations (**Sargisson, 2002; Moylan, 1986**), and in complex – though less explicitly articulated – ways desire to supplant it with better alternatives. Thus, this article draws variedly on post-humanist (**Braidotti 2013; Ferrando, 2016; Latour 2017**), post-structuralist **(Derrida, 1995; 2003; 2016)** and green utopian (**Pepper, 2007; Garforth, 2018**) theoretical tributaries in order to critically assess how REAs' post-anthropocentric worldviews (**Ferrando, 2016**) and modes of relationality with regards to the non-human world in turn influence (and are influenced by) their relations to the 'Now' of the Anthropocene, hope, and the 'Not-Yet'. This theoretical framework is applied to primary data in the form of semi-structured interviews conducted with 26 REAs from such groups as Earth First!, Sea Shepherd, and Extinction Rebellion. Of particular interest is how and why, for those REAs who seemingly have relinquished hope for a viable future and for

whom near total ecological and biological annihilation is seemingly all that is promised by the 'future-to-come' (**Kirkby, 2006; McNeish, 2017**), they 'bother to strive for the good' (**Atwood, 2009: 279**). As will be noted, REAs exhibit what Duggan and Muñoz (**2009**) refer to as 'critical modalities of hope' wherein hope does not vanish but is rather critically reconfigured by grief (**Bloch, 1986**) stemming from their prolonged and keenly felt experiences with the pervasiveness of multifarious Anthropocene losses – particularly of cherished Earth kin and wider biospheric integrity. REAs' grief and anguish over such losses – experienced as nothing less than the unravelling of ethico-political relations extending across vast spatial-temporalities – is critically redeployed in a renewed resolve to resist the present. REA mobilisations and ecotopian modalities appear to be thoroughly influenced by their deep kinship bonds with Earth others. Moreover, traditional associations of hope with abstract ideals (**Ibid**) to be implemented on the distant horizon of a benignly unfolding futurity are eschewed in favour of a desire to bring about a world devoid of the systematic annihilation of nonhuman life in the 'here and now'.

Contemporary Manifestations of Ecotopia

A core premise of the green utopian or 'ecotopian' tradition, whether in literary or social movement form, is the notion that there is something fundamentally wrong with the way growth-oriented industrial-capitalist societies presently relate to the non-human world, and that far more ecologically harmonious attitudes, relations, and modes of subsistence are of the essence (**Garforth, 2018**). Contemporary ecotopian thought emerged from the 'limits to growth' discourses (**Meadows et al, 1972**) and 'deep ecology' movement in eco-philosophy (**Naess, 1973**) throughout the 1970s and 1980s. The same tributaries also gave rise to REA groups such as Earth First! and Sea Shepherd, hence ecotopianism's classification as the 'utopia of radical environmentalism' (**Pepper, 2007: 289**). The new ecological consciousness exhibited by such groups cautioned against worsening human transgressions of planetary boundaries (**Rockström et al, 2009**) [2] via expanding human populations and, crucially, ceaseless-growth-oriented socioeconomic systems, loudly proclaiming the incommensurability between the latter and Earth's finite systems (**Garforth, 2018**). The urgency of the current 'end times' (**Latour, 2017**) has compelled REAs to deploy direct-action tactics such as the sabotage of industrial machinery, road blockades, and tree-sits as desperate measures for bringing an immediate halt to ecologically destructive enterprises (**Tarrow, 2013: 98**). Furthermore, such ecotopian modalities exhibit post-anthropocentric (**Ferrando, 2016; Alberro, 2020**) worldviews that reject notions of a disembodied and superior humanity with the right to subdue and exploit the natural world at will.

Utopianism in its myriad manifestations tends to surface during times of considerable upheaval. The Anthropocene, wherein crisis and breakdown are ubiquitous, is particularly ripe for radical resistance and novel imaginaries. [3]Hence the pertinence of REA mobilisations against the myriad deficiencies of the 'Now' and their post-humanist sensibilities for investigating the broader dynamics of contemporary ecotopianism amid the Anthropocene.

This article draws on a wider project featuring semi-structured interviews with 26 REAs from groups such as Earth First!, Sea Shepherd, Hambacher Forst, Extinction Rebellion and other long-standing activists in the radical green movement heavily involved in contentious or prefigurative modes of political activism – i.e., through engagement in ecological direct-action and who express 'radicalized identities' (**Stuart et al, 2013**). Due to the difficulty of accessing these groups in light of the occasionally illicit nature of their activities and consequent distrust of outsiders (**Alberro, 2019**), recruitment proceeded via snowball sampling after extensive prior communication with key gatekeepers, followed by opportunistic/emergent sampling (**Liamputtong & Ezzy, 2005**). Moreover, interviews were largely conducted through internet communication technologies (ICTs) such as Skype and Facebook Video (**Deakin & Wakefield, 2014**) in order to access participants across vast geographic distances and to help safeguard participant anonymity. In order to ensure the latter, all data was anonymised, stored on an encrypted drive, and the participants given pseudonyms. Experience proved, as others had previously suggested (**Madge & O'Connor, 2004**), that the remote nature of online interviewing helped facilitate further reflection by participants on sensitive topics. Though online research is in its relative infancy, existing research has shown that the nature and quality of the data obtained through online interviews – in terms of pauses, repetitions, recasts, etc. – is very similar to that obtained through more traditional methods (**Cabaroglu et al, 2010**). Lastly, a thematic analytical approach entailing the identification and analysis of patterns in data sets (**Braun & Clarke, 2013**) was utilised. Subsequent coding, theme development and data analysis proceeded electronically through the NVivo software program (**Bazeley & Jackson, 2013**).

'Valuing Life in Ecosystems, and Even in Stars'

The findings featured in this article expand upon previous research (**Taylor, 2008; Cianchi, 2015**) on REAs' decidedly post-humanist (**Taylor, 2012; Braidotti, 2013**) or post-anthropocentric (**Ferrando, 2016**) worldviews and modes of relationality with regards to the non-human world. Though it has many strands, Taylor's (**2012**) rather expansive definition frames post-humanism as the dissatisfaction and/or rejection of

the 'two central tenets of humanism': namely, the belief that humans are the centre of the world (i.e., anthropocentrism) and that, as superior rulers of existence, we have the right to subdue, exploit, and/or otherwise reduce the unruly 'other' to the status of object (**Derrida, 2002: 37**). Similarly, post-humanism rejects longstanding assumptions such as that human ways of knowing and being in the world are *essentially* different from and superior (**Heidegger, 1995**) to those of nonhumans (**Chiew, 2014; Plumwood, 2002**). A variety of environmental ethical tributaries can be subsumed within the posthuman tradition, from bio-ethics emphasizing the inherent value of all living beings (**Rolston, 2012**) to more holistic approaches such as **Val Plumwood's** (**2002; 2010**) non-dualistic philosophical animism which depicts a world populated by agentic persons, only some of whom are human. Virtually all REAs interviewed begin from these basic post-humanist premises in problematizing and deconstructing antagonistic dualisms between humans and animals (**Plumwood, 2002; Wolfe, 2010**), interrogating and reconceptualizing humans' ethical responsibilities towards nonhuman others (**Morton, 2010**), and proclaiming the inherent and equal value of all life (**Naess, 1973**). However, a complex and at times contradictory mosaic of ethical approaches can be detected within REA worldviews. Curiously juxtaposed alongside REA claims of the inherent and equal value of all life were traces of hierarchical value classification particularly around (1) a species or individual's perceived level of sentience/intelligence (**Singer, 1976**), and (2) the perceived significance of a species' ecological role (i.e. phytoplankton and cetaceans) (**Alberro, 2020**). Such approaches, infused by instrumental and aesthetic-based valuation (**Rolston, 2002**), harbour inklings of ethico-ontological modalities 'predicated on affection for sameness' (**Sargisson, 2000**)**.**

Nevertheless, most were critical of and sought to deconstruct rationales underlying moral-ethical boundary delineations, extending them beyond the sentient or ecologically consequential and in some instances avowing an agential matter (**Latour, 2004; Bennett, 2010; Alberro, 2020**). REAs evince generally expansive ecological worldviews wherein humans and non-humans exist in entangled and egalitarian relations with one another, and crucially, wherein Earth others are kin. For instance, the following are somewhat typical responses in this vein:

> *Jellyfish: …now I feel when I see whales die, like, my friends are dying, like, it's a person or somebody that I've already seen or connected with.*
>
> *Poseidon: I'm part of the whole system, and I'm not any different, or better, or worse. I am part of this world, just like an ant, or a snail, or a rabbit, or whatever.* (**Participant Interviewees**)

In avowing our inextricable entanglement with the more-than-human world, REAs make significant strides in dismantling the ontological foundations of human supremacy and the logic of dualism (**Plumwood, 2002**) more generally. For instance, Badger reflects on the ethical paucity of traditional emphases on sentience amid deliberations around who matters and why, and on the problematic nature of boundaries as such:

> *we've become very nervous-system-[focused]. Like, a lot of Animal Rights folk won't give credence or any time to any kind of theorizing or philosophizing, or experiential musings on the fact that plants, trees, etc. might have a degree of being, or sentience and intelligence that we can't comprehend as yet because they lack a central nervous system, in the same way that a lot of vegetarians will say, 'Oh no, it's alright to eat fish because fish can't feel pain', kind of malarky. And again, it's this grading of superiority.* (**Participant Interviewee**)

Humans, no longer situated aloft and disconnected from the rest of existence and other entities, are firmly re-situated within the vast assemblages that constitute reality, moving and striving alongside other actors (**Latour, 2004**). In line with these ontological premises, particularly deep kinship ties between REAs, other species and the wider earth system, many REAs cite the profound urgency of the times and grief over widescale loss as key motivating factors underlying their activism. However, why this occurs, what the widespread loss of cherished Earth kin via contemporary biological annihilation entails for REAs, and, crucially, how this influences their relations to key utopian concepts of hope and futurity have hitherto been underexplored. It is to this that I now turn my attention in the following sections.

'I am Hopeless, and Yet I Continue to Fight': REAs' Critical Modalities of Hope

The interchange below with Poseidon is one that surfaced frequently throughout interviews with REA's following queries around why they continue to mobilize on behalf of threatened Earth others despite purportedly lacking hope in a better 'Not-Yet':

> *Poseidon: To be honest, I don't think there's a solution. I think there would be a solution if the whole planet, so seven billion people, would change from today until tomorrow, change right now, but that's not going to happen. So, I think it sounds fairly pessimistic what I'm saying, but I think we are…excuse me for the word, but I think we're fucked…*
>
> *H: If it's all fucked, why bother trying to save things?*

> *Poseidon: Well, you must never lose hope, so, of course, and every single animal is worth fighting for. So, even if it's the last known animal it's still worth fighting for.* (**Participant Interviewee**)

Why continue to fight if a situation appears hopeless? In the case of REA mobilisations, the answer appears to partly stem from their deep kinship ties to Earth others – that is, views of the latter as family rather than external and/or isolated entities – and the immeasurable grief over their eradication. Contemporary climatic and ecological breakdown have been linked to a consequent proliferation of mental health ills such as depression, anger, distress, sadness, anxiety, and hopelessness (**Cunsolo & Ellis, 2018: 275**) amongst increasingly wider sections of the global population. Hence the recent proliferation of the term, 'ecological grief', denoting grief over both actual and anticipated ecological loss – of species, of whole ecosystems, of times characterized by relative stability, and of a predictably unfolding futurity (**Cunsolo & Ellis, 2018**). In light of their deep kinship ties to the more-than-human world, REA's experience ecological grief particularly keenly:

> *Stonehenge: There is no getting away from the lack of birds in the skies, and the lack of insects, and the trees still standing but dead…we are clearly in troubled, deeply troubled times… [What we need is] the recognition and acknowledgment that we are really where we are. No more disconnect, no more turning away, no more getting lost in the guilt and shame of it. We need to use remorse as a stepping stone into transformation.*
>
> *Badger: In my own lifetime in what is one of the most privileged countries in the world, I've also seen the creep of the absence of life into this country, this island. So, hedgehogs, badgers, foxes, the birdlife…all these factors, again, they weigh on me.* (**Participant Interviewees**)

Grief appears to serve as both 'an expression of deeply felt kinship bonds with other species *and* a significant factor in creating those bonds' (**Pike, 2016: 420; Cunsolo & Ellis, 2018**). Indeed, participants often shed tears during interviews as they recount painful memories and first-hand experiences of the degradation of beloved Earth others and landscapes. Grief over the sheer scale of contemporary loss of beloved co-evolutionary kin in turn serves as a powerful factor driving conversion and especially sustained commitment to radical environmental activism (**Pike, 2016**), hence activists' willingness to engage in often high-risk actions such as inhabiting trees for years on end in order to keep extractive enterprises at bay, or – in the case of Sea Shepherd activists – physically interposing their bodies between whales and harpoons.

Crucially, REAs' ecological grief – in conjunction with their frequent eco-apocalyptic portents of total ecological breakdown (**McNeish, 2017**) – has altered their relationships to hope and futurity in significant and complex ways. Despite powerful ecological grief resulting from repeated first-hand experiences of ecological loss (i.e. witnessing the felling of old-growth trees they've been protecting for years on end) and their purported disavowal of hope amidst the looming prospects of socio-ecological collapse, REAs nevertheless cite an ineffable 'something' that keeps them fighting (**Haas, 2016: 293**):

> *Butterfly: I'm going through a phase where I actually don't have an awful lot of hope, and people go, 'Well, why do you continue doing what you're doing?' And if I had a garden where I had the last butterfly in my garden and I knew it was going to die, I would still do everything that I could to make sure that butterfly lasted as long as possible, you know? And so, it's just part of our makeup; it would be impossible not to look at our flora and fauna, us, and not want it to exist as it was, and as it should be.*
>
> *Warrior: I mean, if you look at what's really going on, it's very hopeless in a lot of ways. So in my mind, like, getting out there and saving that one individual stingray, or that one individual shark, or that one individual porpoise, like, that's the only thing in my mind that really, really matters. Like, finding small pockets in the world where you can help create a liberated space for oppressed groups and individuals, to me that's all that really matters.*
>
> *Stonehenge: I'm also actively stepping away from the idea of hope, as it is traditionally espoused, for the reasons I mentioned. Hope projects something into the future, and right now I'm really focusing my energies on how to address how we live now, rather than how we might live in the future.* (**Participant Interviewees**)

Many REAs claim to have relinquished hope in a viable future while somewhat paradoxically alluding to the possibility that a better world might arise after the wholesale collapse of the present socio-ecological order. However, as denoted by Stonehenge, REAs' active distancing from hope appears largely rooted in a rejection of its traditional association with the 'Not-Yet' as located in a distant futurity, as opposed to hope in its concrete modality (**Bloch, 1986**). Hence REAs' repeated emphases on the need to live and embody better alternatives within the 'Now' (**Foucault & Miskowiec, 1986; Davis, 2012; Latour, 2017**). Anthropocene crises have effectively shattered beliefs in an ordered and benignly unfolding future whose horizon can be more or less predictably delineated (**Wood, cited in Fritsch et al, 2018: 38**). Increasingly, the 'future' is shrouded in uncertainty amid the volatility of contemporary ecological paroxysms, wherein the

event horizon of our *collective* 'ceasing to be' (**Haas, 2016: 287**) lends further difficulty – and perhaps an air of futility – to attempts to delineate the 'Not-Yet'. REAs' absorption into the present and reluctance to map out the 'Not-Yet' is further indicative of the grounded ecotopia or heterotopia's (**Foucault & Miskowiec, 1986**) acute scepticism surrounding future-oriented utopian modalities that, in casting their gaze to distant eras wherein society's ills have already been resolved, risk losing the crucial element of praxis (**Bloch, 1986**) in resisting the 'Now' by creating spaces of alterity within it where a better 'Not-Yet' might be enacted. Crucially, these spaces are deemed vital for resisting the loss of life that thoroughly suffuses the 'Now' and therefore demands urgent and complete attention. As discussed below, hope amid REA sensibilities and mobilisations does not vanish but is rather reconfigured by the exigencies of Anthropocene decline and, crucially, their kinship bonds to Earth others.

Duggan & Muñoz's (**2009**) notion of 'critical modalities of hope' serves as an apt lens for further examining REAs' relations to hope, the more-than-human world and the future-to-come amid the Anthropocene. Herein, hope and hopelessness are conceived of not in an oppositional but rather in dialectical relation to one another. The opposite state of hope is not hopelessness *per se* (**Lazarus, 1999**) but complacency (**Duggan & Muñoz, 2009**). When *all* hope fails, and being itself is perceived as meaningless, 'there is *nothing but despair*', which can in turn morph into complacency in the face of the looming prospects of climatic and biological annihilation (**Lazarus, 1999: 654,** italics added). Yet, REAs vehemently repudiate complacency and passivity via their active and continuous resistance against the widespread injustices being imposed on the more-than-human world. Many are hopeless, indeed, but hopeless in the narrow sense of recovering *specific* loss – i.e. of individuals and species already and irretrievably gone (**Lazarus, 1999: 660**). For instance, Atacama articulates this notion rather eloquently:

> *…there's stuff today that is lost already, really, but there's also so much that's around that can be saved if we all put ourselves to the task…it would be really, really sad to just give up now and say, 'Oh, it's all fucked, it's too late', when actually, maybe it's not. I mean, it's definitely too late for a lot of things, but maybe for most things it's not.* (**Participant Interviewee**)

Hope in this instance is not wholly lost but rather reconfigured into critical modalities (**Duggan & Muñoz, 2009**) which are beyond complacency and denial. Herein grief – at widespread loss of life and the very loss of the 'Not-Yet' as previously conceived – is *actively and collectively* confronted (**Head, 2016**). Belonging and alliances on the basis of a shared dissent in relation to the deficiencies of the 'Now', coupled with shared negative

feelings such as cynicism, despair, and grief, are 'critically redeployed' (**Duggan & Muñoz, 2009: 278; Pike, 2016**) towards a fervent refusal of the 'Now' and its myriad injustices. This would seem to support Hornsey & Fielding's (**2016**) seemingly counter-intuitive findings that negative emotions help boost eco-crisis mitigation motivations and feelings of efficacy. Hope, on the other hand, was found to have a much weaker relation to mitigation motivations by reducing risk perceptions of eco-crises and increasing complacency (**Hornsey & Fielding, 2016**). The authors conclude that, 'An implication of this is that hope-filled messages about change would need to be balanced with active reminders of the negative current reality' (**Ibid: 32**). Hence the indispensability of contrasts between utopian projections and the deficient 'Now'. However, REAs effectively sever any simplistic associations between hope, efficacy, and behaviour within traditional investigations of collective action (**Van Zomeren et al, 2008**) via their critical modalities of hope. REAs repudiate the future-oriented dimensions of hope, and rather draw on its concrete and normative dimensions – particularly the 'ought' of more egalitarian and respectful relations with the nonhuman world. REA hope and ecotopianism more broadly, occasionally mired in an energetic hopelessness, emphasizes the need to simultaneously resist and create micro-exemplars in the 'here and now'.

The Meaning of Loss in the Era of Biological Annihilation

Why is it that the loss of badgers, foxes, hedgehogs, and myriad other life forms weighs so heavily on REAs? REAs' deep-rooted kinship ties to singular Earth others result in their feeling so emotionally and socially 'at stake' in the lives of these earth kin that their loss is experienced as no less than the 'severing of a social bond' (**van Dooren, 2014: 136**), which in turn results in powerful emotional and physiological experiences of grief (**Cunsolo & Ellis, 2018**). As noted in the previous section, the critical redeployment of grief often serves as a key factor motivating the activists' 'engagement beyond negativity' in their myriad strivings. A sense of being at stake in meaningfully shared worlds (**van Dooren, 2014: 40**) and conceiving of oneself as intimately implicated and entangled – socially, emotionally, ethically, existentially – in the lives of nonhumans emerges:

> *Delfin: For me the ocean is alive… it's a great force of nature that in reality is one of the more prominent forces of our planet, as it is the grandest ecosystem, however much we live our lives walking upon firm, dry land. And it's a spirit, a force with which I feel deeply connected.*
>
> *Stonehenge: We [Stonehenge and a tree she was protecting from felling] became a kind of collaborative link… in the moment of connection, I'm not there…I don't feel anything; I'm lost in connection, you know, I'm completely, just…the sense of self isn't there. The sense*

> *of interwoven connectedness with another being doesn't really have space for ego as such, as me having power. It just feels like a longing has been fulfilled.* (**Participant Interviewees**)

REAs evince a thoroughly relational sense of self (**Braidotti, 2013**), though crucially one that also often values the other's singularity (**Sargisson, 2000**). Hence the profound grief experienced at the departure of such cherished kin – from individuals to whole ecosystems – in turn fuelling REAs' desire to take virtually any means necessary in order to curb further loss. Van Dooren (**2014**) enquires: 'What does it mean that, in this time of incredible loss, there is so little public (and perhaps also private) mourning for extinctions?' (**Ibid: 140**). He suggests by way of a response that there appears to be a general inability to grasp the multiple connections between ourselves and Earth others, an orientation that can partially be explained by the still-dominant paradigm of human exceptionalism which continues to posit the non-human world as mere resource for a disembodied and superior humanity (**van Dooren, 2014: 141; Plumwood, 2009**). REAs categorically refute and, though they don't always succeed in doing so, strive nevertheless to deconstruct such orientations to Earth others through their post-anthropocentric sensibilities (**Ferrando, 2016**).

Furthermore, the irrevocable loss of Earth kin seems to be experienced by REAs as not merely the end of *a* world but of *the* world in the Derridean (**2005**) sense. Herein, each living being – from mycelia to California redwoods, to sperm whales – represents a singular origin of existence or patterning that constructs and interrupts our own. Though we share in common with Earth others a finite mortality and embodied earthly habitation, these singular worlds can never be wholly appropriated by us and, crucially, can never be recouped once lost. What, then, occurs when an entire species passes from the world (**van Dooren, 2014: 4**)? It is not merely the calculable loss of biodiversity or the mere departure of a 'fixed' population of organisms along with the death of its last living member (**van Dooren, 2014: 39**). Rather, species are 'embodied intergenerational achievements' (**van Dooren, 2014: 27**), whereby individuals are singular entities situated in dynamic co-evolutionary spatial-temporalities that extend from their past descendants on through the now and towards futures of infinite potentiality and diversity. What extinction constitutes, then, is something truly profound, extending far beyond any individual: the protracted unravelling of life-ways and entanglements with multiplicities of other organisms situated in particular spatial-temporalities extending from the past on through the present and to-come. The widespread ceasing-to-be of singular 'others' in the context of biological annihilation entails not the loss of life as such in an objective sense – for life will likely continue in one form or another – but the (unjust) eradication of irreplaceable and irreducibly singular life-worlds in all of

their diverse spatial-temporal manifestations. What's more, such loss effects a permanent disruption of their intricate entanglements with myriad other singular beings (**van Dooren, 2014**) situated in particular co-evolutionary communities. It is the immeasurable depth of this kind of loss, exacerbated by our common, though differential, complicity in it, that exerts a powerful ethical pull on REAs to intervene in order to stem the tides of contemporary annihilation:

> Shark: *We're basically in very high debt to animals, because we are the reason for the mass extinction which is happening right now, and, yeah…we are in a debt, a huge debt to save as many animals as we can. But yeah, basically my motivation came from a friend of mine who basically said to leave the earth a little bit better than you found it.* (**Participant Interviewee**)

REA grief over past and present loss of cherished Earth kin, and their fervent desire to prevent future annihilation, highlight the protracted spatial-temporal dimensions of death and mourning. From an evolutionary perspective the very capacity to grieve the loss of an 'other' is a biosocial achievement developed through millennia of co-evolving and living in intimate relation with others (**van Dooren, 2014**). Similarly, from a psychological perspective, grief is no mere fleeting emotion but a complex process by which one engages and comes to terms with loss (**Lazarus, 1999: 656**), as evinced by Badger's observation that species loss continually 'weighs' on him. Traditional psychoanalytic accounts of mourning advise that we (those who have lost a cherished other) relive and then relinquish our memories of the dead (**Freud, 1984**). However, as with van Dooren (**2014**) and Derrida (**1995**), the death and mourning of *an other*, and extinction more broadly, are distinctly ethico-political phenomena because they are thoroughly constitutive of self-other relations; that is, both life and death are fundamentally relational affairs that implicate multispecies worlds or assemblages (**Dastur, 1996; van Dooren, 2014**).

Mourning in the Derridean sense entails not an abandonment of the departed, cherished other but an active affirmation of their un-substitutable 'otherness', of our enduring connection with them, and our broader connection to some sense of a beyond (**Derrida, 1986: 85; Kirkby, 2006: 464**). Herein there is no possibility of permanently severing ties to the dead in order to reconnect to the world of the living (**Freud, 1984**) because death is the very 'concrete structure of the living present' (**Derrida, 2016: 70-71**). In other words, the dead are simultaneously constitutive of – as well as beyond – us (**Derrida, 2016: 70; Nancy, 2002**), as our own speech and life-worlds are always laced with traces of those who have come before (**Kirkby, 2006: 467**). As such the border between

life and death always remains 'open and ultimately interminable' (**Derrida, 1995: 78**). This yields an enduring connection to a sense of loss and suffering and, crucially, an acute attentiveness to a simultaneous resistance against – and access *through* – misery to revolt (**Bloch, 1986; Anderson, 2006: 701**). What REAs actively strive against is 'utopia' in its pejorative sense, the good place that is no place, in this instance the 'ultimate nowhere of non-being' where life in its myriad manifestations is reduced to a fraction of its former abundance (**Clark cited in Davis & Kinna, 2009: 9**). REAs' life-affirming praxis deploys a critical modality of hope in a concrete refusal of the necropolitics of advanced capitalism (**Braidotti, 2013**), and is further mobilised by a desired 'Not-Yet' (**Bloch, 1986**) whose content, though never fully determinable, ought to at the very least be devoid of the systematic eradication of life's rich assemblages.

Building More Liveable Worlds in the Here and Now

The preceding discussion suggests that hope and delineations of the 'Not-Yet' during times of extreme duress do not disappear altogether but are rather transformed. Traditional utopian conceptualizations of hope and futurity are radically reconfigured by the 'shadow of death' cast by contemporary climate breakdown and biological annihilation, which increasingly obscures, though seemingly never entirely extinguishes, articulations of – and strivings towards – better alternatives. The critical, concrete modalities of hope exhibited by REAs serve as critique enacted via an embodied sense that 'the Now' is woefully insufficient, and that there are *other ways* (**Duggan & Muñoz, 2009**) – in the form of radical spaces of alterity within the 'Now' that prefigure more ethical and respectful relations with our nonhuman counterparts. A significant aspect of that 'something' that keeps REAs kicking vociferously in the 'here and now' (**Garforth, 2018: 158**) is their intimate kinship bonds with Earth others, with whom they feel ethically, existentially, and socio-politically entangled, and therefore whose increasing absence is experienced as a profoundly moving phenomenon sparking an access through grief to revolt – not merely against the injustices of the 'Now' but, crucially, towards a more abundant 'future-to-come'. It would appear that hope traditionally conceived is not the only, nor necessarily even the most powerful, resource protecting against a wholesale descent into nihilistic despair amid the eco-dystopian 'Now' (**Lazarus, 1999 656**). Equally if not more consequential is a form of negative energetic hopelessness (**Haas, 2016**) that draws on longstanding ties with cherished co-evolutionary kin in order to resist the depredations of global capitalism and its need for continuous expansion, exploitation and commodification in pursuit of profit (**Alvater et al, 2016**). During times of widespread loss and precariousness, the concrete and critical utopian impulse – in the form of

REAs' critical modalities of hope – draws strength to continue in its formidable challenges to the status quo. The mode of ecotopianism manifested by REAs' lives in the interstices, at the intersection of dread and hope (**Kirksey et al, 2013**), wherein conceptualizations of the 'Not-Yet' are continuously (re)enacted. The content of these potential worlds for REAs, though not clearly identifiable, would at the least consist of more ethical modes of human-animal-nature relationality devoid of systematic exploitation and domination, wherein we might enter into more dialogical partnerships with our co-terrestrial inhabitants as entities who are, fundamentally, *with* and not *for* us (**Plumwood, 2003; Le Guin, 1985: 76**).

Heather Alberro recently completed her PhD at Nottingham Trent University's Department of Politics and International Relations. Her background and interests span a range of disciplines including green utopianism, critical posthuman theory, environmental ethics, and political ecology. Her publications include the 2020 article, '"Valuing Life Itself": On Radical Environmental Activists' Post-Anthropocentric Worldviews' published in the *Journal of Environmental Values*, and 'Interspecies' in the upcoming *The Cambridge Companion to Literature and the Anthropocene*. Heather also serves as co-convenor for the Political Studies Association's (PSA) environmental politics specialist group, and as Chair of the PSA's Early Career Network (ECN).

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Endnotes

[1] Bloch (**1986**) makes an important distinction between abstract and concrete forms of utopianism. The former are compensatory, escapist fantasies divorced from the exigencies of the 'Now' (**Pepper, 2007: 290**) and lack any further societal transformation. Concrete utopianism, on the other hand, is derived from critical social theory, rooted in praxis, and helps us sharpen our critiques of existing society through a critical engagement with the virtually unbounded horizon of possibility surrounding the real (**Bloch, 1986: 223**). It is in the concrete modality where hope resides and harbours its transformative potential.

[2] That is, the 'safe operating space' beyond which further disturbances of key earth systems such as biodiversity, the climate and nitrogen cycles can result in unpredictable and potentially catastrophic feedback loops.

[3] Though theorisations of the origins of this contested era abound, the 1800 marker initially proposed by Crutzen (**2006**) is a useful one; after the momentous productive transformations ushered in by the Industrial Revolution, ice core data began to reveal considerable spikes in global concentrations of CO2 and Methane (CH4) arising from the industrial-scale burning of fossil fuels. Since then the post-1945 'Great Acceleration' (**Steffen et al, 2015**) has seen an 'explosion' of the human enterprise, particularly through near exponential increases in consumptive and productive activities particularly after the 1970s (**Ibid**)**.** Though as Moore (**2017**) and others crucially point out, these increases in socioeconomic activity and subsequent ecological impacts have historically been overwhelmingly associated with the Global North – embedded in histories of colonial dispossession – and especially the profligate lifestyles of the wealthy elite (**Malm & Hornborg, 2014**).

Ecological Destruction and Consumerism: A critique of modern society through the works of the contemporary German author Ilija Trojanow

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Abstract

Literature that engages with the theme of anthropogenic climate change carries the potential of awakening the reader's curiosity by creating a dimension in which the effects and impacts of the crisis are tangible. The urgency and unpredictability of climate change are articulated through reflections that combine societal, cultural and political issues associated to the phenomenon, hence encouraging a deeper understanding of the environmental crisis in today's society.

The article examines the novel EistTau by Ilija Trojanow to navigate the political and economic aspects of anthropogenic climate change.

I reflect on the employment of fiction in finding ways to develop attentiveness to nature, whilst exposing how EisTau questions the power relations between culture, politics and economy, in a bid to influence the current state of affairs. I argue that the depiction of the effects of climate change and the melting of glaciers enable public agency, whilst encouraging the rethinking of the environmental crisis and the acknowledgment of its connection to capitalism and to the constant accumulation of goods. I observe how the exposure of the interconnectedness of climate change and capitalism encourages behavioural changes that lead to the adoption of alternative lifestyles that can halt the disastrous effects of climate change and prompts readers to develop a sense of care for the non-human world.

Keywords: climate change; Ilija Trojanow; consumerism; glaciers; global warming; capitalism.

Narrating Climate Change

As we negotiate the anxieties and fears surrounding climate change, literature can play an important role. It can offer an affective space in which to reflect upon the societal, political and cultural roots of the crisis and to envision alternatives.

A writer who has much to offer to our understanding of climate crisis as a problem rooted in deeper social, political and cultural conditions is Bulgarian born author Ilija Trojanow: acclaimed writer, editor, publisher and translator, who holds a prominent role within the contemporary German literary scene and whose strong voice spans across a wide range of genres, including travel, ethnography and climate change fiction. His continuous efforts to overcome linguistic and cultural barriers make him a multifaceted international writer able to use his work to demonstrate how the confluence of different cultures deconstructs prejudices and constrictions. Trojanow's ability to combine different aspects of the environmental crisis encourages deeper reflections on the effects of climate change and on the relationship between humanity and nature. His interest in environmental decline dates back to his youth, when, during a class trip in north Kenya, he personally witnessed the effects of global warming on the population and on nature. Since then, he has expressed the importance of representing climate change in literary fiction and using different means such as interviews, essays, articles but most of all with his elegiac novel EisTau (**2011**). During an interview, he openly expresses the importance of engaging with environmental issues, for he considers that not doing so 'would mean succumbing to the blindness of an age that is pillaging the present and burdening the future' (**Woodbury, 2020**). With his novel Trojanow motivates readers to find new ways of halting the effects of climate change, whilst promoting social justice and encouraging reflections that move beyond the borders of individuality. Trojanow combines political, economic and social aspects to showcase the unsustainability of modern lifestyles and convey the urgency of climate change. The elegiac tone used by the author exposes how EisTau mourns the destruction of the environment that has not yet occurred, but will be if the consumerist lifestyles dictated by capitalism and consumerism are not being withheld.

EisTau, published in 2011, addresses the interconnected issues of global warming, tourism, art, science and the inability of communicating the effects of human-caused climate change. The novel gives insights into how modern politics and economy shape society's understanding of nature and its exploitation, therefore encouraging a rethink of the relationship that humanity has with the surrounding environment. Trojanow's ability in describing natural landscapes modified by anthropogenic climate change

enhances the understanding of the implications and the possible future effects that the environmental phenomena will have on global society. The novel seeks to explore the physical, social and psychological consequences of climate change (**Goodbody, 2013: 94**) through the life description of its passionate main character, Zeno Hintermeier.

Zeno, a former glaciologist, abandons his academic career, after experiencing the melting of an alpine glacier that had been the object of his studies for many years. The communicative strength of Trojanow's message is articulated through the angry and wounded voice of the main protagonist, who collects his thoughts in a notebook during the time spent as a tour guide on the luxury cruise ship MS Hansen. Zeno's personal journal is a combination of present and past experiences that make him aware that scientific knowledge alone is insufficient in the understanding and communication of the environmental crisis. He believes that a full appreciation of the surrounding environment can only occur by combining science with a personal and intimate relationship built to nature. The mourning for the lost alpine glacier, in association with the passivity that his former students, his ex-wife, the cruise ship passengers and Paulina, his Pilipino lover, show when confronted with the destructive power that humanity exerts on the environment, make Zeno angry and hopeless towards a possible societal change.

The arrival on the MS Hansen of the artist Dan Quentin will eventually compromise Zeno's stability to the point of deciding to hijack the ship and leave the passengers and the crew members stranded on the Antarctic ice. Dan Quentin's desire to stage a fake SOS on the ice in order to draw public attention onto global warming contributes to Zeno's awareness on how modern society is unable to fully comprehend the dangers of environmental destruction and pushes him to a point of no return: suicide.

The book is divided into two parts: 12 chapters introduced by geographic coordinates that trace the route of the cruise ship and numbered with roman numerals, and a second set of 12 chapters written in a different font, numbered using Arabic numerals and described by Gabriele Dürbeck as 'cacophonous intermediate chapters' (**2017a**). The different fonts and numeric systems contribute to the creation of an invisible dividing line that runs throughout the novel and creates two different temporal spheres: the encounter of Zeno's present and past in the first 12 chapters, whilst the future of the cruise ship and its passengers is described in the second set of 12 chapters. The first strand represents Zeno's journal: descriptions of everyday life on the ship, his interactions with fellow crew members and people encountered during his journey, and the relationship with Paulina, to whom Zeno cannot commit entirely due to his inability of building social relationships. The second strand exposes memories from his childhood,

his failed marriage and the melting of an alpine glacier. These two strands, that form the chapters introduced by roman numerals, serve the purpose of constructing the protagonist, since they follow Zeno's character development: from the sadness felt by the death of the glacier to the anger and disillusionment felt whilst on the cruise ship. Both strands show how Zeno's internal conflicts make him an unconventional main character, who is torn between emotion, scientific expertise and rationality. The chapters introduced with Arabic numerals hence representing the third strand, consist of radio messages, news flashes, references to porn and sex, and phrases mimicking the advertisement language. They follow a different time pattern, for they start from the point in which Zeno's journal is interrupted and preannounce the hijack of the cruise ship. The information contained in these chapters aid readers to fill the empty gaps left by Zeno's journal about the rescue of the stranded people, as well as the fate of the cruise ship and Zeno himself. Their rhythm is faster, slogans such as 'do your looting while supplies last' (**Trojanow, 2016: 71**) and statements such as 'he who destroys nature is killing God' (**Ibid: 37**) confer the text a negative and obscure tone, since they refer to the appropriation of someone else's goods during catastrophes or wars in the case of 'looting' or comparing the exploitation of nature with the murder of God.

The novel defined roman à these (**Goodbody, 2013**) for its ability to offer a commentary on modern society, speaks to what Hans Adler and Sonja Klocke describe as 'engaged literature': a debatably inferior offspring of high literature that exposes the controversial ties between society and literature (**2019: 1**). The device mainly used to intervene in non-literary contexts enables authors to engage with themes that go beyond the borders of literary confinement, to encourage new perspectives and new behavioural attitudes, by questioning existing orders (**Ibid**). The first to introduce the term was Jean-Paul Sartre. Within the wider concept of Littérature engagée Sartre included any form of literary production that engaged with the political, social, religious and ideological aspects of the time. French existentialists were to include aspects of reality in their work and present the readers with enough elements to prompt them to comprehend and criticise contemporary aspects pertaining to the spheres of politics, society and culture, implying that literature had lost the connotation of 'l'art pour l'art' and served the purpose of modifying the surrounding world (**Wilpert, 2013: 211**).

EisTau engages with the non-literary context of climate change and questions the power relations between culture, politics and economy, in a bid to influence the current state of affairs. The connection between the text and the social context is in line with one of the main aspects of engaged literature: the expression of its contemporality, for engaged literature is always literature of a present, that always creates a distance

through which the reader is encouraged to engage (**Adler & Klocke, 2019: 4**). The reader is hence encouraged to critically reflect on the depicted topic through the distance created between text and reality. The said distance is obtained through the different temporal perceptions of reality, that make the author and the reader contemporaries, but leave the reader the necessary room to reflect on the themes included in the work. Trojanow does not set the novel EisTau in a specific time frame, but makes the melting of glaciers the focal point of interest, to address humanity's role in shaping the future of the planet. It is indeed a natural phenomenon that since the early 2000s has dramatically increased from the Antarctic to Greenland, so a scenario easily identifiable, that however still leaves the necessary room for the reader to take on an active role in the perception of its causes and its gravity. The novel fits into the framework of environmental criticism, for it demonstrates how Trojanow's 'storytelling and image-making shape[s] humans' real-life interactions with the natural world in ways that are historically and culturally distinctive' (**Buell et al., 2011: 419**). In other words, the analysis of EisTau illustrates how the author attempts to activate public concern on environmental issues to promote possible changes in modern lifestyles. The novel engages with climate change on a multitude of levels – personal, cultural, societal, political and economic - to promote a deeper understanding of the connections that climate change has with other aspects of everyday life, such as consumerism or more in general, capitalism that inevitably rely on the exploitation of nature. The reflection on the melting of glaciers prompts Trojanow's engagement with the effects that society's consumerist lifestyles have on planet earth. He addresses modern relationships to nature and at the same time warns society about the devastating effects of their actions.

Combining the scientific evidence of climate change into fiction enables the creation of an 'imaginative repertoire', that gives the reader the possibility to contemplate alternative futures or landscapes as reality (**cf. Macfarlane, 2005**). The combination of present behaviours and future consequences allows the author to debate, sense and communicate the causes and effects of climate change, whilst promoting feelings that could induce readers to envisage the imminent threat posed by the phenomenon (**Ibid**). With the reflection on the interconnection between art and environmental destruction, Trojanow complies with one of the main functions of literature: create alternatives. Imagine a reality that distinguishes itself from the alleged evidence of the existing relationships (**Mangold, 2015**). Therefore, he conveys the political and social values of climate change through the fears and anxieties of his main character, aiming to encourage possible changes in the reader's mental disposition.

EisTau disrupts the human-nature dichotomy by intertwining the decline of nature with the psychological and physical decline of its main character, hence nature and humanity are merged into one single element, both condemned to the same demise. The alpine glacier has lost its quality of natural element and is described as suffering and dying and not simply as turning into water:

> *A dying glacier sounds different than a healthy one, it gives off a powerful rattle when it bursts along a crevasse, and if you listen closely you can hear the melt flowing into the underground lakes speeding the erosion of the wrinkled body.* (**Trojanow, 2016: 44**)

Zeno will feel physical pain caused by a heart attack and emotional numbness caused by the loss of the beloved glacier, to which he had built a personal relationship:

> *Then I lay down the scree, all balled up, a picture of misery, I would have welcomed any emotion that didn't hit me like a positive lab test result. Not knowing what else to do, I stayed like that until a hiker put his hand on my shoulder to check on my condition.* (**Ibid: 79**)

The melting of the glacier deprives Zeno of the joyous feelings of survival and symbolizes the connectedness between humanity and nature.

A further element of interest for the critical reflection on the destruction of nature is the choice of setting: a ship. In his essay Requiem for the Future. How to write a novel on the climate catastrophe (**2010**) Trojanow explains the choice of using the metaphor of the ship in EisTau, since it is a moving non-place, with uncertain destination. The ship is a means of transport carrying moving bodies of travellers who, although interacting with each other, still experience a sense of solitude that causes 'an overburdening or emptying of individuality' (**Augé, 1995: 87**). The means of transport is shaped into a 'place of memory', a non-place that is 'a space which cannot be defined as relational, or historical, or concerned with identity' (**Ibid: 77-78**). The peculiarity of the setting lies within the fact that Trojanow is combining movement with distance by placing a diverse range of travellers onto a ship, who, in a state of personal loneliness, experience the vanishing of the landscape without 'really' seeing the places they come across during the journey. The images of the landscapes are created by the words of Zeno: the lonely traveller who observes the destruction of nature and reflects upon the responsibilities of man. During a conversation with a fellow crew member, the two argue:

> *Fog is setting in, it's not rising off the sea but hovering above it […]. Now the iceberg behind is discernible only by its base. A bird slips out of the mist and flutters past. "And a good south wind sprung up behind; / the Albatros did follow." "We humans have eyes made for hunting," says*

> *Jeremy, "our nose could fall off without great loss to our senses, our ears serve only to uglify our face, but our eyes are sharp and alert, they can be relied upon." "Especially," I add, "when they fix on something in order to kill it."* (**Trojanow, 2016: 100**)

On the one hand, the passage exposes humanity's destructive capacities: The squinty eyes, that do not register what they see but respond to movement and indistinctively destroy everything, voices the author's profound criticism towards humanity's blindness of their own destructive power. On the other hand, it exposes the force of the words used by the author in describing the landscape, for they convey mystery and sadness in constructing the visual image of a melted iceberg recognisable only by its base. Moreover, the choice of the ship suggests that Trojanow draws on the trope of foolishness, as confirmed in the essay Requiem for the Future (**Trojanow, 2010**), since he quotes the satirical works Das Narrenschiff by Sebastian Brant and the remake Ship of Fools by Katherine Porter (**Ibid**). Both works employ the trope to criticise the vices and the weaknesses of humankind and showcase how humans inadvertently indulge in their folly, caused by pride and gluttony (**Ibid**). In EisTau, the critique of human 'blindness' towards anthropogenic climate change permeates the novel from beginning to end and it exposes the vital role played by literature in finding ways of imagining an altered future that can overcome feelings of denial and scepticism that surround environmental decline. Trojanow's narrative choice of constructing a main character who expresses his personal feelings of anger towards society's unawareness of the environmental crisis, can trigger in the reader the desire to question and analyse the personal relationship held to nature. The author exposes and underlines how global society indulges in a consumer- oriented lifestyle responsible for the extremely high CO2 carbon emissions, that are destroying the Antarctic or what he claims to be the last 'Terra Nullius' (**Trojanow, 2010**). The Latin term stresses the fact that the Antarctic is still a pristine and wild country, unspoiled by human activity, and therefore needs to be safeguarded from humanity's desire to expand, conquer and draw capitalist advantage from its exploitation.

The Intermingling of Fact and Fiction

A new poetology is created from knowledge of the world (**Fasthuber, 2007**). The affirmation made by Trojanow during an interview with Der Standard voices the weight the author assigns to the act of research prior to writing his novels. Travelling to the places he wishes to depict in his fiction is a common practice for Trojanow, since it allows him to bring elements of reality, plausibility and credibility into his writings. Before venturing into the creation of a novel dealing with climate change, Trojanow decided to travel to the place of his creative interest and after

embarking on the cruise ship MS Nordnorge in Ushuaia, he was able to see and unravel the beauties of the Antarctic ice. The trip is described in an article, entitled The last Emptiness (**2008**) published by Zeit Online and on his personal website, and anticipates some of the images and experiences the reader will encounter in the novel, for the glaciologist he has so masterfully constructed in EisTau travels along the same route as Trojanow himself.

The trip is undertaken with the scope of witnessing in person the melting glaciers upon which the storyline of the novel is constructed and served the purpose of experiencing emotions that Trojanow conveys into the novel to mentally transport the reader to the last barriers of civilisation (**Trojanow, 2010**). The choice of setting serves as example to encourage readers to feel real life emotions and develop a sense of care that embraces the non-human world, for the devastating effects of global warming are becoming increasingly visible on the pristine Antarctic that to some extent is still untouched by human disturbance.

The inclusion of personal life experiences adds a sense of reality to Trojanow's novels that initiates reflections on societal, political and cultural aspects related to the causes and effects of climate change. In the discussion on the message articulated through his novel Is Climate Change a Theme for Literature? About my book EisTau (**2013**), Trojanow reiterates the natural beauties of the Antarctic, but stresses the importance of preserving such beauty. He believes that the safeguarding of the environment can only be achieved if humanity recognises the destructive power it possesses and the danger that maintaining current lifestyles represents for the survival of the planet. The novelist depicts images of ruined whaling stations, calling them rusty exhibits of mass destruction (**Ibid**), and reflects on the incapability of 19th and 20th century whalers to foresee that their activity could possibly one day lead to the extinction of the animals they were slaughtering. This is what Trojanow describes as the sad story of human greed and self-indulgence (**Ibid**) caused by our capitalist society that destroys nature to produce unnecessary goods, available to consumers who are narcotised and unable to see how the reliance on fossil fuels will ultimately lead to the destruction of our planet (**Ibid**). Trojanow concludes the essay by asserting that the greatest responsibility of our time is to end capitalism, end our Take-make-waste-economy (**Ibid**), for global warming will only bring about wars, mass refuge waves and famine, but he does not give any indications on how to end capitalism nor does he delve deeper into the connection between capitalism and climate change. EisTau on the other hand, reflects on the interconnection between art and politics by navigating through the possibilities of political engagement prompted by the actions of the main character (**Gerstenberger, 2019**).

Trojanow's attempts to elicit action and behavioural changes in readers are indicative of his quest to use fiction to explore the deeper connection between anthropogenic climate change and consumerism. He reflects on the low number of literary works set in the Antarctic, and observes how a possible explanation could lie within the fact that humans are mainly inclined to write about places they have populated and conquered. Therefore, a place like the Antarctic, that formerly does not belong to any country, is not chosen as the preferred setting for a work of fiction (**Trojanow, 2010**). This observation serves as a starting point for the critical interest represented by the novel EisTau , since the author argues the importance of creating a literary piece of work, that focuses on one character, an outsider, who with his life and his anger has attempted to fight against the destructive power of modern capitalism (**Ibid**). The scope of EisTau is to encourage the reader to identify and possibly embrace the main character's radical passion to safeguard nature. The message conveyed is the urge to recognise humankind's destructive power, enabled by society's inability to truly cherish nature, for it is blinded by the constant drive for economic growth and consumerism. The inclusion of historical facts and scientific truth is Trojanow's way of bringing fact and fiction into dialogue. He exposes the social assumptions and the cultural beliefs of climate change of our modern time. The insights into the effects of climate change are rendered through the depiction of the selfishness of the human characters in the novel, who believe that participating in an art installation will suffice to raise awareness on the environmental crisis. Nonetheless, what seems to be far from the passengers' concern is that their desire to cruise on a luxury ship in the Antarctic is amongst the main causes of the crisis. In describing the Chilean Eduardo Frei station in the Antarctic, Zeno is struck by the passenger's delight in discovering that the base resembles a 'normal village' with 'bank, post office, store, school and hospital', hence depriving the station of its real purpose: scientific research. The critique forwarded by Zeno highlights how humanity is on a constant strive for emblems that recall consumerism and human presence, but are prone to ignore that the 'true legacy of the human race [is]: rusty garbage' (**Trojanow, 2016: 105**).

The paranoia felt by the main character makes the issue of global warming far more urgent and pressing, since it questions the current knowledge on climate change, on capitalism and on the role of fiction in communicating scientific knowledge. The author demonstrates the importance of including details and personal knowledge of the described scenarios or, like in this case, of the effects of global warming, since it aids the reader in comprehending his poetic choices, as well as the distinction between fact and fiction.

Trojanow openly states in his essay Requiem for the Future that the message he intends to articulate with the novel EisTau is: if the Antarctic is destroyed, then humanity will be destroyed, too (**Ibid**). The truthfulness of the images depicted, such as the research stations, the effects of climate change and the melting of glaciers enable public agency, the rethinking of the environmental crisis and its connection to capitalism and to the constant accumulation of goods.

The Critique of Modern Society in EisTau

Zeno is a controversial and very ambivalent character: by no means a role model for the reader to follow, he constantly shifts from pro-environmental to arrogant, self-centred behaviours that make him an outsider. He is 'a prophet crying in the wilderness' (**Goodbody, 2013: 97**), implying that his words are wasted, for nobody is willing to listen. The biblical reference employed by the critic Axel Goodbody undermines the communicative strength possessed by Zeno, for the pessimism he feels enhances the urgency of acknowledging the effects of climate change. Zeno's helplessness and anxiety towards the unknown effects of climate change, challenge the reader to reconsider cultural beliefs and critically review the political and economic aspects of said phenomenon. Mr Iceberger (**Trojanow, 2016: 7**) as Zeno is nicknamed by fellow co-workers on the cruise ship, where he will spend his last days before deciding to take his own life, has a strong awareness of the consequences of climate change. He is however unable to positively articulate them, since 'he constantly offends others with his high-ground moral attitudes' (**Dürbeck, 2017b: 335**).

Zeno decides to abandon his university career after undergoing a profound life crisis triggered by the end of his marriage to Helene and a cardiac problem which forces him to undergo a bypass operation. However, the most important reason for his decline in mental health and desire to drastically change his life is represented by the melting of the alpine glacier to which he had built a paradoxical relationship, since the glacier has taken on human like qualities in the eyes of Zeno. Trojanow, connects Zeno with the glacier on a deep emotional level and describes them as 'an elderly couple' (**Trojanow, 2016: 44**). The personification of the glacier dramatizes the relationship between human and nature and adds importance to the safeguarding of the environment. Zeno feels the pain of the dying glacier; he is helpless and in mourning, for he has lost a beloved part of his life, the glacier, and with it, the hope of avoiding environmental destruction as a glaciologist.

The inability to avoid the disappearance of the glacier encourages him to accept the job as tour guide on the MS Hansen, where he believes he will have the opportunity to lecture the tourists about the natural beauty and the importance of glaciers. Zeno considers glaciers as enormous archives, for they retain 'every volcanic eruption, every eclipse, every atomic weapon test, every shift in the concentration of atmospheric carbon dioxide' (**Trojanow, 2016: 30**). In short, glaciers register natural and man-made modifications of the environment, they combine the natural with the artificial and need to be safeguarded for a chance of survival. Zeno is aware of the importance of glaciers for human civilization but is disillusioned by society's behaviour and lack of understanding.

The depiction of a scientist as the main character is used as a tool by the author to combine scientific knowledge with emotion. Zeno abandons his career as a scientist but withholds his knowledge and intends to use it to encourage other to build personal relationships to the environment and hence engage with the environmental crisis at the level of individuality. The new setting, the mixture of hope, anger and disillusionment make him an unappreciated character, seen by his colleagues as an irrational and rancorous person, whose unpredictable fits of anger are like avalanches that destroy what they encounter:

> *The lecturers all start to sigh - here he goes again [...]. They know from experience that whenever Mr Iceberg waxes apodictic things will end apocalyptic.* (**Trojanow, 2016: 7**)

The passage demonstrates Zeno's inability to communicate his scientific knowledge, since he becomes too angry to clearly state that 'we [humans] destroy everything aligned with nature' (**Ibid**). Zeno is however considered a hypocrite, especially by a barman in the Patagonian town of Ushuaia, for, although he knows how much of an environmental hazard a luxury cruise ship would be for the natural and pristine Antarctic, he still earns his money by guiding the tours, becoming part of the destructive power he criticises. The barkeep considers Zeno's pontifications 'nothing but talk', his indignation nothing more than 'a fart', and reflects that knowledge that does not move to action is far worse than ignorance (**Ibid: 9**). The encounter with the barkeep is the turning point that shapes Zeno's future behaviour, for he realises that it is time to take action against humanity's destructive power. He is aware that humanity, including the younger generations 'won't rest until they've consumed polluted squandered destroyed everything' (**Ibid: 80**). The style used by Trojanow is sharp, dry and harsh. The author conveys the message of environmental destruction using a fast-paced rhythm obtained by the minimal use of punctuation or, in this case, the total absence of commas to reiterate the clarity and importance of the message conveyed. The target of his attack here is that

of a young generation, who unaware of the damage that the consumer-oriented society has already exerted on their surroundings, remain oblivious and carry on with the lifestyle they have been brought up with.

The profound disinterest shown by the passengers towards the melting of the glaciers is at the root of Zeno's disillusionment in the novel, so he decides to commit a final act of violence by hijacking the cruise ship. The hijack can be read as Zeno's attempt to avenge the destruction of the environment, for he feels that nature can regain its supremacy only by destroying human life. Zeno's decision, however, reveals a paradoxical contradiction, since the hijack happens when the tourists and the crew members descend on the ice to stage a fake SOS, with the aim of raising awareness on environmental decline and the importance of nature. This represents a mise-en-scène or, more precisely, 'a funfair, Octoberfest in the southernmost latitudes' (**Ibid: 153**), that itself harms the nature it aims to preserve, demonstrating the incapability of comprehending that it is human activities that lead to the ultimate devastation of nature. The choice of the words 'funfair' and 'Octoberfest' showcase extreme spectacles of consumerist decadence and are employed by Trojanow to criticise the carbon footprint of the global population. The image of more than 300 people walking on the ice to create a fake SOS, recalls the connection between climate change and carbon emissions, for it alludes to the amount of carbon dioxide that the group releases in the atmosphere to reach the designated area, hence it alludes to the group's carbon footprint. Zeno's obsession with human footprints on the ice occurs once more within the novel, when the main character challenges a group of soldiers, who, whilst smoking amongst penguins, 'mar[ch] off', (**Ibid: 107**) leaving their footprints and cigarette stubs on the ice. Furthermore, the fake SOS is an art installation that, according to Zeno will not have any effect; on the contrary, it only serves to reiterate the scarce attention that human beings pay towards nature. He believes that art needs to be transformed, the SOS needs to be real if the act of protest is to be taken seriously. This is in stark contrast with Trojanow's personal beliefs, who during an interview with the newspaper Der Standard asserts:

> *I am always horrified when I am asked whether I consider literature to be an instrument of enlightenment. Yes, what else? The TV, for example? Literature must depict the present in the sense that it reflects and seeks to overcome the madness of one's own epoch.* (**Gmünder, 2011**)

Trojanow stresses the importance of literature in provoking change and action, thus underlining how he uses his works to contribute to public discourse around political and social issues in an attempt to raise public awareness. Although Zeno possesses great scientific knowledge on

glaciers and their endless importance, he reaches a total emotional breakdown when he realises his inability to stimulate protest. The decision to hijack the ship before jumping to his own death is a consequence of Zeno's total dismay and an attempt to make a political statement which will fail miserably, since the reasons that pushed Zeno to the violent act are undermined and completely ignored during the rescue of the passengers. The reason behind Zeno's action and its importance get lost in the midst of slogans and apparently senseless information that are included in the 12 chapters introduced by Arabic numerals. The peculiarity of these chapters lies in the fact that the ironic slogan-like sentences employed to reflect on tourism, sex and prostitution reproduce 'mass media's short attention span and the lack of profound analysis' (**Gerstenberger: 55**) behind the produced commentaries. If on the one hand they highlight the importance of communication, they also highlight the power possessed by mass media to undermine important information. The despair that drove Zeno to his act of self-destruction, because he felt sorry to be human under these circumstances loses its meaning when the stranded passengers are being rescued without a mention to Zeno's wish of preserving the Antarctic ice and the helplessness he felt towards the pressing issue of global warming. Zeno's suicide is 'a provocative challenge to the readers' (**Goodbody, 2013: 100**) that raises concerns about a successful intervention and adaptability to climate change. Explanations for Trojanow's choice of characterization which avoids emotional involvement between the reader and Zeno, can be found in the final pages of the novel, in which the author observes how human beings need to be shaken, frightened or pushed from their podium in order to be saved:

> *[…] I realize that we have to topple humans off their pedestal in order to save them [...]. Only big blows are capable of jolting mankind.* (**Trojanow, 2016: 157**)

The description of a man who decides to take extreme measures, such as hijacking a ship and committing suicide because he finds it unbearable to be human in a parasitic system in which humanity only causes catastrophes (**Ibid: 145**), can be read as a wake-up call. Trojanow attempts to raise awareness on the most pressing issue of our time and stresses the importance of literature in the process. He voices his disbelief and discouragement through Zeno's voice, who observes how the power of changing the world is only assigned to canonical literature:

> *The classics are allowed to shine light into the darkness and fashion words worthy of chiselling into stone facades. Living authors, on the other hand [..] are expected to have more modest aims, to motivate here or agitate there, but under no circumstances should they propose to change the world.* (**Trojanow, 2016: 138**)

Adapting to climate change and moreover understanding the causes and the gravity of the environmental catastrophe is not straightforward and easy; the world population needs to understand that '[B]usiness as usual is no longer an option' (**Areeba Hamid quoted in Queally, 2019**). According to the scientific research assessed by the Intergovernmental Panel on Climate Change, the world will undergo drastic modifications in the next few decades, if the global temperature increase is not kept below 1.5 °C. If 'business as usual' is the chosen option, then it needs to be taken into account that the survival rate, in many underdeveloped countries will radically decrease. Trojanow strongly criticises our capitalist society and as mentioned earlier, he believes that it is our duty to put an end to it. He highlights how modern society is reluctant to change, the tourists depicted in his novel are prone to take action for the safeguarding of the environment, but only in the form of an artistic installation. Before the SOS action, one entrepreneur argues: 'If I'm being called on to do something for the environment then count me in' (**Trojanow, 2016: 116**). It is important to note that the entrepreneur is willing to participate in the artistic demonstration, but not in a real protest, and only when 'called on' (**Ibid**) which implies that he, like the others, will not abstain from their destructive comfortable lifestyles once they return home. The importance to safeguard nature is undermined by the staged action and by the fact that the tourists are able to purchase souvenir photos recalling the performance at discounted rates (**Ibid: 116-117**). The protest activities are hence inextricable from consumerism. The implication that economic growth occupies a greater importance in today's society is thus clearly exposed and strengthened by the evident reluctance of characters in the text to change or to take action, that argue the inability to learn from history. Trojanow creates links between the present and the past to expose the relevance of comprehending history in order to avoid future disasters. The novel EisTau, especially for the choice of a main character, who is constructed as a non-hero, attempts to expose the links between the past, the present and the future, and between consumerism and environmental destruction that possibly aid readers in acquiring a greater understanding of the current environmental crisis and the consequences of consumerism.

A series of historical events included in EisTau showcase the human destructive power of the natural environment and are employed to inform about the present and predict possible future scenarios. The comparison that is thus enabled is between past patterns and present and future patterns, that could encourage reflections on the slow occurring dramatic consequences of climate change. The infamous historical events depicted can be read as the author's attempt to showcase past mistakes that can be prevented from occurring in the future. The passages have been woven

into the plot as discussions between the characters or in the form of short lectures:

> *The extermination of the Yahgan people who saw their territories being disrupted in the late 19th century by people attracted by the gold rush. The Falkland wars fought between Argentina and Great Britain over the control of the Falkland Islands. The attempt carried out by the Nazis in 1939 to claim parts of the Antarctic by dropping swastikas on to the ice from airplanes, and finally the paradox that one of the few "places in the world where nature reigns supreme", the Falklands, has beaches that are covered in anti-personnel mines. There are also references to the killing of whales, seals and penguins to obtain fuel and to the volcanic eruptions on Deception Island, that in the late 1960s freed the island from human settlement. The island, which once held a whaling station, is an abandoned reminder of what Zeno argues to be:[…] a vibrant symbol of progress: destroying the essential to create the superfluous.* (**Trojanow, 2016: 7, 39-40, 43, 75, 124, 129**)

The destruction of the necessary to produce the unnecessary is the main idea on which Trojanow bases his critique of capitalism. The historical episodes are linked to the current consumerist culture and refer to the tendency towards accumulation and superfluity brought about by modern capitalism (**Trojanow, 2016: 65-66**). Within the novel, there is also a mention of the Antarctic Treaty System, which aims to maintain the continent free of permanent human settlements and military activity, with the exception of temporary settlements for scientific research purposes. During a conversation between Zeno and Mary, the two contemplate the possibility and consequences should the treaty be invalidated and Zeno describes a scenario in which lobbyists would argue for the necessity of drilling for oil in the Antarctic and sacrificing the penguins, for humans cannot endure the shortage of raw materials only to safeguard expendable animals (**Ibid: 93**). Whilst questioning the strength of the treaty, Mary suggests that should it come to the point in which the luxurious lifestyles of the rich and powerful are endangered, a great number of people would have to willingly fight against the abuse of power carried out by lobbyists, to avoid the destruction of the Antarctic (**Ibid**). The scepticism that appears on Zeno's face regarding the possibility of joining in a fight against the powerful, opens scope for discussions on feelings of guilt and shame. Zeno is aware that his position on the cruise ship is questionable and that he is contributing to the destruction of the Antarctic, hence he is silently admitting that he is unable to fight against the strength of the powerful. The position of tour guide on a luxury ship in the Antarctic encourages the form of tourism that is jeopardizing the safeguarding of the Eternal Ice, but Zeno puts his personal need of sojourning in the ice first, which promotes

deeper reflection on personal responsibilities within the discourse of the environmental crisis.

Modern society is aware of the consequences that climate change will have on our future generations, but what is at stake is whether the awareness that humanity is responsible for climate change, suffices to make our generation, and our leading parties, change our attitudes and search for solutions that could enable change. Human beings should be encouraged to contemplate the kind of lifestyle they intend to adopt and the role they would like to occupy within society, in order to envision ideas, concepts and possibilities that deviate from the standard modus operandi, for problems cannot be solved with the same mental disposition that has led to them in the first place (**Welzer, 2008: 266-267**). Zeno too is aware that humans need to embrace change and set the desire for possessions aside. During a conversation with Paulina, she wrongly compares Zeno to the great explorers of the past, for she believes that Zeno wishes to decide the fate of the Antarctic like the explorers of the past (**Trojanow, 2016: 61**). This episode provides a crucial insight into Zeno's feelings of pain and desperation and delivers a plausible explanation for Zeno's ultimate act of violence, the hijack:

> *If you mean I don't want any people or fuel in the Antarctic, then you're right, I do want to determine what happens here. But I don't want to possess the place, that's the difference, I don't want to have any part of it named after me, I just want it to be left in peace.* (**Trojanow, 2016: 61**)

The vigour used to explain Zeno's desire and voice his thoughts mirrors the urgency of the message Trojanow is trying to transmit through his main character: the necessity for humans to stay away from the Antarctic in order to avoid the destruction of the largest and last unspoiled wildness of our world.

I read EisTau as a successful example of engaging in public discourses on climate change, whilst encouraging deeper reflections that combine political, societal and economic aspects of the environmental crisis. Trojanow intervenes in public discourses on climate change to motivate the reader into taking actions that widen the sense of responsibility and care for the environment. The author does not lecture the reader, nor chases them down a guilt trip by creating apocalyptic end-of-the-world scenarios, but by conveying emotions and exposing the long reaching negative effects that consumerism has on the environment. The urgency to take action against climate change is voiced through Zeno, who, torn between the guilt of working on a cruise ship and thus being an accomplice in the destruction of the 'last Terra Nullius' (**Trojanow, 2010**), believes that the only way to avenge nature is through acts of violence. However, since

the hijack committed by Zeno ultimately has no tragic effects, and the reasons behind it are silenced by mass media, EisTau represents a challenge to the reader, who is encouraged to find alternative lifestyles that combine political, social and cultural modifications able to reshape the relationship that humanity has to nature. The reader is encouraged to reflect on the destruction of the environment whilst being transported on a mental journey that reaches earth's southernmost continent, thus interrogating the globality of climate change and the human-nature interconnectedness.

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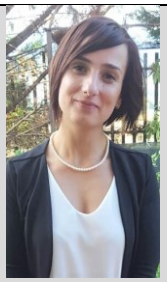

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Climate Fiction and its Narratives: (Non) Secularists imaginaries for the environmental collapse

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Abstract

In the late 20th and early 21st centuries, the narratives about a possible environmental collapse and its consequences have multiplied. This is due to a growing awareness about issues such as climate change or the energy crisis. The so-called 'climate science fiction' or cli-fi has reflected these concerns in highly successful films, like the two analysed here: The Day After Tomorrow (2004) and The Day the Earth Stood Still (2008), a remake of the 1951 classic. In this paper, I approach both films through an analysis of their plot and narrative structure, focusing mainly on the evolution of their main characters and storylines. I argue that these mainstream productions avoid any examination of the actual causes of the environmental crisis, turning it into a matter of individual responsibility based on Judaeo-Christian values such as guilt and redemption, especially those about the apocalypse.

Keywords: cli-fi; collapse; apocalypse; religion; desacralisation

The analysis of how entertainment industries configure imaginaries worldwide is essential to understand where our greatest fears and desires lie, especially in our current economic, political, social, and environmental crisis. In this context, apocalyptic narratives are fundamental objects through which we can think about our future, as the ones referred to in this paper

Cultural Industries, mainly through science fiction and above all the so-called 'climate fiction' or cli-fi, have appropriated the environmental crisis narratives and have made them highly successful. Beginning in the 1970s with films such as *Soylent Green* (1973) or *Mad Max* (1979)—both the seed of cli-fi—during the late 20th and early 21st centuries, the issue has risen to prominence with films such as *Waterworld* (1995), *The Day After Tomorrow* (2004), *Wall-E* (2008), *The Road* (2009) or the remake of the 1951 classic, *The Day the Earth Stood Still* (2008).

Taking this into account, it is undeniable that Hollywood, as one of the main centre of production of cultural goods, still has the role of 'dream factory' to most of the Western world. In this regard, Kalafatoğlu (**2019: 73**) states that between 2012 and 2017, Hollywood revenue still represented around 11 percent of US annual income. Thus, the 'Mecca of cinema' continues to be one of the main centres of cultural dissemination or, as Kalafatoğlu (**Ibid: 65**) points out, 'the economic and political power of the USA has been transferred to the field of culture through cinema'.

In this way, dystopian and apocalyptic mainstream cinema—which at first glance could be considered 'critical' towards capitalism—evades censorship of the economic system, cause of the civilisational collapse represented in these productions (**Rey Segovia, 2016**). Despite its apparent 'progressive' spirit, I endeavour to demonstrate that this genre continues to reproduce the logic that supports the current economic system. Additionally, I also argue that the discussion of these 'uncritical dystopias' (**Mirrlees, 2015**) cannot be justified exclusively through a structuralist approach that interprets them from an Althusserian perspective—that is, as mere 'ideological apparatuses' of mass control. This means that Cultural Industries should be considered from a perspective that is not limited to the mechanistic matter of deterministic relationships between economic base and superstructure. It is then necessary to take a deeper look at the way in which we understand, represent, and reproduce our reality.

A Cultural Studies perspective is useful to bring new ideas to this debate because I understand that 'the difficulty lies in estimating the final importance of a factor which never, in practice, appears in isolation'. Therefore, 'if we are to understand the cultures, we are committed to what is manifest: the way of life as a whole' (**Williams, 1960: 300**). This

requires considering the interactions and conflicts between mass culture and the critical expressions of popular culture (**Fiske, 2010: 19**).

In that respect, we must pay attention to fictitious representations of eventual civilisation collapses in order to understand how these images affect our capacity to act (or not) and transform reality. Through the analysis of two of the most successful films on this topic, *The Day the Earth Stood Still* (**2008**) and *The Day After Tomorrow* (**2004**), I will explore how this issue is approached nowadays by exposing their narrative structure and the conservative perspective they uphold. My aim is to prove how cli-fi mainstream fictions present plots to the audience under a pseudo-scientific veil that obscures their religious orientation. As a result, these films ultimately avoid the debate about the consequences of our economic system.

Cinema is one of the most powerful vehicles for collective imaginaries, therefore film analysis will help us provide new insights to the issues raised above. Paraphrasing Jameson (**2003: 76**), it is necessary to understand why it is easier for us to imagine the end of the world than the end of capitalism. The following examples may give us some clues.

Dystopia, Cli-fi and the Collapse of Western civilisation: An essential clarification of concepts

A proper delimitation of the sub-genre is necessary before proceeding. Although I intend to maintain a certain flexibility in the categorisation of the films analysed, it becomes essential to narrow this collection of films according to certain criteria.

The term cli-fi is attributed to American journalist Dan Bloom, creator of the online dissemination project *Cli-Fi Report Global* (http://cli-fi.net/). Bloom relates it to the eco-fiction genre, popularized in the 1970s through novels such as *The Monkey Wrench Gang* (1975). However, Bloom believes climate fiction has become an independent genre, restricted to those fictions that take into consideration the specific problem of global warming (**Sullivan, 2017**). The Guardian journalist Rodge Glass points out that, unlike most science fiction, climate fiction focuses on intense and immediate threats. In his opinion, what differentiates climate fiction from traditional science fiction is not so much a concern about discovery but about warning. According to Glass, the horrors described in climate fiction are presented to us as strangely familiar. In this regard, cli-fi closely echoes the definitions of dystopian fiction.

According to Claeys (**2017: 4**) the term dystopia refers to a 'diseased, bad, faulty, or unfavourable place'. Claeys (**Ibid: 5**) also points out that the expression is normally associated with literature and refers to 'fearful

futures where chaos and ruin prevail'. Other authors such as Hernández-Ranera (**2005: 14**) emphasise that dystopian societies take place in imminent futures where conditions are based on the social tendencies of the present time. Therefore, dystopias have a strong anchor in the present, inferring the future from the extrapolation of the existing categories in a particular moment (**López Keller, 1991: 15**).

Consequently, 21st century dystopias have progressively abandoned their traditional clichés—such as the fear of totalitarianism—to introduce new concerns much more rooted in our present reality. In this sense, Claeys (**2017: 501**) refers to the importance given to climate change and its consequences when it comes to imagining a dystopian drift in our future. As Spratt and Dunlop (**2019**) have argued, the so called climate crisis 'provides a glimpse into a world of 'outright chaos' on a path to the end of human civilisation and modern society as we have known it'.

This can be linked to the possible 'collapse' described by authors such as Tainter (**1995**), Diamond (**2006**) or Taibo (**2017**). Based on the work of Spanish scholar Carlos Taibo, we can define 'collapse' as

> *(...) a strong shock that disrupts many relationships, the consequent irreversibility of the process, deep alterations regarding the satisfaction of basic needs, a significant decrease in human population, a generalized loss of sophistication in all fields, together with a growing fragmentation and retrogression of centralizing flows, the dissolution of pre-existing institutions and, finally, the breakdown of the legitimizing ideologies and many of the communication mechanisms of the previous order* (**author's translation, Taibo, 2016: 31-32**).

In recent decades, these kinds of narratives have multiplied mostly due to a growing concern about issues such as climate change or the energy crisis. This began, especially in the 1960s and 1970s, with the publication of studies such as *Silent Spring* in 1962 (**Carson, 2005**) or ten years later with *The Limits to Growth* (**Meadows, 2006**). Environmentalism—which owes much to the conservationist movements of previous decades —flourished during this period in a way that continues today. It was during those years that concerns such as overpopulation, industrialisation, pollution, the use of natural resources and food sovereignty became more relevant in scientific and academic spheres, spreading to other areas such as Cultural Industries and, more recently, to the corporate discourse. However, as Herrero (**2006: 154**) notes, the multiplicity of discourses and scientific studies developed over the last fifty years has not succeeded in deflecting the path to collapse.

As such, dystopian fiction provides a useful tool for relaying many of the concerns that environmentalists address to the general public. If we conceive dystopias as depictions of our present fears and anxieties about the future, climate fiction, with its speculative character over the future and its premonitory spirit, might be understood as a peculiar form of dystopia, or even as a sub-genre within it. Therefore, the concept of environmental dystopia is suitable for referring to these narratives. I will consider environmental dystopias those fictional productions that focus on the representation of undesirable futures directly related to ecological collapse. This is, the impact of human activity on the natural environment that can cause irreparable and undesirable changes in human relations.

Environmental Dystopia in Mainstream Cinema: The desacralisation of contemporary apocalypse

I will proceed to establish some examples in order to illustrate and analyse the statements made before. I will examine two of the most famous cli-fi movies of the 21st century: *The Day the Earth Stood Still* (**2008**) and *The Day After Tomorrow* (**2004**). The two feature-length films were successful box-office hits. The first film remained in first place worldwide for seven days after its release, while Emmerich's was the sixth most popular film of the year 2004. Both films address the end of days and refer to our responsibility for the fate of our planet. While dystopias normally reveal the world after the apocalypse, these movies provide an account of the days before the final catastrophe. Even if this characteristic might be seen as problematic for the integration of the films into the genre of dystopia, I argue that these films are clear examples of cinematographic depictions of possible collapses—either directly caused by human action on the environment or as 'punishment' for their bad actions.

I will consider not only the formal aspects of the films, but also, and especially, their plot and narrative structure. I seek to establish how the main characters are presented to the audience and which of their qualities are highlighted by the filmmakers, as well as analyse the evolution of the plot and the identification of the main themes. Textual film analysis will be a fundamental tool in this approach, and I will also concentrate on other issues related to the social and cultural dimensions of the stories.

The Day the Earth Stood Still and *The Day After Tomorrow* offer an alternative perspective on environmental dystopias, in terms of contingency of a future anchored in our present. This 'attachment' to our present gives us the possibility to draw some clues about our era's philosophy or, in the words of Gramsci (**2011: 130**), about 'the body of feelings and conceptions of the world that prevail among the "silent" majority' (author's translation). In terms of hegemony, it is interesting to

examine how this 'silent majority'—those outside of direct political participation—interprets environmental problems through an apparently de-ideologized lens, in the same way that these films approach them.

2008's *The Day the Earth Stood Still* tackles the environmental concerns directly associated with the anti-war movement and youth protests of the first decade of the 21st century in the United States of America, unlike the 1951 film, which focused on the post-war and Cold War fears. Although the film softens the messianic aspects of the original one, this analysis will show that this discourse is still present. The apparent secularisation of the original story contributes to mask the politically conservative message that the film still holds.

In Derrickson's film, astrobiologist Helen Benson (Jennifer Connelly) is summoned by the US Government after the arrival of an unidentified object from space. This object, a large sphere, lands in New York's Central Park and an alien in human shape, later known as Klaatu (Keanu Reeves), descends from it along with a giant robot named Gort. Humans will soon discover that similar objects have landed all over the world. Klaatu's mysterious intentions will be revealed shortly: he has come to rescue Earth's biodiversity from being wiped out by mankind. Following biblical fables, US Secretary of Defense Regina Jackson (Kathy Bates) will discover the alien's true purpose: to cause a new Great Flood to exterminate the human race. During the film, Klaatu will join Helen and her son, Jonas, who will eventually convince him of our capacity to rethink our attitude in dealing with the environment.

The US government is represented in the figure of Regina Jackson, a strong middle-aged woman whose only concern seems to be the possibility of a global armed conflict not only against the alien visitors but also against other powerful nations of the world. The film shows a clear antimilitarist and pacifist discourse, easily appreciated in the grotesque representation of the US Army and government as institutions conformed by incompetent and irrationally violent people.

Klaatu, who is characterized as a young Anglo-Saxon man, is a cold, hyper-rational being who sticks to that same rationality when disclosing the urgent need to annihilate humanity. He does not let his emotions control him at any time, even when he finally comprehends that emotions are an important part of human 'nature'. Nevertheless, he does seem to be able to appreciate the 'beauty' in art, which he eventually attributes to a sort of 'hidden' but distinctive quality of our humanity that he does not fully understand.

To complement Klaatu's character comes Helen, initially presented as an independent and prominent woman in her professional field. However, the storyline quickly focuses on her role as a long-suffering caregiver, blurring the scientific and rational aspect of her character. This is clearly noticeable in several sequences of the film; e.g. when Helen visits Professor Barnhardt, her mentor and Nobel Prize winner, his advice to her is to persuade Klaatu 'not with reason, but with yourself'. Helen's prominence then becomes relegated to her emotional and sensitive side, characteristics of femininity traditionally represented in Hollywood cinema even in female scientists (**Conrad, 2009: 57**).

With this brief overview of the different roles played by the main characters of the film we see, at first glance, a certain degree of conservatism. From this perspective, the tale of a creature coming from Heaven to judge us and decide on our future is no less conventional. However, Klaatu is not a legendary figure or a prophet in a traditional manner—although he does depict some of the characteristics that allow us to consider him as one; for example, being capable of healing himself or others, even though it is not through 'magic' or supernatural powers but through advanced medicine.

This is even more obvious if we focus on the form of 'punishment' Klaatu decides to throw over the world: a plague of mechanical locusts. This plague invokes the one inflicted by God on Egypt as a punishment for the enslavement of Hebrews. The parallelism between the two plagues can be noted in the film. While its origin is an artificial organism, Gort's mechanical body, we can observe how it first emerges from a military base situated in the desert and it quickly advances looking for the city. On its way, the plague of locusts wipes out all man-made infrastructures, vehicles, and weapons (**Pictures 1 to 4**).

Picture 1: Gort emerges from a military base, shot perspective that of the gathered troops. Image source - *The Day the Earth Stood Still* (**2008**) © Twentieth Century Fox/3 Arts Entertainment et al.,

Picture 2: Alien mechanical locust plague attack a fleeing truck. Image source - *The Day the Earth Stood Still* (**2008**) © Twentieth Century Fox/3 Arts Entertainment et al.,

Picture 3: Wide angled shot of alien mechanical locust plague advancing on New York. Image source - *The Day the Earth Stood Still* (**2008**) © Twentieth Century Fox/3 Arts Entertainment et al.,

Picture 4: Aerial shot of the alien mechanical locust plague engulfing New York. Image source - *The Day the Earth Stood Still* (**2008**) © Twentieth Century Fox/3 Arts Entertainment et al.,

In the final part of the film Klaatu sacrifices himself to save humanity and the calm that follows his act, that is also a clear example of the religious background of the story. The sequence begins with a picture of Helen and Jason who are seeking protection under an arch in Central Park together with Klaatu. As a result of the plague, Jason begins to bleed from his nose and collapses. Helen begs Klaatu to save him, while she also starts bleeding. The image of the woman holding her fallen stepson can easily be compared to Michelangelo's Pietà (**Picture 5**). Klaatu finally kneels before them and decides to save both using his healing abilities, as Christ did for the sick and leper (**Pictures 6 to 8**).

Picture 5: Helen clasps her dying stepson. Image source - *The Day the Earth Stood Still* (**2008**) © Twentieth Century Fox/3 Arts Entertainment et al.,

Picture 6: Wide angled shot, in silhouette, the figures of Klaatu and Helen kneel over Jason, Helen's dying stepson. Image source - *The Day the Earth Stood Still* (**2008**) © Twentieth Century Fox/3 Arts Entertainment et al.,

Picture 7: Close up shot, Klaatu claps the hands of a human, their point of view perspective. Image source - *The Day the Earth Stood Still* (**2008**) © Twentieth Century Fox/3 Arts Entertainment et al.,

Picture 8: Close up shot, Klaatu claps the hands of a human, reverse perspective. Image source - *The Day the Earth Stood Still* (**2008**) © Twentieth Century Fox/3 Arts Entertainment et al.,

Consequently, the film presents an account of religious fables based on the Judeo-Christian tradition, regardless of the apparent secularisation or desacralisation suggested through the figure of Klaatu. It is no longer God, Jesus or the Four Horsemen of the Apocalypse, but an alien in human form, whose purpose is to alert and 'save' us from ourselves.

At this point it is worthwhile to remember that Klaatu, as a kind of avenging angel sent from Heaven, not only intends to destroy every human creation, but also to save the planet's biodiversity by collecting, like Noah, specimens of the world's flora and fauna. Nature, thus, remains as a permanent and unchanging element during the whole plot. The dichotomy Nature versus Civilisation—one of the recurrent dystopian themes according to scholars as Martorell (**2019: 41**)—operates here almost as an argument for a necessary refoundation in evolutional terms: the need to start again, from scratch, on a newly created blank canvas.

This is one of the main reasons why the film is close to the dystopian genre and, more specifically, to the so-called 'negative utopias' (**Sargent, 1994: 9**): unable to find rational solutions outside the limits imposed by our current economic system —that is, capitalism— the only way to escape our inevitable fate is to trust love and start over. In this setting, our imaginaries about the future end up seeking answers in the past; that is, in the fables and/or traditional narratives that sustain the pillars of Western civilisation.

On that note and according to Wallis (**2014: 71-72**), we can observe how our greatest fears are reflected in popular culture and the topics addressed by Hollywood cinema. He understands that contemporary apocalyptic films, which could also be referred to as collapse films, are characterized by a desacralisation of the apocalypse, while at the same time they tend to valorise 'the everyday wherein (...) the contemporary social order (understood typically as male and North-American) is reaffirmed and celebrated' (**Ibid: 73**). Thus, and considering the problem presented in Derrickson's film, the film also adapts perfectly to our definition of environmental dystopia in the description of an eventual collapse caused by our activity on the environment and its consequences.

Wallis states in this respect that many of these apocalyptic films operate, for contemporary audiences, in much the same way as the apocalyptic texts of the Middle Ages and the Renaissance in Europe did (**Ibid: 75**). In his opinion, however, some differences can be identified. These differences refer mainly to the mitigation of fatalism when compared to biblical texts or to the consideration of the Apocalypse as a 'natural' fact and avoidable through human action. In the film, the most immediate consequence of our actions is the aforementioned punishment by this extra-terrestrial creature who threatens with the apocalypse.

The latter is related to the concept of 'apocalyptic religion' referred to by scholars such as Gray (**2008: 3**). According to Gray, this type of religiosity is experiencing a sort of rebirth in the new millennium, accompanied by contemporary political conflicts such as the terrorist attacks of 9/11 (2001) or the Iraq War (2003). Gray (**2008: 23-24**) points out that utopian narratives (and therefore, I would add, also dystopias) are strongly influenced by the Millenarian movements that impregnated modern social and political movements. Other scholars, most notably Conrad Ostwalt (**2016**), also refer to this apparent desacralisation. According to Ostwalt (**Ibid: 8**), the blurring of the boundaries between the sacred and the secular has created a new apocalyptic myth, characterized by a fundamental desacralisation of the traditional forms of the apocalypse.

In Derrickson's film, there is clearly an effort to dissociate religiosity from its 'magic' component, but in the end, it is covered up with a halo of scientism reinforced by the main characters of the film. Klaatu and Helen are both rational beings —modern in the historical sense of the term— who base their decisions on scientific evidence. In this sense, it seems clear that *The Day the Earth Stood Still* offers us a re-issue of the apocalypse in which various Judeo-Christian themes such as the Exodus (specifically, the Seven Plagues of Egypt) or the Great Flood are mixed, with the Ark as the central element and Klaatu as a new Noah.

The movie thus offers some fundamental lessons. On the one hand, it argues that we are unable to realize the problem until a greater, seemingly all-powerful being comes to warn us about it. On the other, it tells us that science and reason will not save us, but love will. Although this message may be arguable, taken it together with the re-packaging of religious discourses, it paradoxically implies a potentially 'unscientific' position.

In the end, the story seems to emphasize faith as one of the most important values we have as individuals. In order to reaffirm this, the film presents us an unresolved ending in which we must trust and believe for everything to work out. That faith is in fact the basis for our salvation. Here is where it lies the conservative approach to the subject. Guilt is equally shared among all planet's inhabitants and redemption does not imply any structural changes but merely moral ones. Although the film raises some questions about our 'way of life', it does not dwell on these issues for long.

The film also perfectly fits within the tradition of conservationist environmentalism, a movement with a long history in the United States. More specifically, the postulates of Christian environmentalism seem to have a clear influence in the plot presented by Derrickson. According to Kearns (**1997: 351**), this movement 'is rooted in an evangelical interpretation of the biblical mandate for humans to be good stewards and to take care of the earth'. Kearns also states that Noah is a central figure

for these activists, especially when it comes to the moral implications which the story represents. Derrickson's film clearly illustrates this by providing us with an updated portrait of Noah's ark on the big screen.

On top of that, the possibility of a Great Flood has for decades been one of the most debated issues among Christian environmentalists and the so-called 'creationist scientists'. The most influential publication among the latter is, undoubtedly, *The Genesis Flood* (**Whitcomb & Morris, 1961**), which addresses the issue raised in its title from a pseudo-scientific perspective. As Witske (**1984, 60**) says, this book 'stirred up a great deal of interest in a group of Christian apologeticists seeking to unite Biblical literalism with evidence from the geological and biological sciences'. An interest that we can link back to the films presented in this paper.

The work of Michael Oard, a prolific American meteorological researcher and member of the Institute for Creationist Research (ICR), is an example of this. Interestingly, his research has focused on the possibility of an Ice Age caused by the Great Flood (**Oard, 1990**). This issue is conspicuously brought up by the film *The Day After Tomorrow* (**2004**), which depicts a post-collapse scenario, this time caused by the imminent consequences of global warming. In the film, the global warming has caused a change in ocean flows, which will end up precipitating a flooding and a new glaciation throughout the northern hemisphere.

Here, the protagonists are a dysfunctional father, Jack Hall (Dennis Quaid), and his son Sam (Jake Gyllenhaal). Jack is a paleoclimatologist who specializes in the research of the climatic changes that the Earth has experienced throughout its existence. During the first part of the film, Jack warns on numerous occasions about the risks of climate change, confronting the scientific community and the US Government itself, which maintains a negative attitude until disaster becomes inevitable. As in the previously analysed film, humanity is not aware of the problem and people only awaken when the collapse occurs.

The hero is once again a white heterosexual man, although in Jack's case he is a scientist who puts his reputation at stake by opposing official discourse. As can be seen, it is not 'science' but a scientist or, for that matter, a group of 'enlightened' scientists who warn about the threat. Although their appeal to authority has some weight in the plot, the storyline ends up focusing on Jack's personal life story and his promise to rescue Sam, his son, from certain death.

In *The Day After Tomorrow* collapse comes to our civilisation in the form of a flood (**Pictures 9 & 10**), making the biblical references even more evident than in the previous example. Like Noah, Jack tries to convince the rest of the mortals of the imminent catastrophe, but he fails. He

continuously depicts a doomsday scenario that is rejected by most of the people who surround him. This is an attitude that easily resembles the one that environmentalism has sustained since its revival in the 1970s. Here, it is perhaps more evident that there is a strong correlation between the film's plot and the positions that the Christian environmental movement has held since its origins.

Mass media plays an important role in the plot. The events are permanently broadcast, so the diegetic space transcends the cinematic screen, making the spectator live them in a much more frenetic and realistic way. This also allows us to witness how the tragedy is impacting the rest of the world. However, the centre of the picture is still located in the United States: the riots, looting, and violence seem to take place beyond its borders; inside, we only notice perplexity and confusion among the people.

Jack's son, Sam, a shy and smart teenager, also ignores his father's warnings and flies from Washington to New York to participate in an academic contest with his friends, Laura, and Brian. While in New York, the dramatic events predicted by Jack unfold and a devastating tsunami strikes the city, leaving it completely flooded (**Picture 11**). After that, temperatures plummet and a snowstorm begins; the city is now under a huge blanket of snow and ice. Survivors take shelter inside New York's buildings, which serve as a refuge while waiting to be rescued. These buildings serve as a resting place, just as the mountains of Ararat did for Noah's Ark. In fact, the characterisation of Sam's girlfriend [Laura] during these incidents reminds us of an icon of a religious nature, almost as a Madonna (**Picture 12 to 14**). Her head is covered with a pashmina while her coat serves as a kind of robe, only leaving her face exposed.

Picture 9: Mega tsunami wave impacts New York, aerial view. Image source – *The Day After Tomorrow* (**2004**) © Twentieth Century Fox/Centropolis Entertainment et al.,

Picture 10: Mega tsunami wave impacts New York, offshore perspective. Image source – *The Day After Tomorrow* (**2004**) © Twentieth Century Fox/Centropolis Entertainment et al.,

Picture 11: Mega tsunami wave impacts New York, inundated street level perspective. Image source – *The Day After Tomorrow* (**2004**) © Twentieth Century Fox/Centropolis Entertainment et al.,

Picture 12: Tsunami survivors huddle, with Laura Chapman off-centre left. Image source – *The Day After Tomorrow* (**2004**) © Twentieth Century Fox/Centropolis Entertainment et al.,

Picture 13: Close up, tsunami survivor Laura Chapman. Image source – *The Day After Tomorrow* (**2004**) © Twentieth Century Fox/Centropolis Entertainment et al.,

Picture 14: Wide shot, tsunami survivors in the background, with Laura Chapman the central focus. Image source – *The Day After Tomorrow* (**2004**) © Twentieth Century Fox/Centropolis Entertainment et al.,

It does not seem casual that the building Sam chose as a shelter for him and his friends is the New York Public Library. The frozen and tired refugees end up burning books to keep warm. The debate over which books are worth saving from burning is also interesting. For instance, Nietzsche is described as a 'chauvinist pig' despite being 'the most important thinker of the 19th century', so his work does not escape from fire, while all the 'tax law' books are dispensable. Perhaps the most significant conversation held in the library is between two minor characters, Helen, and Jeremy. The man holds a Gutenberg Bible tightly against his chest while the woman mocks his attitude: 'Do you think God will save you?', she says. Jeremy, who claims to be an atheist, explains that he is trying to avoid the burning of this particular Bible because, in his opinion, it 'represents the dawn of the age of reason'. 'If Western civilisation is finished, I'm gonna save at least one little piece of it', he adds. The link established between reason, (Western) civilisation, and religion does not seem to leave any room for debate as to which fundamental pillars the film is upholding. In other words, we are offered a defence of modern civilisation as interpreted through American values.

It is not no less significant that this defence comes in the form of a revival of Judaeo-Christian values and biblical postulates, or as I have already pointed out, as a punishment (in this case from Nature) for humans' attitude towards Earth.

Once again, we are initially offered a grotesque representation of the United States government, although this time it is related to a much more 'material' debate: the opposition between capital gain and human life. Although this could be interpreted as an 'anti-system' statement, this argument does not seem to hold up for long. In fact, in the end, the US government itself will accept the necessity to change the way we relate to nature. Thus, the resolution of the conflict does not really focus on a 'revolutionary' way out, but on a 'reform' of the economic system within its limits.

Furthermore, from a moral standpoint, we can recognize that the plot pivots around Judeo-Christian themes such as sin (Jack's neglect as a parent, as well as the government's neglect regarding climate change), guilt (Jack's assuming his responsibility as a father as well as the US President as 'father of the nation', that is, responsible for its citizens) and forgiveness (the friendly 'reconciliation' between Jack and his family, but also between the US and the 'Third World'). Following this framework, we could establish a parallel between the evolution of Jack's character and that of the nation itself. The plot suggests a path of redemption for both, the need to believe that these 'dysfunctional parents' can save us from our sins through their sacrifice.

Again, the similarities with some messianic figures, such as Christ himself, seem quite evident. At this point, it might be worth remembering that Emmerich also directed *Independence Day* (1996), which highlights similar aspects as the ones discussed here.

Once this new Great Flood has passed, one of the only things left is the Statue of Liberty's torch emerging from the water, as a reminder of the lost freedom and of people's ability to rise from ashes (**Picture 15**). In the end, we are again presented with an almost literal image of a blank canvas beyond the city, symbolizing the chance for a fresh start (**Picture 16**).

Picture 15: Wide angle shot, a submerged New York City from the Upper Bay Perspective in the background, with the Statue of Liberty half underwater to the fore. Image source – *The Day After Tomorrow* (**2004**) © Twentieth Century Fox/Centropolis Entertainment et al.,

Picture 16: Aerial shot, survivors of New York in the distance, trudging across a frozen, snow-bound, featureless landscape. Image source – *The Day After Tomorrow* (**2004**) © Twentieth Century Fox/Centropolis Entertainment et al.,

There are clear similarities between both filmic texts. In the first place, both examples revolve around the need to rethink our relationship with Earth, that is, the necessity of taking care of its biodiversity and/or to acknowledge the impact of human activity on our planet. To this end, the plots rely on biblical characters and Judaeo-Christian narratives—especially on fables like the Great Flood or figures like Noah—in order to present a sobering discourse in which moral and ethical values such as love, forgiveness, and sacrifice become fundamental pillars.

As shown, both productions ignore the earthlier causes of the problem. It all ends up being reduced to moral or ethical issues, without delving into any of the economic, social, or political ramifications of their perspectives. One of the main problems with this approach lies not so much in the possible lessons that can be established on an ethical level, but in the blurring of the environmentalists' most radical demands regarding such challenges. For instance, explicit references to the potential impacts of a shift in capitalist production model are clearly scarce, which are essential to curb carbon emissions.

It might be argued that these films deal with a necessary issue and stimulate an important debate. However, as this analysis has shown, they address it in terms of individual responsibility and from an ethnocentric approach. Hence, what is presented to us as an apparently de-ideologized and neutral message becomes a sobering plea when scrutinised. It is nothing but a plea to rebuild civilisation through the restoration of the presumably abandoned Western cultural values.

While a further analysis of these issues is required, the analysis presented in this paper gives us some clues about how environmental collapse is presented in mainstream Hollywood cinema. The issues that have been pointed out might serve as preliminary defining characteristics of a film genre that can also be traced in other examples, such as the famous Waterworld (1995). I think this work provides a guideline for the identification of a certain model or recognizable pattern inherent to environmental dystopias. In summary, the cinematographic apocalypse presents a secular —or at least non-religious— story, when related to environmental catastrophes. At the same time, these narratives are actually re-packaging elements present in ancient texts, such as the Book of Revelations.

The updating of sacred texts serves as a form of desacralisation of the apocalypse in the analysed films. On the one hand, the new ‘messiahs’ are now scientists or, at least, hyper-rational beings, like Klaatu or Jack. On the other, the reasons for the end of the world are intimately related to our actions and can also be avoided or mitigated through them. This desacralisation can be also related to what Partridge (**2005**) calls

'oculture', a characteristic of our times according to him. As the author states, it is a confluence between secularisation and sacralisation in which old religious forms are replaced by new non-Christian spiritualties. In this case, it would involve everything related to the veneration of nature or life on our planet.

This cinematographic approach to possible collapses might be also linked to the de-ideologisation and cynicism that characterize our times (**Žižek, 2009: 7**). The films focus on the selfish nature of human beings and their destructive capacity, which are worthy of divine punishment. Consequently, they detach the reasons that led to collapse from the current economic system, based on an extractivist, consumerist and productivist logic. Although there are references to this in the films, both end up focusing on moral and ethical conflicts. They also highlight the importance of the family and of institutions in restoring order and a specific lifestyle, that is, the American Way of Life. Thus, the restoration of normality (**Wallis, 2014: 72**) becomes the primary objective of both plots.

It is important to remember that cinema is a language which while often considered as a reflection or duplication of reality, it also serves as an instrument of persuasion. Therefore, as Carmona indicates (**2005: 16**), we must pay attention to the signifying strategies that take place in it. Although in these cases presented, the 'reflection' does not work as an absolute identification of the filmic image with the real world, it does so in terms of contingency. That is, in terms of an apparently deductible future based on the categories and elements that conform the spectator's present, which leads the image to be presented not only as plausible but also as possible.

Therefore, this approach to some of these mainstream dystopias—specifically, to those related to environmental collapse—points out some of the contradictions of our current economic and productive model. It also shows how direct criticism is avoided and turned into individual dilemmas of a Hobbesian human nature. The lack of an assertive solution in the films' endings—always open to interpretation—constitutes a clear commitment to a refoundation based on values.

This, while undoubtedly necessary, is of course insufficient to reverse the accumulative logic of capitalism and its effects upon the environment. It can be argued that this is not the main goal of these films; however, it seems clear that they aim at more than entertainment when addressing problems such as those described. In conclusion, these films' approach—which I might describe in political terms as liberal progressive—seems valuable in some aspects but, in the end, it does not succeed in imagining potential new worlds or, after all, new utopias.

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Picture 1: Gort emerges from a military base, shot perspective that of the gathered troops. Image source - *The Day the Earth Stood Still* (**2008**) © Twentieth Century Fox/3 Arts Entertainment et al.,

Picture 2: Alien mechanical locust plague attack a fleeing truck. Image source - *The Day the Earth Stood Still* (**2008**) © Twentieth Century Fox/3 Arts Entertainment et al.,

Picture 3: Wide angled shot of alien mechanical locust plague advancing on New York. Image source - *The Day the Earth Stood Still* (**2008**) © Twentieth Century Fox/3 Arts Entertainment et al.,

Picture 4: Aerial shot of the alien mechanical locust plague engulfing New York. Image source - *The Day the Earth Stood Still* (**2008**) © Twentieth Century Fox/3 Arts Entertainment et al.,

Picture 5: Helen clasps her dying stepson. Image source - *The Day the Earth Stood Still* (**2008**) © Twentieth Century Fox/3 Arts Entertainment et al.,

Picture 6: Wide angled shot, in silhouette, the figures of Klaatu and Helen kneel over Jason, Helen's dying stepson. Image source - *The Day the Earth Stood Still* (**2008**) © Twentieth Century Fox/3 Arts Entertainment et al.,

Picture 7: Close up shot, Klaatu claps the hands of a human, their point of view perspective. Image source - *The Day the Earth Stood Still* (**2008**) © Twentieth Century Fox/3 Arts Entertainment et al.,

Picture 8: Close up shot, Klaatu claps the hands of a human, reverse perspective. Image source - *The Day the Earth Stood Still* (**2008**) © Twentieth Century Fox/3 Arts Entertainment et al.,

Picture 9: Mega tsunami wave impacts New York, aerial view. Image source – The Day After Tomorrow (**2004**) © Twentieth Century Fox/Centropolis Entertainment et al.,

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Picture 16: Aerial shot, survivors of New York in the distance, trudging across a frozen, snow-bound, featureless landscape. Image source – The Day After Tomorrow (2004) © Twentieth Century Fox/Centropolis Entertainment et al.,

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Environmental Crisis, Cli-fi, and the Fate of Humankind in Richard Jefferies' *After London* and Robert Harris' *The Second Sleep*

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Abstract

This article discusses two instances of 'Anthropocene fiction' (Trexler, 2015: 4) that engage with the environmental crisis that industrial modernity has generated: Richard Jefferies' After London (1885), and Robert Harris' The Second Sleep (2019), which both depict a future in which technological civilisation has collapsed, and the non-human world is resurgent. Like climate change fiction, or cli-fi, these novels are concerned with the elusive and unpredictable environmental risks that modern societies inadvertently create, and with finding ways to negotiate the representational challenge of those risks; unlike many instances of climate change fiction, however, these novels do not set out to warn their readers of what is to come, or lament the disaster they depict. They are instead concerned with the legacy of technological civilisation – a legacy of risk and uncertainty – and the question of whether that legacy can ever be escaped. Neither novel offers an answer; but nor do they foreclose its possibility.

Keywords: modernity; cli-fi; risk; uncertainty; apocalypse; non-human

Introduction

My aim in this article is to explore two narratives that depict the apocalyptic aftermath of society's breakdown, and discuss their relationship to and bearing on contemporary climate change fiction, or 'cli fi' (**Johns-Putra, 2016: 267**). In Richard Jefferies' *After London; or Wild England*, first published in 1885, an unspecified 'event' (**Jefferies, 2017: 15**) has precipitated the collapse of modern, industrialized society. Robert Harris' *The Second Sleep*, published in 2019, also depicts a mediaevalesque future; it too takes as its point of departure some form of catastrophe or upheaval that has transformed society but whose nature is surrounded in mystery.

What bearing might these two novels have on discussions about the nature and role of climate change fiction, which is, by contrast, explicitly concerned 'with anthropogenic climate change or global warming as we now understand it' (**Johns-Putra, 2016: 267**)? Climate change fiction has become increasingly popular over the last decade, but whilst cli-fi has been 'identified as a genre of fiction in its own right' (**Johns-Putra, 2016: 267**), Andrew Milner and J. R. Burgmann have argued that it is more accurately regarded as 'a subgenre of sf' (**2018: 1**). As they contend, 'both climate fiction's texts and its practitioners articulate a structure of feeling that accords centrality to science and technology, in this case, normally climate science' (**Milner & Burgmann, 2018: 5**). It is on the basis of that climate science that, as Adam Trexler argues in 'the first book-length study of climate change fiction' (**Johns-Putra, 2016: 272**), its practitioners set out 'to explain, predict, implore, and lament' (**Trexler, 2015: 9**). The related point, argue Milner and Burgmann, is that, 'understood as sf', cli-fi has a 'pre-history', a pre-history that encompasses 'a flood narrative', such as Jefferies' *After London* (**2018: 5-7**). Consequently, and although 'not strictly speaking a climate fiction' (**Ibid: 7**), Jefferies' novel can be seen as a part of a longer sf tradition that also encompasses cli-fi.

Whilst Milner and Burgmann set the precedent for including Jefferies' novel in a 'pre-history' of cli-fi, there is, however, a more compelling reason for linking it to a discussion of climate fiction. As I argue in this article, Jefferies' novel responds to the deeper crisis created by industrial modernity, a crisis that is itself long-standing, and of which climate change is just one expression; for decades and perhaps even centuries, the planet's ability to sustain human existence has been strained by a whole range of human impacts, from ocean acidification to chemical pollution. As Jefferies' novel highlights, modern societies are imperilled by hazards of their own technological making. Consequently, it might be argued that *After London* is a form of sf that 'accords centrality to science and technology' (**Ibid: 5**) only to underline the risks of doing so.

No less importantly, Jefferies' genre-defying novel also responds to the representational challenge of this 'crisis of 'modernism" (**Hooker, 1996: 43**), and to the 'peculiar forms of resistance' that it presents to modern, realist fiction (**Ghosh, 2016: 9**). As Amitav Ghosh has argued, it is not simply that, with its exclusive focus on human narratives, realist fiction is poorly equipped to engage with risks that defy the human sense of scale in space and time; in what he terms 'the time of the Great Derangement' (**Ibid: 11**), realist fiction is also complicit with the Western reluctance to acknowledge the depth and extent of a crisis that, although of its own making, defies its comfortable, bourgeois sense of what is likely or probable (16-17, 25). Thus, and as Ghosh insists, 'the climate crisis is also a crisis of culture, and thus of the imagination' (**Ibid: 9**), and one possible representational response lies in exactly those hybrid forms of fiction that realism has 'banished' (**Ibid: 66**).

The continuing relevance of Jefferies' work is suggested by a much more recent novel, Robert Harris' *The Second Sleep*. First published in 2019, Harris' "genre-bending thriller" (**Clark, 2019**) also shares a number of thematic resemblances with Jefferies' novel, such as the latter's concern with the fragility of technological civilization, the multiple risks that civilization generates, and its legacy of uncertainty; it too leaves the cause of that apocalypse opaque, underlining the extent to which its future world is also entrapped by a lack of understanding. Although the two novels were published over a century apart, both present a fictive future haunted by the condition of not-knowing, of not being able to know, or of being denied knowledge. More or less unwittingly, these future societies are condemned to repeat the same mistakes as those they succeeded.

As this brief outline suggests, both novels are recognisable instances of Trexler's 'Anthropocene fiction', responding to a 'human process' of geophysical transformation that was already underway 'in the Victorian period' (**Trexler, 2015: 4**). Since neither is, however, directly concerned 'with anthropogenic climate change … as we now understand it' (**Johns-Putra, 2016: 267**), they also avoid some of the pitfalls inherent in the kinds of climate change fiction that Trexler surveyed: neither implores or laments (**Trexler, 2015: 9**); neither defers the risks that modernity generates, or reduces them to a 'single tsunami' (25); and whilst both imply that modernity's downfall is a dialectic inevitability, neither extrapolates from this the kind of extreme, end-of-the world scenario that climate fictions often offer (**see also Garrard, et al., 2019: 39, 120**). Rather, these narratives are concerned with the kind of society that might reconstruct itself in modernity's shadow, 'after London ended' (**Jefferies, 2017: 3**), and whether that shadow can ever be escaped.

My intention in this article is, therefore, to evaluate these novels as part of a wider, interlinked response to the nature and impact of modernity, a response that also encompasses cli-fi itself. The article has three main sections. The first establishes the link between modernity, risk, and uncertainty, with which the climate change debate is (still) caught up (**Garrard et al., 2019**). The second turns to the novels themselves, and explores their themes of risk and uncertainty. The third shifts the focus to the representational decisions each makes – to their narrative strategies – and the kinds of generic fluidity that result. As I conclude, these novels are relevant to our understanding of 'the complexity of climate change as a cultural phenomenon' (**Johns-Putra, 2016: 267**) because they respond to the same modernizing impulse with which climate change is caught up, and to the uncertainties and potentially cataclysmic risks that impulse generates, and because, like cli-fi, they too engage with the representational challenge of an environmental crisis that is complex, mutable, and elusive. No less significantly for our understanding of how fiction (such as cli-fi) might respond to environmental crisis, both novels refuse 'to foreclose the possibility of an optimistic outcome' (**Frost, 2017: xlvi**); whilst neither identifies what that outcome might be, their emphasis on the renewed dynamism and agentiality of the non-human world – a world that cannot now be dismissed as inert, passive, or pliable – tentatively implies that any future hinges on the question of how that world is taken into account.

Modernity, Risk, Uncertainty

As Ulrich Beck has argued, modern societies are by their very nature risk societies (**1992: 19-23**), and the risks they inadvertently create mark the limit of scientific understanding: often, those risks take the form of what Timothy Morton calls 'hyperobjects', 'massively distributed in time and space relative to humans' (**2013: 1**), making it all the more difficult to understand, adapt to, or mitigate them. But whilst modernity has generated unforeseen and unpredictable risks, it has also created less resilient, more vulnerable societies, heavily dependent on technology, but insulated from any sense of their own vulnerability by a false sense that the non-human world has itself been mastered; as Ghosh points out, the 'distinctive mark of [this] "modern" worldview' (**2016: 22**) is that gradualism has replaced catastrophism (**Ibid: 17-20**), 'banishing […] the improbable' (**Ibid: 17**), and substituting a view of 'Nature [as] moderate and orderly' (**Ibid: 22**). In other words, risk societies are also societies that, paradoxically, believe in a world that is comprehensible, predictable, and pliable; when the evidence offers an incontrovertible challenge to that paradigm, there is a tendency to disbelieve it. Thus, and whilst uncertainty may be used as a reason to exercise caution (**Garrard et al., 2019: 233**), late modern societies tend instead towards intransigent inertia. In spite of

their inherent fragility, these societies live as though the 'scientific consensus […] were not true' (**MacDuffie, 2018: 543**), or actively exploit uncertainty to justify inaction (**Garrard et al., 2019: 233**): in the literature of climate change denial, for example, 'the limitations of climate models' projections are a constant – and not unjustified – refrain' (**Garrard et al., 2019: 6**). Consequently, questions of certainty and uncertainty, 'truth and falsity' (**Trexler, 2015: 4**) continue to overshadow debates about climate change. Indeed, it is precisely to avoid the 'extraordinarily heightened rhetoric' generated by those debates that Trexler refers to 'Anthropocene fictions' rather than cli-fi (**Trexler, 2015: 4**).

As this brief discussion highlights, modern societies are caught in a complex bind. On the one hand, modernity assumes a model of the non-human world as passive and predictable, yet it is neither, as the impacts of climate change already demonstrate: '[e]xtreme climate change,' note Milner and Burgmann, 'necessarily involves everyday improbabilities: radically extreme weather events on the one hand, and a nonhuman Nature that is both sentient and proactive on the other' (**2018: 1**). On the other, modernity has created more fragile and less resilient societies, whilst exposing them to an array of risks whose multiple, unforeseen consequences are now 'a dominant force in history and society' (**Beck, 1992: 22**): the uncertainty surrounding those risks has itself become a major factor in societies' growing vulnerability. How, then, do *After London* and *The Second Sleep* respond to the 'self-endangering, "civilized" world' that modernity has generated (**Beck, 1995: 13**)?

Themes of Risk and Uncertainty

After London and *The Second Sleep* take as their premise the collapse of the modern world, a collapse which may not have been understood at the time, and whose nature is now impossible to unpick; this failure to understand what has happened is part of a wider loss of knowledge and understanding, which has in turn shaped the primitive worlds that the novels depict. In *After London*, for example, there is no agreement about what happened, or why, and even the existence of this uncertainty is a matter of mystery (**Jefferies, 2017: 14**), since only a few generations have (it is said) elapsed since the event (**Ibid: 3**): 'it may be that even when they were proceeding, the causes of the changes were not understand' (14). 'All that seems certain is, that when the event took place, the immense crowds collected in cities were most affected, and that the richer and upper classes made us of their money to escape' (**Ibid: 15**). Yet 'nothing has ever been heard' of the 'multitudes that left the country' (**Ibid: 15**). One explanation is that the multitudes did not leave, and they filled the cities only to die there, an alternative implied by stories of the 'ancient cities' whose sites – some now 'lost in the forest', others covered by swamp –

are avoided because they cause 'ague or fever' (**Ibid: 33**). It may be that plague played some part in modernity's downfall; it may also be that society's collapse was precipitated by the accidental release of the 'strange and unknown chemicals collected by the wonderful people of those times' (**Ibid: 166**), chemicals that now form part of the toxic cloud that marks the site of London. Ultimately, 'nothing is certain and everything confused' (**Ibid: 14**), and that confusion reflects the fragility as well the vulnerability of an 'industrial-capitalist colossus' (**Beck, 1995: 5**) which was over-dependent on technologies that only a handful understood or could fix once broken (**Jefferies, 2017: 15-17**): when 'the cunning artificers of the cities all departed', 'everything fell quickly into barbarism' (**Ibid: 17**), and 'the secrets of their sciences' (16) were quickly lost.

The continuing fascination of Jefferies' premise is underlined by Harris' *The Second Sleep*, which takes as its own basis the 'systemic collapse of technical civilisation' (**Harris, 2019: 57**). In Harris' novel, as in Jefferies' (**Jefferies, 2017: 17**), there are theological explanations for that collapse, and they are particularly prominent in Harris' fictional future, where a resurgent church has assumed authority, and it is believed that 'God had punished the ancients for their elevation of science above all else' (**Harris, 2019: 60**). There is, moreover, a certain truth to the church's teaching: 'technical civilization' is indeed raised on the achievements of modern science, and it was those achievements – that very sophistication – that rendered 'it [technical civilization] uniquely vulnerable to total [and rapid] collapse' (**Ibid: 58**). Yet scientists were also those intent on warning society about its own inherent fragility (**Ibid: 57-59**). Led by a Nobel prize-winner named Morgenstern, the most chilling aspect of their warning is, however, its tacit acceptance that nothing by then (the year is given as 2022) could be done to save society from any one of several 'catastrophic scenarios that fundamentally threaten the existence of our advanced science-based way of life' (**Ibid: 57**). Whatever the trigger, and whether it is climate change, pandemic, or super-volcano, or any of the other possibilities that the scientists identify (**Ibid: 57**), the aim must be to find a way to restore 'technical civilisation' as quickly as possible (58).

In Harris' novel, therefore, society does not pull back from the brink; it simply cannot. Moreover, its collapse is of a kind so sudden and severe that knowledge of what is happening and why is quickly lost, if it was ever fully understood at the time. Whilst societies of like-minded antiquarians (**Ibid: 55-56**) – and sometimes, simply, the curious – struggle to piece together the truth, their efforts are humbled not only by the way that the knowledge of 'the ancients' disappeared, perplexingly, into 'The Cloud' (56), but by the way in which knowledge is itself now regarded. In Jefferies' future, the ruling elite has little if any interest in the ancients, or 'the

secrets of their science' (**Jefferies, 2017: 16**), and the only exception is the young and idealistic misfit Sir Felix Aquila, who recognises the potential importance of that learning, and whose quest occupies the novel's second part (**Ibid: 39**). In Harris' narrative, by contrast, the church frowns upon and ultimately suppresses any interest in the ancients, whilst secretly finding ways in which to seek out and secure their knowledge (**Harris, 2019: 218-219, 321**).

As these novels underline, modernity has failed to address the threat of natural disaster, such as pandemic, but it has also succeeded in creating new and unexpected dangers, from atmospheric pollution and toxic spills, which in Jefferies' novel have created places where 'the earth was poison, the water poison, the air poison' (**Jefferies, 2017: 166**), to the still greater challenge of a warming climate, signalled early on in Harris' novel by the fact that in England's west country, the parakeet is now 'common' (Harris, 2019: 3). For these future societies, however, these conditions are simply a lived reality, the inexplicable legacy of a past none now understand (or admit to understanding). In turn, their own futures are shaped by this lack of understanding, forcing each to recapitulate its own now forgotten history. The opening part of Jefferies' novel is entitled the 'Relapse into Barbarianism' (**Ibid: 3**), whilst Harris' novel depicts a society in which wars are again being fought against old enemies (France, Scotland), and lives are once again lived in fear of a repressive church. It also seems as if the same mistakes may be made again. Although Morgensten has failed to resurrect the technological civilisation he said could not be saved, mill owners are already seeking out the kind of machinery will enable them to escape the 'brake' that 'Nature' places on their 'expansion' (**Harris, 2019: 120**). It may just be a question of time before they (re)discover steam-power, and the Anthropocene is once again underway (Watts' invention of the steam engine in 1784 is often given as the Anthropocene's nominal ground zero) (**Trexler, 2015: 1**).

These future societies are, therefore, brought low by their own lack of understanding: as they try to negotiate the hazards left to them by modernity, uncertainty has itself become a form of risk. For the novelist, however, a premise such as this is at once a problem to be negotiated and an opportunity to be exploited. How do these novels respond to the representational challenge of the themes with which they engage?

Representing Risk and Uncertainty

For Anthropocene fictions that seek to respond, as these novels do, to the risks and uncertainties that modernity generates, the realist mode may itself be inadequate. Uncertainty can be rendered as mystery or a puzzle to be solved – like the question of what precipitated the collapse of technological civilisation in these novels – but realist fiction typically

requires the satisfaction of a tidy resolution, and in these fictional worlds, answers are in short supply. Nor is realist fiction necessarily able to encompass the kinds of risk that modernity generates, hyperobjects that occupy a daunting temporal and spatial vastness (**Ghosh, 2015: 62-63**), since readers of realist fiction expect their stories to centre on human lives, operate over human time-scales, and focus on typically human concerns (such as love, relationships, or intergenerational strife).

These concerns have been variously highlighted by those who recognise the challenge that hyperobjects (like climate change) pose to the realist novel, such as Amitav Ghosh (**2016**) and Timothy Clark (**2015**). However, as Ghosh points out and Clark acknowledges, fiction need not conform to these realist rules. A more experimental (**Ghosh, 2016: 11, 24**) form of fiction might find ways of decentring the human – and of going beyond a human sense of scale – whilst also invoking uncertainty as an operative principle within the novel.

How do these novels negotiate the twofold difficulty of representing risk (when that risk takes the form of enduring ecological upheaval and societal transformation) and of representing uncertainty? Both employ the sf device of setting the action in the future: in Harris' novel, for example, over 800 years has elapsed since the apocalypse, which enables ecological transformation to run its course, whilst also explaining and legitimating this future world's uncertainty about its own past (it is only the crucial discovery of a letter from Morgenstern that makes any sense of what might have happened). By contrast, *After London* opens with a scholar's panoramic survey of technological civilisation's collapse, its swift erasure, and the emergence of warring states and peoples, all in a state of conflict and competition with each other and with a resurgent, non-human world. Combining human and non-human histories at various different scales, the scholar's chronicle enacts a decisive shift in focus away from the individual and towards the collective (**Ghosh, 2015: 77**). It also resists the temptation to lapse into an omniscient third-person narrative: although the unnamed scholar is palpably present in the account that he (or she) gives, it is only to draw attention to its gaps and limitations (for example, little is known of what might have happened to the world beyond the United Kingdom's shores).

In Jefferies' novel, it is, moreover, the gaps in the scholar's chronicle that sets up a quest-like narrative in the novel's second part, now related by a more conventional third-person narrator. The narrative quickly establishes Sir Felix's refusal to conform to the nobility's values, his contrary fascination with knowledge, and his need to find some way in which to prove himself. It also underlines some of the many hazards (both natural and manufactured) that Felix will have to negotiate if he is to succeed. The

stage is set for a journey of discovery which will, the reader hopes, provide answers about the nature of 'the event', and enable Felix to demonstrate the kind of superior wisdom and understanding that will point to a better and less brutish future. Yet the second part of the novel confounds the expectations it creates. Felix's quest is never rewarded with any new understanding of 'the event', and no great discovery that might enable him to launch a new society. Instead, it becomes clear that, on the few occasions when Felix has been able to use his own superior understanding, his primary objective is to find ways in which to reinforce his own standing, and establish his own authority over both people and place: he is, in other words, re-enacting both the Victorian 'romance of empire' (**Hooker, 1996: 49**) and the Enlightenment fantasy of mastery and possession (**Ibid: 48-49**). Furthermore, the narrative underlines both Felix's continued lack of knowledge – his journey is nearly cut short by his encounter with the toxic swamp that now marks the site of sunken London, an encounter which he is lucky to survive – and his powerlessness before an agential but indifferent non-human world. His quest ends, inconclusively, as he sets off on his return trip, leaving the reader none the wiser, unsettled and perhaps frustrated by a story that fails to supply any answers to the question it poses. Other endings, wrote Edward Thomas of the novel, 'could have been found to conform to the needs of perhaps a majority [of readers]. But to end with suspended breath is […] in keeping with this age' (**Thomas, 1909: 260**) – the age we now recognise of the Anthropocene. That open ending is, in other words, a final, categorical marker of the uncertainties in which the novel deals, and it underlines how different it is to the realist novels that were then in the ascendency, with their progressivist, comforting visions, and neat resolutions.

By contrast with *After London*, Harris' novel takes a more conventional approach to its material, by situating a soluble, human-sized mystery within the larger, incomprehensible story of ecological upheaval and technological collapse. The novel's opening line establishes that this is the year 1468, and that this is England (**Harris, 2019: 1**), but the appearance of parakeets on the next page throws both facts into doubt. As the narrative follows the progress of its young protagonist, Fairfax, it becomes clear that this is a future world, which has reset its calendar in the wake of some kind of apparent apocalypse. At this point, however, the larger mystery is subsumed within a more local, parochial one, as Fairfax's curiosity draws him into the search for the underground complex or 'ark' (**Ibid: 320**) in which Morgenstern and his followers may have waited out the chaotic aftermath of the disaster. This too is a quest (**Ibid: 319**), but it ends very differently to Felix's: Fairfax locates the now empty ark, only to be caught by his superior, Bishop Pole. He too is curious to know 'the truth of this place', but only so he may then bury it, along with all the other

secrets that the church keeps (**Ibid: 321**); in what the reader will recognise as the dramatic enactment of just desserts, Pole is buried alive moments later when the weakened bunker collapses.

Thus, Harris' novel also leaves key questions unanswered. Fairfax dies along with Pole, and whatever truths the ark might have contained lies buried with both. This burying of the truth is itself a metaphor for the wider uncertainties that the novel fails to resolve: although the (now empty) ark has been discovered, the fate of its inhabitants is simply guessed at, and there is no discovery of the truth about the apocalypse itself. As it becomes clear, Harris' novel responds to the indeterminacy of the modern condition not by seeking to resolve its uncertainties, but by embodying indeterminacy in its own, open-ended narrative structure. Even as Fairfax's story comes to an end, the story of which it forms a small, even inconsequential part continues, without solution or resolution.

Furthermore, and whilst Harris' novel lacks Jefferies' sustained, opening account of a resurgent nature, the narrative quietly insists on the agency of the non-human world. The novel opens with the solitary figure of Fairfax on horseback, slowed not only by 'his grumpy beast […] more mule than horse' (**Ibid: 4**) but by a wet and inimical landscape that impedes his progress and emphasises his isolation and vulnerability in a much larger, non-human world (3-5): what was once near is now far-off (4). Human achievements, like humans themselves, are dwarfed by the non-human. As it becomes clear, the earth has both literally and metaphorically erased almost every trace of technological civilization, bar the occasional Lego brick, concrete tower, or Apple phone.

With their open endings and strong sense of humankind's littleness, what kinds of novel are these? Both novels are difficult to classify, except, perhaps, in the most general terms, as Anthropocene fictions. They avoid 'apocalypse, progress and pastoral' (**Garforth, 2005: 397**), 'three of the dominant tropes through which human social relationships with nature have been managed and imagined in modernity' (**Ibid: 393-4**), and their worlds, whilst self-evidently post-apocalyptic, have had time to re-establish the parameters of new forms of society, even if those societies are haunted by their pasts. These future societies come close to the dystopian, particularly in Harris' depiction of a future controlled by the church, but at the same time, the novels' emphasis on a resurgent non-human agentiality begs the obvious question: for whom or what is this dystopian? Given their insistence on the entanglement of human and non-human worlds, do these novels perhaps encode the possibility of an alternate to modernity and its myths, an alternate in which ecocentric thinking is both possible and necessary? That alternate does not lie in the primitive, tribal society that Jefferies described, nor in the reactionary,

authoritarian society that Harris depicts, but Felix's and Fairfax's failed acts of resistance to the norms of their own kind nevertheless admit the possibility that where they have led, others may follow. Perhaps, therefore, these narratives are utopian by virtue of their refusal to close off the possibility of what is yet to come, utopian, that is, in the open-ended sense of the 'critical utopia', as the non-prescriptive basis for 'the imagination of transgressive and oppositional ecotopian alternatives' (**Ibid: 397**). As both novels imply, however, even tentative, critical forms of utopia cannot exist without the kind of self-reflexivity (and by extension knowledge and understanding) that is so conspicuously absent from these future worlds, each another risk society in the (re)making.

Difficult as it may be to classify these novels, it is nevertheless clear that they operate very differently to the modern, realist novel, whose limitations Ghosh identifies as part of the 'Great Derangement' (**2016: 11**); their departure from conventional realist norms is not incidental but central to their importance as part of the literary response to modernity, to its risks, to its uncertainty, and central to their bearing on cli-fi, as a (sub)genre that is itself seeking to find the representational means by which to engage with the unprecedented challenges of the Anthropocene.

Conclusion

According to Timothy Clark, 'innumerable so-called Cli Fi novels [resort] to cultural stereotypes', often dystopian, often 'with a focus on future environmental disasters such as devastating flooding […] or on collapsed societies' (**2015: 78-9**). 'Such approaches', Clark insists, 'evade most of the present-day moral, political dilemmas by simply jumping ahead to some far more straightforward depiction of future disaster' (**Ibid: 79**), a point that Trexler also acknowledges (**Trexler, 2015: 237**). What is needed, Clark implies, is a dose of reality, and it is notable that, as Trexler argues, 'realist fiction about the Anthropocene' (**Ibid: 233**) is on the increase, as climate change necessarily ceases to be seen as 'a distant hypothetical future' that can 'be endlessly deferred' (**Ibid: 223**, **233**), but as a part of lived existence (**Ghosh, 2015: 72-3**). 'The rise of realist fiction' (**Trexler, 2015: 233**) is, however, problematic in two ways.

Firstly, realist fiction is, Ghosh argues, a flawed medium, whose roots lie in the same frameworks of understanding that have created the conditions for climate change. As Trexler notes, 'there remain real limits to realist fiction' (**2015: 233**), not least its inability to transcend its own concentration on human as opposed to non-human agency. Secondly, and even as 'the Anthropocene real' (**Ibid: 226**) becomes a part of everyday life, the future is still entangled in 'climactic and political feedback loops' (**Ibid: 223**) that make it difficult to know what the future might bring, or whether it is yet possible to avert the worst outcome(s). Consequently,

there may yet be a role for non-realist, experimental forms of fiction (whether we call this form of fiction 'cli-fi' or just another branch of sf). The question, nonetheless, is whether there is a place for novels like *After London* and *The Second Sleep*. With their predictions of an insurmountably bleak future, do they not encourage a fatalistic sense that nothing now can be done, an 'apocalypse fatigue that once again distances representation from the real' (**Lawrence, 2020: 307-8**)? To the contrary, both novels insist that the apocalypse – the 'event' – is not the end of the world: not of the non-human world, which thrives now that humankind has been disempowered, nor even the end of the human world, but simply of modern, technological civilization, a recent invention and legacy of the Enlightenment. The last word of both novels is their open endings, endings that suggest that the future is still there to be written beyond the worlds they depict. By refusing to foreclose future possibilities, and in so doing avoiding the traditional, formal utopia, 'closed, static, and prescriptive' (**Garforth, 2005: 397**), they open up a space within which the reader might yet envisage some as yet unimagined and as yet unwritten alternative to modernity.

At the same time, these novels introduce a note of caution. In both, fictive future worlds look back to technological civilizations that were undone by risks of their own making. The futures brought about by their collapse are themselves crippled by their ignorance, their condition of not-knowing, and the greatest of the gaps in their knowledge is the failure to understand what went wrong. Without that understanding, it might be argued, these future societies may in time simply take up the same modernizing path to the same catastrophic outcomes. As the climate change debate underlines, uncertainty is a lever that sceptics use to prevent a society from responding to the risks of its own creation; uncertainty can also be a reason to act, as the uncertainty principle suggests; but it is difficult to act when the risks that modernity generates take the form of Morton's elusive hyperobjects, unforeseen, nonlocal, and hyper relative to our knowledge (**2013: 2**).

The related point is that modern epistemologies may themselves be faulty: societies fail not because of what they do not know, but because of how they conceive of what they do. Arguably, this is the message of post-equilibrium ecological thinking, quantum physics, and post-normal science (**Garrard et al, 2019: 217-8**), all of which point to the need for Western societies to reconceptualise their relationships to a dynamic agential materiality of which they themselves are a co-constitutive part. Instead, and even though it has provided the conceptual tools to transcend itself, modernity continues to insist on a nature-culture dualism – a 'Great Divide' – which is, as Bruno Latour has argued (**1993: 12**), a function of a stalled 'modern critical stance' (11) that is continually stymied by the

dynamic interplay 'of nature and society' (**Beck, 1995: 7**). To be truly modern – that is, to mark a distinctive break with and transcend what Beck calls 'the continuation of the Enlightenment to technological ends' (**Ibid: 6**) – is to accept the entanglement of human with 'non-human' and 'more-than-human' worlds, and embrace a self-reflexive mode of knowing and being that manages (rather than banishing) uncertainty (**Garrard et al., 2019: 217**).

It also follows that the most relevant and compelling Anthropocene fictions are those that reflect the way in which 'Nature' (intrusive and unavoidable) forms part of the everyday. 'Nature' is also an integral and important part of both these novels, in which the subject is not simply modernity and its failings, or a newly rediscovered awareness 'of the precariousness of human existence' (**Ghosh, 2016: 55**), but a sense of 'apparently inanimate things comings suddenly alive' (**Ibid: 63**), and of '[s]omething planetary … breaking through' (**Clark, 2015: 9**). Yet here, too, we can make one final distinction: the agentiality of the non-human world in Harris' novel is a felt presence, there to be recognised, but it is in Jefferies' disconcerting, late-Victorian novel that the non-human world erupts most vividly; in this radical and experimental narrative, a hybrid of chronicle and quest, the non-human emerges most fully as an agency with which human histories are inescapably caught up. Arguably, it is this recognition that unites Jefferies' proto-ecological novel with the 'future imaginaries' (**Lawrence, 2020: 322**) that a time of climate crisis demands.

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Do Androids Dream of Electric Sheep? Borders in the Anthropocene

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Abstract

This article performs a close reading of the Philip K. Dick novel, Do Androids Dream of Electric Sheep? While developing the argument for an 'ironic' usage of the concept of the Anthropocene. This ironised conception is one that intends to countenance both the Anthropocene's strength as a designation of human impact on the non-human and the important, valid critiques responding to the Anthropocene. Philip K Dick's work, in particular Do Androids Dream of Electric Sheep? is a superb illustration of such an ironic dynamic because of the dual narrative structure present. For example, Do Androids Dream of Electric Sheep? raises questions about human identity that, while metaphysical, have great significance materially for the characters in the novel, and can be understood as a form of structural discrimination. To demonstrate this ironic duality that should be brought to the Anthropocene, the article draws on Nick Land's essay Kant, Capital, and the Prohibition of Incest: A Polemical Introduction to the Configuration of Philosophy and Modernity.

Keywords: Anthropocene; capitalism; migration; Nick Land; climate change; science-fiction.

> *Man is the pie that bakes and eats itself, and the recipe is separation.*
> **Alasdair Gray, Lanark**

Introduction: Why Do Androids Dream of Electric Sheep?

When thinking of Philip K Dick in relation to climate change, the obvious place to start is his novel *The Three Stigmata of Palmer Eldritch*. Temperatures of 180°C in formerly temperate zones such as New York make emigration from Earth necessary, while the high capitalist society (ever present in Dick's works) seeks to profit from the immiserating circumstances in which the colonists find themselves via the Perky P Layouts (miniature recreations of 20th century life) and the communal hallucinogenic CAN-D. The anguish of living apart from a dying Earth is a central component of the narrative in *The Three Stigmata of Palmer Eldritch*. However, while global warming underpins the novel, and although one can discover motifs of ecological disaster in almost any major Dick story (e.g., references to synthetic leather and fake food), *Do Androids Dream of Electric Sheep*? (hereafter referred to as *DADES?*) is the novel most thoroughly saturated by questions pertaining to the Anthropocene and late capitalist society, and, more specifically, the question of borders.

DADES? presents anxieties about the human as a citizen against a scenario of economic scarcity, migration, and enhanced borders. In the novel, Earth is not devastated by climate change but by a nuclear war known as World War Terminus. The first and most visible consequence of this devastation is the death of almost all animal life. The second is the fallout that is always at work degrading the human faculties of the remaining human inhabitants, most importantly mental and reproductive. Combined, these comprise the stick part of the deal motivating the human population to leave earth for off-world colonies in hope of a better future. Earth is heavily depopulated and clung onto by those who cannot bring themselves—or are not allowed—to leave.

Like many of Dick's other novels, it is characterized by a 'deep ontological doubt [and] profound questioning of every reality claim' (**Miller, 2017: 18**). Another Dick hallmark *DADES* exhibits is its 'double marking' or the complex relationship of 'two narrative levels, so that each of the elements in a Dick novel has two antithetical uses which can be exercised simultaneously, the one corresponding to a socio-political, the other to an ontological-metaphysical reading of the novel' (**Ibid: 23**). In other words, the explorations of what it means to be a living creature in *Do Androids* are not separate from their social or political implications. What distinguishes *Do Androids* from other novels in Dick's oeuvre is the anxiety the novel's interior world has about separating the two.

An Ironic Anthropocene

The epigraph chosen for this article reflects the multi-faceted nature of the diagnosis implied in the Anthropocene, of division. A powerful criticism of the employment of the term Anthropocene is that it is far too broad and all-encompassing in its implications to properly delineate a historical period in which humans have played a significant role in shaping the earth's geological structure. It is also potentially problematic in that it arguably obscures the specific historical, political, social, and economic forces behind the actual changes. In their persuasive chapter, titled 'Who is the *Anthropos*?' from their book *The Shock of the Anthropocene,* Bonneuil and Fressoz cite the example of the Yanomami Indians, 'who hunt, fish, and garden in the Amazonian forest, working three hours a day with no fossil fuel' to ask the question: 'should [they] feel responsible for the climate change of the Anthropocene?' (**Bonneuil & Fressoz, 2014: 70**). In 'On the poverty of our nomenclature', Eileen Crist argues that:

> *As a cohesive discourse, [the Anthropocene] blocks alternative forms of human life on Earth from vying for attention. By upholding history's forward thrust, it also submits to its totalizing (and, in that sense, spurious) ideology of delivering "continuous improvement"… By affirming the centrality of man—as both causal force and subject of concern—the Anthropocene shrinks the discursive space for challenging the domination of the biosphere, offering instead a techno-scientific pitch for its rationalization and a pragmatic plea for resigning ourselves to its actuality.* (**Crist, E. 2016: 25**)

Simultaneously, given the scale and complexity of the trends we are confronted with when attempting to comprehend the trends latent in a term such as the Anthropocene, and given the problem of determining exactly which force is responsible for the current ecological crisis - in the words of Donna Haraway, '[all] the thousand names are too big and too small; all the stories are too big and too small' (**Haraway, 2015: 160**) - this article will employ an ironic use of the term Anthropocene, as unstable as it is in its unfolding. This is also intended to reflect the unstable categories in *DADES* and what Quentin Samuel Miller describes as 'a complex and porous narrative about shifting environmental paradigms' (**Miller, 2017: 4**). This narrative duality, or doubling of the metaphysical and the material, is a dynamic I wish to bring to bear on the Anthropocene discourse. The very fact that the term or discourse of the Anthropocene is contentious and viewed as an ideological palimpsest by some critics can be employed as a useful shorthand for indicating both the conventional, original usage and the significant critical response.

To help guide me through this doubling I will refer to Nick Land. Land drew on *Blade Runner*, the film adaptation of *DADES?* for some of his most notable work in *Machinic Desire* and *Meltdown*. However, I will draw from Land's first short essay *Kant, Capital, and the Prohibition of Incest: A Polemical Introduction to the Configuration of Philosophy and Modernity*, in order to illustrate the doubled, ironic Anthropocene in Dick's novel. The reason for this decision comes from the startling correspondence between this essay's formulation of a metaphysics of capitalist modernity via its reading of racist technologies, and the political economy in *DADES*?. A further reason is that *Kant, Capital, and the Prohibition of Incest* makes its argument on philosophical and political levels, a duality appropriate for reading a Philip K. Dick novel.

Inhibited Synthesis of the Anthropocene

Land's thesis in *Kant, Capital, and the Prohibition of Incest* stems from the premise that the Bantustans of Apartheid South Africa are a microcosm of capitalism's fundamental structure. As Bantustans served to keep the black population at arm's length from the wealthy white population, they established a political distance between both whilst maintaining geographical proximity for black economic exploitation. Land argues that the same relationship exists between the global metropolises and the colonial periphery. Colonised peoples yield their resources and labour to capital but are excluded from the nations acquiring this wealth. Land argues for this relationship by explicating the relationship between Kant's conception of synthetic a priori and the theory of trade conceived by Claude Levi-Strauss.

Kant's theory of synthetic a priori knowledge is for Land the philosophical reflection of capital's accumulation of wealth, the signature of 'an enlightenment society' that 'wants both to learn and legislate for all time' (**Land, 2011: 63**). This is because synthetic a priori is a form of knowledge that 'is both given in advance by ourselves [a priori], and yet adds to what we know [synthetic]' (**Ibid: 64**). This conceptual framework is inherently inhibitive for Land, because it is a theory of knowledge that attempts to explain difference in advance, and therefore to capture that difference through anticipation.

This reading of Kant is then applied to Levi-Strauss' account of 'rich food', food 'given to another to consume, and received from another', which is food that derives its quality of richness not from its relation to class, but 'upon a differentiation between tribes' (**Ibid: 68**). The rich food is an external object given to another tribe; it comes from outside (**Ibid: 68**). The rich food exchanged, 'the primordial element of trade' (**Ibid: 69**) alongside women for marriage, develops a new bond of kinship, one of alliance instead of filiation (**Ibid: 68**).

Land concludes that Kant's conception of synthetic a priori knowledge is the philosophical culmination and base for the commodity. By producing a synthetic a priori model for experience, what is novel in the other finds itself contained. Ensconced as such, what is exterior to a conceptual system is anticipated, processed by that anticipation, and thus primed for commodification; the rich food can be taken without the risk of marriage.

This, per capitalism's function, includes people with their labour, and gives formal structure to the conception of a 'Bantustan' relationship between the metropolis and the periphery. A person's labour as a commodity is taken in the 'trade' – economic proximity - but the accompanying marriage, or cultural exchange, is kept at a political distance. In this tensile relationship which Land terms 'inhibited synthesis […] which can be awkwardly described as patriarchal neo-colonial capital accumulation' (**Land, 2011: 63**), capitalist modernity is caught in an intractable contradiction, wherein its need for profit fuels an infinite requirement for the other, which it is politically unable to imbibe. What generates the contradiction in inhibited synthesis is what Land calls 'exogamic dissipation' – extending Strauss' inter-tribal exchange via marriage to the cultural exchange - or the dissolution of patriarchal cultural and ethnic identities through the continuous engagement people must have with those outside their traditional ties of kinship, such as those inculcated by a nationality. A limited example of this occurred with the emergence of the urban proletariat in the wake of the industrial revolution, when those who were forced into the cities for work encountered each other, became conscious of their commonality and began to agitate for their own interests. Land proposes something larger and more radical, a *global* explosion in the potentiality of exogamic 'marriages' alongside the 'trade' as conceptualized by Levi-Strauss. Such a global dissipation of identities and traditional bonds of kinship would also dissolve capitalism. This global dissipation of the old patriarchal and provincial structures would generate a universal, fraternal, and horizontal kinship that could not tolerate exploitation. On this basis, capitalist modernity exhibits proto-fascist traits, Land argues, because it is constantly flirting with its own extinction. Capitalist modernity enacts policies and builds infrastructures, such as the Bantustan, in order to keep 'kinship and trade… systematically isolated from each other.' (**Ibid: 62**).

Borders in the Anthropocene

Neocolonialist capitalism has consistently employed brutal immigration policies and racist practices both within and outside of western countries in order to perpetuate the synthetic inhibition, but it has done so with zones permitting the free movement of labour - the most prominent and formal of these being the European Union's Schengen Area, bounded by

'Fortress Europe', a concept used to describe the complex of securitised immigration policies towards those who seek to cross the European Union's external borders, especially its southern one (**Pinos, 2009: 3**). This system has been described as 'a means to filter out and exclude the discomforting other… that is to say, the outsiders who challenge the EU's *borders of comfort*' (italicised for emphasis, **Ibid: 4**).

Additionally, the nationalist renaissance across Europe and North America, especially with its emphasis on border control, presents an intensification of the inhibitive process, as those countries attempt to reverse the forces that are eroding the privileges of their bourgeois classes at both the geopolitical and socioeconomic levels. In his 2016 review of Martin Heidegger's black notebooks, Malcolm Bull introduces Branko Milanović's concept of citizenship rent—'the increased income you get from doing the same job in one country rather than the other'—in order to make the following comments:

At a time when the long-heralded decline of the West is finally becoming an objective reality, the 'lower middle class of the rich world' stands in an ambiguous position. Geography still counts for almost everything… But if these trends continue, citizenship rents will decline further, and citizenship itself will be devalued as an asset… What makes the current moment unique is that the ontological decline of the West has fallen into step with the decline in income differentials, and attachment to place isn't just a matter of becoming indigenous and making yourself at home in the world, but of stubborn attachment to a particular position in the global economic order (Bull, 2016). [i]

Bull gives an account for a neocolonial order that is attempting to reassert itself through a reaffirmation of xenophobic identity in order to maintain economic pre-eminence. Without recourse to reorganizing the world's resources for a more equitable distribution of wealth, capitalism and populations turn to a state of vicious retreat behind border walls. The forces behind the inhibition of synthesis reassert themselves through strengthened technologies of racism.

What makes for a bleaker future is that there is every indication that the climatic and ecological deprivations associated with the Anthropocene will exacerbate this fundamental situation. As many parts of the world follow a trajectory towards the uninhabitable, as farming yields decline, and as land and nations shrink or even disappear, the far right nationalist rhetoric of blood and soil becomes very literal, 'because climate change isn't just about things getting hotter and wetter: under our current economic and political model, it's about things getting meaner and uglier' (Klein, 2016). At the time of writing this article, the UN does not legally recognise climate change as a qualifying criterion for refugee status, and there is therefore

'no formal, legal protection for these affected people.' (**Beeler, 2018**). The arguments specifically put forward against offering legal protection include the fears of aggravating pre-existing chauvinist sentiments, '[making] things worse for the very people the refugee convention aims to protect.' (**Ibid**).

This reluctance to afford the climate migrant refugee status contains a tacit acknowledgement by the system of nation-states manifested in the UN of the political potential of mass migration, especially when considering the numbers of people who will be dislodged by the climate crisis; a billion per degree of temperature increase (**Seaton, 2020: 48**). The disruption those fleeing pose to the infrastructure of synthetic inhibition – of borders, formal nationalities, and the accompanying security systems - has the potential to overwhelm it, rending apart the international infrastructure of borders capital still depends upon, effectively dissolving them, by making encounters between peoples and their others unavoidable. Fleeing the Bantustan destroys it.

This synthesis must be resisted at any cost for capitalist modernity to survive. Anti-immigrant policies and the refusal to coordinate a comprehensive rescue policy between European countries, for example, has meant that the chance of death for a person crossing the Mediterranean between January and July 2018 was 1 in 18 (**Crisp, 2018**). A list compiled by UNITED recorded the death toll of people trying to cross the Mediterranean and enter Europe between the 1st January 1993 and the 5th May 2018 at 34,361 (**UNITED, 2018**). Simultaneously, such a large and systematic human cost requires a hierarchy of racial worth. A hierarchy that, I argue, inhabits *DADES?*

Reading Do Androids Dream of Electric Sheep?

When looking to understand the ideology within *DADES?*, the passage most useful to gain an insight into its world's political economy is the brief, explosive portion of an advertisement the character J. R. Isidore listens to as he shaves:

> *The TV set shouted, '- duplicates the halcyon days of the pre-Civil War Southern states! Either as body servants or tireless field hands, the custom tailored humanoid robot – designed specifically for YOUR UNIQUE NEEDS, FOR YOU AND YOU ALONE – given to you on your arrival absolutely free, equipped fully, as specified by you before your departure from Earth; this loyal, trouble-free companion in the greatest, boldest adventure contrived by man in history will provide-' it continued on and on.* (**Dick, 1997: 18**)

This, Isidore informs the reader, is part of a propaganda push from the Washington-run space colonisation program, the chief economic drive in World War Terminus' nuclear wake. It is the promise of an organic android to fulfil 'YOUR UNIQUE NEEDS', the *you* being a human, a citizen of earth meeting the novel's UN's criteria for humanity; *your unique needs*, which encompasses not just physical needs but emotional and symbolic. A few lines down the government propaganda features an interview with a recent immigrant to Mars, and she is asked, '"Mrs Klugman, how would you contrast your life back on contaminated earth with your new life here in a world rich with every imaginable possibility?"' (**Dick, 1997: 18**), Klugman answers:

> *I think what I and my family of three noticed most was the dignity.' 'The dignity, Mrs Klugman?' the announcer asked. 'Yes' Mrs Klugman, now of New New York, Mars, said. 'It's a hard thing to explain. Having a servant you can depend on in these troubled times… I find it reassuring.* (**Dick, 1997: 18-19**)

Mrs Krugman's soft, short sentences (Krugman has three sentences compared to the direct advertisement's two), her hesitation, and the vagueness in her answer, of reassurance, complements the first part of the hysterical, shouted propaganda. Whereas the official pronouncement is explicit in its hyperbolic description of the android's utility, Mrs Krugman's vagueness makes a sentimental appeal and gestures to the fantastical dimension of owning sentient labour. The kernel of the propaganda and advertising for the driver of the 'greatest, boldest adventure contrived by man'—the android—includes a self-comparison to the chattel slavery of nineteenth century America.

What raises the passage from a crude comparison between sentient mechanical labour and slavery, however, is Dick's apparently heavy-handed allusions to the latter, which on first reading can be dismissed as crude commentary. The propaganda is at pains to make an explicit comparison between the organic androids and slaves of the Antebellum South. Because the comparison is diegetic, an extra dimension comes into play. The android's physical labour is not the sole source of the android's appeal as a commodity. The experience of slave-owning itself is commoditised and standardised, sold as an essential aspect of human individuality. The white supremacist pastoral of the Antebellum ('pre-war') cathects the memory of a pre-war earth. The individual is re-centered ('YOU') as the focal point of economic expansion and activity in the wake of the destruction caused by the capitalist civilization that generated the same project of hyper-individuality. This recentering is a buttressing of a specific identity, of an anthropocentric identity, that merges totally with a bourgeois identity. Dick's material grounding of *DADES* in relation to a

specific period of American history enables an interpretation of the novel in the context of the Anthropocene and a distinctly self-conscious Eurocentric anthropocentrism. This anthropocentrism derives from a desire to preserve and strictly regulate a human identity in order to maintain social cohesion for a new economic project that intends to recapture that Eurocentrism.

There are two discrete geographical zones in *Do Androids Dream*: Earth and the colonies, each of distinct significance. Despite Earth's devastation, and despite the economic momentum being with the colonies, organic androids are restricted by law from leaving the colonies. Because androids are built exclusively for their labour power—even Rachael Rosen is a salesperson for her 'uncle', Eldon Rosen—any extra-instrumentality can pose a risk to the anthropocentric economic order. For this reason, illegal immigration—both geographical and ontological—requires lethal policing.

Bounty hunters are disavowed agents of Earth-based law enforcement, employed on a low salary and a commission-based 'retirement' bonus. Earth's remaining civilian population is unaware of the extent to which androids are pursued and murdered on earth, because, says Pris Stratton, '[y]ou people aren't supposed to know' (**Dick, 1997: 113**):

> *'I think,' Isidore said, 'you're mistaken.' Never in his life had he heard of such a thing. Buster Friendly, for instance, had never mentioned it. 't's not in accord with present-day Mercerian ethics,' he pointed out.* (**Dick, 1997: 113**)

Isidore lives in a civilization formally recognising, after World War Terminus, all conventional terrestrial life as sacred. However, this does not constitute a bulwark against destructive economic or capitalist tendencies. As he does with the Anthropocene, *avant la letter,* Philip K. Dick depicts an Eremocene, the age of human loneliness in a time of mass extinction, coined by E.O. Wilson (Wilson, E. O., 2013), in *DADES*. It does not present the spectre of ecological loneliness as a catalyst for the discontinuation of capitalism or domination, but as a vehicle for a penetrating, fetishising commodification. Its apogee is the monthly Sidney's Catalogue, pricing every animal according to its scarcity, and the integration of this pricing into social relations. Deckard is motivated in his work by the hope of owning a 'living' organic animal, like his peers. In the Freudian sense of the word fetish, animal life becomes a substitute mediating the affirmation of anthropocentrism and bourgeois, patriarchal values. Abortion is an offence punishable by death, and there exists a class of people officially known as 'special', within which there are subcategories of intellectual disability pejoratively referred to as 'chickenheads' and 'antheads', (Isidore himself is a chickenhead). Those who are 'special' are the most affected by the environmental effects of radiation, and forbidden to leave,

much like those who are most affected by the policies of capitalist imperialist countries are those who face the largest obstacles to their escape. Subjected to the hierarchy of human identity, they are unsuitable for the novel's UN colonization project.

While the crumbs of surviving nature are transformed into fetishised objects, Dick imagines the remains of abandoned human habitations assuming nature's role as the source of the negative and uncanny. Isidore senses this energy, named Kipple, keenly throughout the novel:

> *From the useless pole lamp in the living room it oozed out, meshing with the empty and wordless descent of itself from the fly-specked ceiling. It managed in fact to emerge from every object within his range of vision, as if it – the silence – meant to supplant all things tangible.* (**Dick, 1997: 20**)

Kipple is the name for the cumulative, entropic presence of consumer goods abandoned after the mass migration from Earth, presenting an oppressive weight and stripped of their utility, unmoored by human depopulation. It complements the destabilization of anthropocentrism brought about by the increasingly sophisticated androids, in a manner eluding the techniques of android policing. It is telling that this most acute description of Kipple's effect comes from Isidore immediately after he turns off the TV screaming the advertisement for androids. Kipple is, in fact, the reason Isidore turns on the TV in the first place. The collective experience of Mercerism seems to have come from a move to counter that destabilization, although the Mercerian hoax is of unknown origin (**Ibid: 158**):

> *'I didn't think it was true,' he said full of relief.*
> *'Why didn't you?' She swivelled to stare intently at him…*
> *'B-b-because things like that don't happen. The g-g-government never kills anyone, for any crime. And Mercerism –'*
> *'But you see,' Pris said, 'if you're not human, then it's all different.'*
> (**Dick, 1997: 122**)

Mercerian ethics, by which empathy becomes an official institution and bulwark of the human species, correspond with corporate and UN intentions to perpetuate the political economy of slavery by operating across both socio-political and metaphysical-ontological narratives. Mercer's appearance outside of the empathy boxes to Deckard late in the novel do seem to contradict Buster Friendly's debunking. However, the appearance presents itself as an ideological validation of his bounty hunting job and social role:

> *'Am I outside Mercerism, now?' Rick said. 'As the chickenhead said? Because of what I'm going to do in the next few minutes?'*
> *Mercer said, 'Mr Isidore spoke for himself, not for me. What you are doing has to be done.'* (**Dick, 1997: 166**)

Mercer offers no explanation for why the retirements must take place beyond tautology, but if Mercer's conversation with Isidore is any indication, Mercer's position is fatalistic and permissive. The only positive action Mercer takes in his appearance to Deckard is to warn him of Pris (**Dick, 1997: 166**). It is here that Mercerian ethics and the accompanying empathy industry aligns most explicitly with their counterpart, the Voigt-Kampff test, as technologies of racism. Further, Mercer's empathy box experience is not only the prime example of doubling in the novel, but also comes closest to the double rendition of Kantian subjectivity Land describes. The Mercerian phenomenon as illustrated above allows for an experience of alterity that is circumscribed through ritual and its predetermined end. However, when Deckard and Isidore encounter the androids personally, they must confront the ambiguity of the other themselves.

Deckard as Race Scientist

Regardless of his personal doubts as to the business of retiring androids, Deckard in his professional capacity is only troubled, not compromised, when it concerns his sexual interest (Rachael Rosen) and his aesthetic tastes (Luba Luft's singing), not because he considers androids beings who warrant care. Like bourgeois ideation concerning immigrants, Deckard's valuation of androids is predicated on their use-value or their capacity to disrupt. Nevertheless, Deckard is disturbed by his encounters with the other. His relationships with the androids, especially with Rachael, chime with Land's assessment of modernity's appropriative movements: 'a profound but uneasy relation to an outside that both attracts and repels it.' (**Land, 2011: 64**)

Consider Deckard's perspective on android retirement. As violent and graphic as the following passages are, and despite the deliberately inconsistent deployment of pronouns, they contain no details about each android's viscera or tissue:

> *…the .38 magnum slug struck the android in the head and its brain box burst. The Nexus-6 unit which operated it blew into pieces, a raging, mad wind which carried throughout the car.* (**Dick, 1997: 73**)

> *The laser beam, aimed with skill… bifurcated Inspector Garland's head. He slumped forward… the corpse teetered on its chair and then, like a sack of eggs, it slid to one side and crashed to the floor.* (**Ibid: 96**)

> *The beam missed its mark but, as Resch lowered it, burrowed a narrow hole, silently, into her stomach. She began to scream…. Like the picture, Rick thought to himself, and, with his own laser tube, killed her. Luba Luft's body fell forward, face down, in a heap. It did not even tremble.* (**Ibid: 103**)

> *He fired at her as, imploringly, she dashed toward him. The android burst and parts of it flew…'I'm sorry, Mrs Baty,' Rick said, and shot her.* (**Ibid, 168**)

> *He shot Roy Baty; the big man's corpse lashed about, toppled like an over-stacked collection of separate, brittle entities.* (**Ibid: 168**)

Aside from the mentions of reflex circuits and brain 'boxes', Deckard fails to describe the entrails, and the reader only receives Isidore's perspective of the corpses second-hand, through Deckard. This is strange; although the android's physiognomy differs from a human's, it is not simply the case that androids are composed of materials corresponding to real-life robotics. The alternative to the Voigt-Kampf test is the Boneli test, consisting of 'a bone marrow analysis' by which a person's humanity 'can be organically determined,' (**Ibid: 43**) suggesting that the android's tissue is near identical to a human's. This is before the other utility of an android – sex – is considered. Phil Resch and Deckard both have sex with androids, and Resch reports the commonplace practice of illegal android mistresses on the colonies, telling Deckard '[sure] it's illegal, but people do it anyhow.' (**Ibid: 110**). Androids are, for the most part, physiologically human. Deckard's perception and self-narrativising of his social function as a bounty hunter reflects his troubled disavowal.

Nevertheless, the androids do differ from humans. For Isidore, the androids Pris, Irmgard, and Roy seem 'strange… As if a peculiar and malign *abstractness* pervaded their mental processes' (**Ibid: 119**). However, the novel leaves open the question of whether this malignity is innate to the androids or relational. The Voigt-Kampf test demonstrates uncanny accuracy in distinguishing androids from humans by measuring empathy. By measuring physical responses to questions, othering becomes a technological practice, even when the questions themselves are explicitly absurd and steeped in the civilization's social mores. Humans are sufficiently standardized in their fetishization of pre-android life that the Voigt-Kampf test can be applied to anyone with the same decisive result. Garland's observation to Rick, that:

> *It's a chance anyway, breaking free and coming here to Earth, where we're not even considered animals. Where every worm and wood louse is considered more desirable than us put together.* (**Dick, 1997: 94**)

> *…does not go far enough; animal life as a commodity literally constitutes the metric that determines whether extra-instrumental androids are executed. Empathy is just 'a way of proving something that humans can do… based on the human's word.'* (**Ibid: 158**)

Fetishised as such, empathy becomes a form of scientific racism repurposed to deny the androids sovereignty as citizens and denies their right to free movement. The androids have no option but violence to escape their slavery:

> *'He doesn't understand yet,' Pris said in a sharp, brittle stentorian voice, 'how we got off Mars. What we did there.'*
> *'What we couldn't help doing,' Roy Baty grunted.* (**Ibid: 124**)

The political economy of Dick's world bears striking similarities to the current climate-accelerated political economy of ours. In addition to the simple fact that the androids, like migrants, are valued significantly less than charismatic megafauna, the android, when escaping their enslavement and entering Earth, much like a person escaping to a country of the global North, dissolves their clear identity as an unperson. They are visible as a sapient, feeling being. They enter the liminal space, on the lip of Land's synthesis. Insofar as they impersonate a recognizable role (Garland or Luft for example), the android assumes citizenship of Earth, plausible to their fellow person. This, to recapitulate, is why I argue that people migrating to the global North are resisted most violently *at the point* of crossing the border. Equally, Land himself argued in his conclusion to *Kant, Capital, and the Prohibition of Incest* that '[a] revolutionary war can only be fought in hell,' as '[the] state apparatus of an advanced industrial society can certainly not be defeated without a willingness to escalate the cycle of violence without limit,' (**Land, 2011: 79**) for this very reason. Land envisages the ascension of feminine (i.e. non-patriarchal) amazons to overthrow the capitalist reality and destroy the inhibition. The android neatly assumes this role, as its figure presents the 'uncontrollable eruption of feminine (i.e. migrant) alterity into the father's heartland' (**Ibid: 62**).

Conclusion

As is true in many of Philip K. Dick's stories, what happens to how the characters think about the world in *DADES* (as opposed to the changes in the world itself) assumes more importance to the narrative. Despite the arrival of android amazons, no revolution arrives at the end of the novel; an exhausted Deckard returns to his wife after a long day of work. Isidore shrinks miserably away under the shadow of Kipple. Isidore's lack of understanding and his distress as he watches the androids torture the spider spring from his strict adherence to Mercerian and UN orthodoxy,

allows him to appreciate the androids as people a priori. Because he honestly believes the anthropocentric dogma, he can move beyond its ideological entrapment, into a new modernity. The androids would kill the spider, and Deckard would disdain it because of its low status in the animal hierarchy. Isidore wishes to care for it and keep it. The Anthropocene as a term and discursive project, instead of being discarded, should be retained also, with the intention that its universalizing project develops a new ecological and human kinship, a new synthesis. The nurturing societies are tasked with ensuring the Anthropocene's continuation, whether they move to a post-capitalist future or not.

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Endnotes

[i] https://www.lrb.co.uk/v38/n20/malcolm-bull/great-again

Climate Fiction and the Crisis of Imagination: Alexis Wright's *Carpentaria* and *The Swan Book*

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Abstract

This article analyses the representation of environmental crisis and climate crisis in Carpentaria (2006) and The Swan Book (2013) by Indigenous Australian writer Alexis Wright. Building upon the groundbreaking work of environmental humanities scholars such as Heise (2008), Clark (2015), Trexler (2015) and Ghosh (2016), who have emphasised the main challenges faced by authors of climate fiction, it considers the novels as an entry point to address the climate-related crisis of culture – while acknowledging the problematic aspects of reading Indigenous texts as antidotes to the 'great derangement' – and the danger of a singular Anthropocene narrative that silences the 'unevenly universal' (Nixon, 2011) responsibilities and vulnerabilities to environmental harm. Exploring themes such as environmental racism, ecological imperialism, and the slow violence of climate change, it suggests that Alexis Wright's novels are of utmost importance for global conversations about the Anthropocene and its literary representations, as they bring the unevenness of environmental and climate crisis to visibility.

Keywords: Alexis Wright; cli-fi; slow violence; ecological imperialism; climate apocalypse

Alexis Wright, activist and award-winning writer, is a member of the Waanyi nation from south of the Gulf of Carpentaria and the Northern Territory. She has written widely on Indigenous Australian rights: her works of fiction and non-fiction include *Grog War* (1997), *Plains of Promise* (1997), *Carpentaria* (2006), winner of the Miles Franklin Award in 2007, and *The Swan Book* (2013). The present analysis dwells on the epic novel *Carpentaria* and the climate change dystopia *The Swan Book* and considers the novels as an entry point to address the climate-related crisis of culture and the danger of a singular Anthropocene narrative. Exploring themes such as environmental racism, ecological imperialism, and the slow violence of climate change, I suggest that Alexis Wright's novels are of utmost importance for global conversations about the Anthropocene and its literary representations, as they bring the unevenness of environmental and climate crisis to visibility.

In the past two decades, climate change and its effects have been articulated in a growing body of literary works and have especially become major trends in Anglophone fiction (for a comprehensive analysis of cultural works engaging with anthropogenic climate change, see **Goodbody & Johns-Putra, 2019**). Environmental humanities scholars such as Ursula K. Heise, Adam Trexler and Adeline Johns-Putra are increasingly investigating the ecopolitical value of environmental literature, and the main challenges faced by authors of climate fiction, such as the more-than-human complexity of climate change, the novel's anthropocentric tendencies, the planetary scale and the slowly unfolding pace of human environmental impact.

In his groundbreaking monograph *Ecocriticism on the Edge: The Anthropocene as a Threshold Concept* (**2015**), Timothy Clark draws on the idea that the roots of the climate crisis are to be found in a failure of the imagination, hence literary studies can play an important role in understanding, if not solving, this crisis. He also posits, however, that the Anthropocene might be a threshold at which literature becomes inadequate to represent the planetary scale of human environmental impact. Providing multiple examples of climate change fiction, from Ian McEwan's *Solar* (2010) to Barbara Kingsolver's *Flight Behaviour* (2012), he claims that the generic conventions of the contemporary novel and the techniques available to engage a reader's response (such as the conflict between characters with opposing views) are at odds with the scale of the ecological crisis: Clark argues that 'familiar modes of suspense and identification (…) have more to do with the human psychology of competition or self-fulfilment (…) than with the true complexities of the issue' (**Ibid: 181**). He further validates that extreme weather events unfold with 'indulgence in a pleasurable destructiveness' (**Ibid: 182**), and that literary realism is ill-equipped to deal with the agency of material things.

The clash of scales also encompasses the distinction between *homo* and *anthropos*: humans have never experienced themselves as a species nor thought of human agency over multiple scales at once (**Chakrabarty, 2009; Horn & Bergthalle, 2020**).

Adam Trexler's study on climate change novels (**2015**), similarly, highlights that the 'interpenetration between domestic and planetary scales' (**Ibid: 26**), the *longue durée* of climate change and the agency of non-human others require a complex transformation of the novel's generic conventions. In order to be articulated through fiction, climate change should force multiple narrative innovations of pre-existing genres:

> *[t]he Anthropocene challenges science fiction's technological optimism, general antipathy toward life sciences, and patriotic individualism. Chiller fiction becomes wholly implausible when supernatural forces resolve enormous, atmospheric effects. Coming-of-age stories break down when the actions of prior generations trigger insolvable weather disasters and collapse economic opportunities for young people struggling toward independent adulthood. Safe identification with the hero of a suspense novel breaks down when he drives sports cars and exotic yachts, not to mention serves a government that has repeatedly thwarted climate accords. It is even more difficult to condense the distributed, impersonal causes of global warming into a climate villain* (**Trexler, 2015: 14**).

A thorough analysis of the challenges presented by the Anthropocene to the art and the humanities is offered by Amitav Ghosh's extended essay on the subject of climate change, *The Great Derangement* (**2016**). One of the most debated books on the limits of human thought when it comes to environmental catastrophe, it points out 'serious' fiction's reluctance to deal with climate change. The acclaimed novelist identifies a variety of factors that are likely to have an important influence over the crisis of imagination that he laments: the novel is usually set in a certain time horizon that rarely extends beyond the lives of the characters and requires a confined setting. Further, the literary imagination is 'radically centred on the human' (**Ibid: 114**) and on the individual at the expense of the idea of the collective, and treats nature as a mere background. It tends to employ conventional literary strategies linked to human psychology rather than to the nonhuman context, whilst the land and the natural world are portrayed as a backdrop for human drama, lacking agency. Ghosh also argues that science fiction and climate fiction might be better equipped to deal with climate change, but they are 'made up mostly of disaster stories set in the future', which 'is but one aspect of the age of human-induced global warming: it also includes the recent past, and, most significantly, the present' (**Ibid: 124-125**).

What is also important for the present discussion is his assertion that among the key features of the birth of the modern novel were the relocation of the unlikely – such as a character hit by 'an unheard-of weather phenomenon' – and the unheard-of to the margins and the exile of catastrophism toward the background. In fact:

> *to introduce such happenings into a novel is in fact to court eviction from the mansion in which serious fiction has long been in residence; it is to risk banishment to the humbler dwellings that surround the manor house—those generic outhouses that were once known by names such as 'the Gothic', 'the romance', or 'the melodrama', and have now come to be called 'fantasy', 'horror', and 'science fiction'* (**Ghosh, 2016: 45**).

The Anthropocene, however, is defined precisely by weather events that have a high degree of improbability. Ghosh actually suggests that there are literary movements confronting and celebrating the improbable, like surrealism and magical realism. He posits, though, that what marks a major difference between these movements and the current weather events is that 'these events are neither surreal nor magical. To the contrary, these highly improbable occurrences are overwhelmingly, urgently, astoundingly real' (**Ibid: 50**). To treat climate change as magical or surreal would run the risk of robbing it of its urgency: magical realism, he concludes, is a form of concealment as much as the realist novel.

Diverging from Ghosh's skepticism about literary movements replete with the unheard-of, Ben Holgate (**2019**) states that one possible response to the crisis of imagination posed by climate change could come from magical realism. Besides drawing on postcolonial scholars such as Elleke Boehmer and Homi Bhabha who have widely described the link between magical realist fiction and the postcolonial world, he also sheds light on the commonalities between the former and environmental literature; namely, the development of new language and forms of expression that respond to dominant ontologies and epistemologies, the defamiliarising juxtaposition of the unreal and the ordinary, a focus on the interconnectedness of the natural world, and a capacity to break down boundaries between human and non-human. He particularly reads Alexis Wright's *The Swan Book* as an antidote to 'the great derangement' (**Ghosh, 2016**), linking Indigenous Australian ontology with magical realist fiction, and asserting that the magical elements of the text do not undermine the urgency of climate change, but rather help the reader to 'understand the 'real' setting of climate change' (**Holgate, 2019: 9**). As Holgate notes:

> *[a] magical realist text does not necessarily have to present extreme weather events or climate change as the 'magical' elements. Indeed, Wright's* The Swan Book *portrays drought and flooding in the apocalyptic setting in a matter-of-fact manner, that is, as 'real'* (**Holgate, 2019: 9**).

Holgate notes that Wright employs magical realist conventions to convey the Indigenous Australian understanding of the world and of its creation, the Dreamtime, following other Aboriginal authors. The land and its entanglements with human and non-human beings are central to the Dreamtime as well as to Indigenous Australian Law, that Bill Gammage defines as 'an ecological philosophy enforced by religious sanction' that 'compel[s] people to care for all their country' (cited in **Holgate, 2019: 43**).

I situate my critical position as a partial departure from both Ghosh' and Holgate's stances, underscoring that several critics have warned against the association of Indigenous Australian knowledge with magic and the supernatural. In relation to 'Western' categorisations of Alexis Wright's work, Alison Ravenscroft (**2012**) points out that not only the Waanyi writer has been anchored to white Australian literary canon, but her texts – both *Carpentaria* and *The Swan Book* – have often been fixed 'within the constraints of magic realism' (**Ibid: 60**), reinforcing the binary opposition between Indigenous magic and 'Wester' reality as the only possible reality. She refers to Toni Morrison's claim that 'among African Americans there are ways of knowing that might fall into magic or superstition in the eyes of white American readers' (cited in **Ravenscroft, 2012: 25**), and that she aims at representing reality even when her stories have been referred as magical by white scholars. Similarly, Wright refuses this assimilation with magical realism and states that she considers literature 'the best way to tell the truth … more of a truth than non-fiction which isn't really true either. Non-fiction is often about the writer telling what it is safe to tell' (**2002: 13**). As such, Wiradjuri writer, poet and academic Jeanine Leane, following Wright and Ravenscroft, defines Carpentaria 'a work of Aboriginal realism' (**2015: 155**). Critically, Frances Devlin-Glass addresses white readers urging them to read *Carpentaria* as Aboriginal realism and a true representation of Indigenous Australian Law and a 'powerful contribution to understanding of indigenous knowledge' (**2008: 392**). These texts provide the foundations of my argument and have helped me to recognise the limitations of my own position as a white Western European reader of an Indigenous text. As Ravenscroft notes, 'Indigenous Law cannot be 'seen' from a Waanyi point of view if one is not Waanyi' (**2012: 77**), and although it is important to keep moving towards understanding, this movement can never be an arrival, and knowledge always remains provisional. Bearing in mind Ravenscroft's paradigm of 'radical uncertainty and impossible dialectic' (**Ibid: 63**) and the risks arising

from efforts to find 'redemption in Aboriginal people's culture, as if those we have conquered should now save us' (**Rose, 2004: 2**), I propose a reading practice of *Carpentaria* and *The Swan Book* that considers the novels as entry points to address the climate-related crisis of culture (while acknowledging the problematic aspects of reading the novels as antidotes to the 'great derangement') and the danger of a singular Anthropocene narrative.

Following Lucy Rowlands' lucid work on the issue of narrative and indigeneity (**2019**), I stress that Indigenous perspectives on climate change and environmental damage cannot be excluded from the global conversations about the Anthropocene, 'precisely because the survival of their culture and relationships with their country are most at risk' (**Ibid: 2**). Much contemporary discourse on the Anthropocene, though, invites us to think at undifferentiated species level, running the risk of erasing power hierarchies, as the *anthropos* after which geologists have named the current epoch does not seem to have a class, a race, a gender, nor in-built vulnerabilities shaped by colonialism and capitalist inequality. As Ursula K. Heise suggests, the environmental humanities should provide an account of the 'productive conceptual tension between humans' agency as a species and the inequalities that shape and constrain the agencies of different kinds of humans, on one hand, and between human and nonhuman forms of agency, on the other' (**Heise, 2008: 6**).

This universalising logic is also a recurring feature of multiple literary representations of the Anthropocene. Hsu and Yazell (**2019**) have termed 'structural appropriation' the process in which mainstream post-apocalyptic climate fiction projects into white American characters and readers the structural violence of climate catastrophe that has already been experienced by colonised, postcolonial and Indigenous populations. These future scenarios, exemplified by Cormac McCarthy's *The Road* (2006) and Paolo Bacigalupi's *The Water Knife* (2015) are often inhabited by small groups of survivors struggling to regenerate US culture and society, both endangered by a 'third-worlding of the West as a result of apocalyptic social collapse' (**Ibid: 350**). If, as Lawrence Buell (**1995**) has suggested, the '[a]pocalypse is the single most powerful master metaphor that the environmental imagination has at its disposal' (**Ibid: 285**), analysing what these narratives conceal and obscure instead of revealing is an urgent task. In these narratives of apocalypse climate change is portrayed as a universal human threat that is experienced by a universal human subject, silencing the manifold vulnerabilities to environmental catastrophes that have been conceptualised by global climate justice movements.

Sharae Deckard has rightly suggested that climate fiction from the Global South and other postcolonies might differ from the one published in North America or Western Europe, in terms of contents but also aesthetic (**Deckard & Akbar, 2020**). Having the unevenness of environmental crisis and the tight link between climate change and settler colonialism as 'constitutive part[s] of its own aesthetic', it can offer 'a corrective to the 'invisibilisation' of these already-occurring disasters in the Western media' and intervene in Hollywoodian and Euro-American representations of climate change where apocalypse is a 'sudden, total shock to a bunch of privileged white people fleeing for their lives, rather than a process unfolding incrementally'. This resonates with what Rob Nixon (**2011**) has termed the 'slow violence' of climate change, which is 'neither spectacular nor instantaneous, but rather incremental' and 'occurs gradually and out of sight' (**Ibid: 2**), taking years, even centuries, to manifest. The main casualties of slow violence are the unseen 'poor' (hence the title *Slow Violence and the Environmentalism of the Poor*) lacking resources. Among the most common forms of slow violence against the poor Nixon places 'petro-imperialism, the megadam industry, outsourced toxicity, neocolonial tourism, antihuman conservation practices, corporate and environmental deregulation, and the militarization of commerce' (**Ibid: 5**). Nixon brings together postcolonial studies, ecocriticism and literary studies to address the representation of climate crisis in an age when the media often chooses the instant sensational event over the long-term effects of disasters that are 'anonymous and star nobody' (**Ibid: 3**), and suggests that both human responsibility for climate change and vulnerability to environmental harm are 'unevenly universal'.

Furthermore, as Stephanie LeMenager (**2017**) suggests, much of the climate fiction of Europe, white America, Britain and Scandinavia is concerned with what Roy Scranton has termed 'learning to die' in the Anthropocene: according to Scranton one of the main challenges of the Anthropocene is learning to die not as individuals, but as a civilisation, because it is too late to imagine effective responses to the challenge of living in the Anthropocene. But who is learning to die as a civilisation? As the Potawatomi philosopher Kyle P. Whyte makes clear in *Indigenous science (fiction) for the Anthropocene: Ancestral Dystopias and Fantasies of Climate Change Crises* (**2018**), narratives of apocalypse that project climate crisis in 'horrific science fiction scenarios' (**Ibid: 225**) obscure ongoing oppression against Indigenous people, and conceal their perspectives on the continuities between colonial violence and climate change. 'Having endured one *or many more* apocalypses' (**Ibid: 236**) and having suffered the most severe hardship arising from environmental transformation due to different forms of colonialism, most Indigenous people live in a present which is already dystopian. Among such dreadful

transformations Whyte mentions 'ecosystem collapse, species loss, economic crash, drastic relocation, and cultural disintegration' (**Ibid: 226**) and a disrupted relationship with the nonhuman. A key feature of what the philosopher has defined 'living Indigenous science fiction' (**Ibid: 230**) is the contrast between a spiralling time of constant change and ongoing crisis – which sheds light on the role of colonial dispossession in environmental transformation – on the one hand, and linear narratives of upcoming crisis and dire futures of climate change on the other (**Xausa, 2020**).

The 'slow violence' of Ecological Imperialism: *Carpentaria*

Reconstructing *Carpentaria*'s plot is an exceedingly challenging task: as Kate Rigby notes, the novel's nonlinear narrative and its several tangled storylines pose 'profound hermeneutic challenges' (**Rigby, 2013: 123**) for non-Indigenous readers. These difficulties partly derive from Wright's choice to 'engage more Indigenous readers, especially from remote locations, to be readers of this book either now, or in the future, or perhaps at least, to be able to listen to a reading of the book' (**Wright, 2007: 80**).

Set in the fictitious town of Desperance, in the Gulf of Carpentaria in north-west Queensland, the award-winning novel presents a multilayered structure that portrays the lives of the Indigenous Australian people of the Pricklebush clan. The clan lives in a 'human dumping-ground next to the town tip (…), piled up together in trash humpies made of tin, cloth, and plastic too' (**Wright, 2006: 4**), separated from the white settler population's quarter known as Uptown. As Ben Holgate notes, this garbage ghetto segregating Indigenous Australians from the white society and preventing them from having legal control over their traditional land is a form of slow violence and environmental racism, a form of systemic racism whereby minority groups and communities of colour are burdened with a disproportionate number of health hazards. It is clear from the first pages that the Indigenous protagonists of the novel suffer ongoing colonisation, although Australia is officially considered a decolonised nation since the British handed over direct rule to Australia in 1901 and the Commonwealth of Australia was inaugurated. The novel centres on the Phantom family and their patriarch Normal Phantom, leader of the Westend Pricklebush people – and, most importantly, a guardian of the Law and protector of the environment –, and their disputes with the Eastside camp – home to Joseph Midnight's mob exiled from the West – on the one hand, and with the white Uptown and the Gurfurrit mine on the other.

The town of Desperance, built 'in the hectic heyday of colonial vigour' (**Ibid: 3**), was intended to serve as a port but eventually lost its harbour waters as the Rainbow Serpent altered the river's course. The Serpent is one among multiple ancestral spirits that reside within the environment, shape it, and watch over the Country. As such, it collapses space and time, merging geological time with the Dreamtime and creating a place of 'deep time underneath Desperance' (**Leanne 2015: 9**) that falls out of the scene of white settlers imagining: 'the inside knowledge about this river and coastal region is the Aboriginal Law handed down through the ages since time began' (**Wright, 2006: 3**). Just as *The Swan Book*'s polluted dry swamp, *Carpentaria*'s main setting is a place nobody cared about: 'they were changing guards at Buckingham Palace but nobody in the world cared what happened to Desperance' (**Ibid: 71**), and 'never in their wildest imagination had they [the Pricklebush clan] expected to see the likes of downtown Desperance splashed across television, like New York, Jerusalem or Kosovo' (**Ibid: 303**).

The town acquires a more sophisticated outlook when the first multinational mining operation established in the region:

> *The multi-million dollar mine, from infancy to its working prime, was probed, described and paraded to network viewers. Interviewers and footage of scenery went jig-jogging along in soap opera intensity, before finally shifting to pan, and viewers were encouraged to dissect what had become of this showcase of the nation* (**Wright, 2006: 397**).

It soon becomes clear, however, that the resource extraction industry starts 'pillaging the region's treasure trove' (**Wright, 2006: 8**) and undermining the traditional sacred land. The novel highlights that both the traditional land and its dwellers are 'pillaged' and exploited by the mining company – 'they cannot crush people just because they have the power to crush the landscape to smithereens' (**Ibid: 185**) –, and that the Pricklebush people are well aware of the environmental risks arising from the dewatering of the ore in a flood-prone area. 'Who was involved? Who knows? Who cares? What was the environmental hazard to his traditional country?' (**Ibid: 372**); 'how many evolutions would it take before the natural environment included mines in its inventory of fear?' (**Ibid: 379**). As Holgate suggests, the iron ore is yet another form of ecological imperialism, a concept introduced by Alfred Crosby to describe European settlers' introduction of plants, animals, and diseases in colonised areas as well as the dispossession of land, the subjugation of native peoples, and the exploitation of the natural environment for economic profit. Furthermore, by making a false Native title claim on the area, Joseph Midnight chooses to benefit from mining royalties, indicating that ecological imperialism can also led Indigenous people to fight among

themselves. Holgate critically argues that *Carpentaria* is set in 2002, a decade after Mabo judgement abolished the legal fiction of *terra nullius* – or 'land belonging to no one', on which British based their claims to possession of Australia – and recognised the land rights of the Meriam people, traditional owners of the Murray Islands. The novel, therefore, could be interpreted as a 'counter-reaction to the conservative reaction to Mabo' (**Holgate, 2020: 53**).

The Uptown's white settler population, instead, maintains a good neighbour policy with the Gurfurrit mine – a policy that 'worked to kill opposition' (**Ibid: 364**), as Will Phantom explains. Son of Normal Phantom, leader of the Westend Pricklebush Aboriginal, Will remains adamant through the whole novel in his campaign against the environmental and cultural damage brought about by the new mine, acknowledging that:

> *cold and heartless ambitions of politicians and bureaucrats came flying in from faraway cities and capitals to destroy the lives of Aboriginal people (123), [and] some little operation like this could be very lucrative for any of the miners wanting to make their retirement package. Nothing short of an olive plantation back in the home country for the italian. Palaces in Europe or Asia for the management* (**Wright, 2006: 372**).

He will eventually guide the sabotage of the Gurfurritt pipeline, but the final defeat of the mine will be helped by the complete destruction of the town by a massive cyclone. Anthony Carrigan suggests that Wright depicts the 'slippage between indigenous-led resistance and environmental agency' (**Carrigan, 2015: 94**). The arrival of the 'big rain' is sensed by the main characters, who observe this 'mysterious change of great attitude' (**Wright, 2006: 443**) in the clouds, the seagulls, the cockatoos and many other birds heading inland. The Pricklebush's dwellers, who are presented from the first pages as the ones who understand the Gulf country weather and 'know the moment of climatic change better than they know themselves' (**Ibid: 3**), feel the agency of the air long before the Uptown people:

> *Remember the real people of the Gulf, those poor black should living on heartbreak and worries in the Picklebush because they know all about cyclones, unlike those copycat Uptown dolce vita type of people sitting in comfortable armchairs expecting to acquire their ancestral ties with the sea by sitting on their posteriors watching television programs, and never going out to sea on any occasion to pay their respect, like the old people who were the backbone of the Pricklebush who did not mind paying their dues, and will tell you cyclones don't come from nowhere, because there is plenty of business going on when cyclones come onto the country out of the rooftop of the world, like what is going on outside*

> *now from the most powerful creation spirits, who come down out of the skies like a tempest when they start looking for Law breakers* (**Wright, 2006: 460**).

The cyclone obliterates the whole town, including the Gurfurritt mine. Will, observing the devastation left behind by the cyclone, realises that the whole human history could be erased if the Gods decided to 'move the country' (**Wright, 2006: 473**). But whose history is obliterated by the cyclone? Throughout the whole novel, Wright stresses that Desperance's dumping ground, home to the Pricklebush clan, is one of the most unknown places in the world (as the swamp in *The Swan Book*); the cyclone, however, erases both the mine and the privileged side of the town, whose inhabitants turn a blind eye to the arrival of the flood. This way, the living land writes an alternative history that fills the gaps and silences of the official one. Kate Rigby suggests that 'the massive cyclone constitutes the most dramatic incursion of the other-than-human into the action of the novel and, ultimately, facilitates its utopian conclusion' (**Rigby, 2013: 132**), and 'acts as a corrective in the lives of some of the key Aboriginal characters as well, and it is with their unfinished stories that the novel ends' (**Ibid: 133**). Will Phantom, indeed, learns to see nothing monstrous in 'the bulwark of the spirits rose from the waters' (**Ibid: 473**) and in the consequent more-than-human creation 'singing the country afresh' (**Wright, 2006: 499**). The Indigenous Australian protagonists' experience of the cyclone is radically different from that of the Uptown people, who pathologise the event as a malign force to defeat. As Leanne notes:

> *for the settlers, the town is levelled and destroyed. For the Aboriginal residents, the town is transformed as part of the cosmos of the underground serpent. It never was a question of 'if', but 'when'. In this way, Wright challenges European arrogance and inexperience with the living land* (**Leanne, 2015: 158**).

The flood catastrophe mitigates the effects of colonisation on the traditional sacred land and its Indigenous Australian inhabitants. While Rigby stresses that in the world beyond the novel the incursion of the non-human rarely benefit the most vulnerable ones, and the erasure of the mine does not signal the end of ecological imperialism, *Carpentaria*'s hopeful conclusion comes from the various forms of resistance – spiritual and militant – to environmental exploitation offered by Dreamtime ancestral spirits, guardians of the Law like Normal Phantom, and Indigenous Australian guerrilla warriors like Will, who join hands to watch over the Country. The novel therefore challenges the binary opposition between the real and the supposedly unreal, responds to the crisis of the imagination that Ghosh laments, and resists a magical realist reading that

would stigmatise the cyclone as a supernatural event – hence ill-equipped to represent the compelling urgency of climate change.

As this extreme occurrence suggests, even though Northern Australia is a flood-prone area, such 'natural disasters' are as a matter of fact less natural than human induced. The cyclone comes at the very end of the novel, but it is built from the very first pages through the representation of the 'slow violence' of environmental and neo-colonial exploitation. Thus, *Carpentaria* prepares the reader to the altered environment represented in *The Swan Book*, but it is not less engaged with climate change than Wright's latest novel, as Anthony Carrigan stresses:

> *its creative integration of many factors that have driven climate change - from colonialism to extractive industry - permit us to read for climate change at multiple narrative levels, and in ways that reflect the culturally differentiated responses that are needed to address climate change in reality* (**Carrigan, 2015: 95**).

'The eternal reality of a legacy in brokenness': *The Swan Book*

The Swan Book is set 100 years into the future, when the Indigenous Australian are still living under the Intervention in the North, and the environment is fundamentally altered by climate change. In Wright's third novel, despair seems to predominate over hope:

> *Mother Nature? People on the road called her the Mother Catastrophe of flood, fire, drought and blizzards. These were the four seasons. *People talked the language of extinction*. They talked about surviving a continuous storm under the old rain shadow, or they talked about living the best part of their lives with floods lapping around their bellies* (**Wright, 2013: 5. Author's emphasis**).

The novel follows the life of a young Indigenous Australian woman called Oblivia, a victim of a gang-rape by petrol-sniffing Indigenous boys, that signify 'dysfunction within her own society' (**Holgate, 2020: 45**). After being raped, she hides from her abusers inside a sacred tree, where she inscribes 'stanzas in ancient symbols' (**Wright, 2013: 6**) over the tree surfaces, writing knowledge on the land itself. Like Normal Phantom in *Carpentaria*, she becomes the guardian of the Law and of the environment. Eventually, she is rescued by a European Old Woman, Bella Donna of the Champions – 'the white woman was one of those nationalities on earth lost to climate change wars. The new gypsies of the world' (**Ibid: 20**) – but she never recovers from being violated and decides to stay mute. Bella Donna takes the girl to live with her in a polluted dry swamp, 'the world's most unknown detention camp in Australia that still liked to call itself a first-world country' (**Ibid: 35**), and begins to tell stories about her journey and the climate refugees from the Western countries.

The swamp, resembling Desperance's human dumping-ground, is a hidden place that is considered from European people 'another eden' (**Ibid: 27**). However, Wright does not romanticise this land as a pristine land: it is affected by environmental devastation as any other place in the world, as she has previously stressed in *Carpentaria*. The swamp is another site of ecological imperialism and environmental racism, a place of traditional land controlled and destroyed by white settlers. Environmental degradation and the denial of Indigenous Australian rights are woven together:

> *This was the history of the swamp ever since the wave of conservative thinking began spreading like wildfire across the twenty-first century, when among the mix of political theories and arguments about how to preserve and care for the world's environment and people, the Army was being used in this country to intervene and control the will, mind and soul of the Aboriginal people* (**Wright, 2013: 41**).

As Holgate notes, we can also read a critique to twenty-first-century environmentalism that claims to preserve virgin wilderness while impinging human rights. The swamp people 'already knew what it was like to lose a Country' (**Wright, 2013: 35**) and were not interested 'in being conquered by other people's stories' (**Wright, 2013: 29**). As such, *The Swan Book* represents the vulnerability deriving from human-induced 'slow violence', restoring voice to those people who can already perceive the scale and the effects of climate change.

Wright invites the reader to consider Obliva not as the main character, but 'the main *human* character'. The very idea of the book came indeed from the migration of the black swans, as the author declares in an interview:

> *The black swan is indigenous to Australia. But when I started thinking about writing a book about swans, way back in 2003, people started telling me stories of swans that they had seen in the desert, so far away from coastal and wetter regions of Australia. What happens to a bird - or to anyone - who has no story for that country? We had taken them out of their habitat through environmental damage that has been mostly men-made, and the swan moved. Where do they go and what stories do they have*? (**Wright & Zable, 2013: 30**).

When the black swans arrive at the swamp, Oblivia understands that they share a similar experience of exile: like swans displaced from southern Australia by global warming, Oblivia has lost sovereignty over her own brain: 'I have become a gypsy, addicted to journeys into these distant illusionary homelands' (**Wright, 2013: 3**). Similarly, 'the swans had become gypsies, searching the desert for vast sheers of storm water' (**Ibid: 13**).

From this moment onward, their stories and their fight for survival are 'brought together in an interwoven relation', as Meera Atkinson stresses (**Atkinson, 2018: 51**). The swans, Oblivia and the Indigenous Australian community – which has lost sovereignty over its land and culture – are all inheritors of oppression and dispossession: 'it's the eternal reality of a legacy in brokenness' (**Wright, 2013: 75**) that is not just a prerogative of the human society. The struggle of the black swan is intimately bound to that of Indigenous Australian people, and not just the backdrop for human drama. Critically, Ben Holgate suggests that the black swans are not just a 'metaphor for Australia's original inhabitants', but they are to be read 'literally as 'ancestors' who once travelled the continent, sharing their Law stories' (**Holgate, 2020: 63**).

Like the black swan who has no story for that part of the country, Oblivia, observing some alcoves depicting scenes from the world's history, cannot find anything regarding her story and the swamp's story:

> *After exploring all of these little scenes that had been created by months of labor, she had found no eucalyptus tree trunk with strange writing in the dust, no swamp lined with people guarded by the Army. She could not understand why this history did not exist in this world of creation. There was no miniature of a black girl such herself in any of these depictions of humanity, no swamp world of people quarreling over food* (**Wright, 2013: 198**).

Furthermore, Oblivia and the swans share a condition of forced muteness: the black swans die without sound, and Oblivia, who experiences a denial of her Indigenous voice, observes that 'she had no sound either, and knew what it was like to be without sound. This country would never hear her voice, or the language she spoke' (**Wright, 2013: 157**). Oblivia and the swans have such an intimate bound that she starts to believe that by helping them to survive on the polluted swamp she might learn how to escape as freely as they had been able to take flight. When she becomes a climate refugee herself, indeed, the swans help her flight. At the end of the novel, when everyone is forced to head north to escape the ruined cities and the polluted areas:

> *Oblivia doesn't join the people with passports who were not a threat to national security. People who could pay the tax that allowed them to pass through the numerous security checkpoint on the highways. She joins instead those who were traveling incognito on unofficial and illegal crossings through the swamps. Some were former street people, others were the homeless people* (**Wright, 2013: 273**).

Oblivia carries in her arms a cygnet refusing to fly, and she calls him Stranger - significantly. When everyone become increasingly disoriented during this forced migration and begin to hallucinate, she is probably saved by her own care for the cygnet. Moreover, as she could not be discovered escaping, she keeps hiding and walking under the cloud of swans moving slowly. It is this multi-species connection that saves both of them, and it is through this connection that they both gain agency and write their own story.

Conversely, the male human protagonist Warren Finch, who comes from a community of people who 'wanted to be good Black people, not seen as troublemakers, radicals, or people who made Australians feel uneasy' (**Wright, 2013: 84**) and is educated to become the first Indigenous president of Australia, will eventually lose his voice and agency. Finch is the male hero saving the world from environmental catastrophes:

> *Like a modern Moses, with the same intent of saving the world from the destructive paths carved from its own history. (…) He espoused correct answers for saving the lives of the Aborigines, displaced people, freedom of speech, endangered species, the environment. Enough causes to cover the entire planet* (**Wright, 2013: 110**).

When he visits the swamp, the community commented:

> *the world's foremost environmentalist was visiting - but if anyone needed to know, they had some of the world's true environmentalists living at Swan Lake. They could bet a million dollars to think that they were not using much of the world's resources* (**Wright, 2013: 115**).

To solve the pollution problems of the swamp, he closes down to swamp, because 'there is no time for places like that' (**Wright, 2013: 207**). He will eventually die, and his violent individualist agency will be replaced by the interconnection between Oblivia, the swans and the land, and their reciprocal ethics of care.

Conclusion

It has been widely stressed (**Rigby, 2013; Carrigan, 2015; John-Putra, 2018**) that Alexis Wright's two most recent novels respond to what Val Plumwood has defined Western culture's 'hegemonic centrism', which she considers to be 'androcentric, eurocentric, ethnocentric, as well as anthropocentric' (**Plumwood, 2002: 101**).

In Wright's fictitious worlds, women are not the silent background of male action, but they gradually gain agency and write their own stories. However, some significant differences can be observed between the two novels. While Oblivia is the main (human) protagonist of *The Swan Book*, the female characters in *Carpentaria* seem to be quite peripheral to the

main action, which revolves around the male protagonists Normal and Will Phantom, Elias Smith and Mozzie Fishman. Nevertheless, the novel explores the interconnectedness between sexism, racial and environmental exploitation through the figure of Stan Bruiser, mayor of Uptown, whose only one motto is: 'if you can't use it, eat it, or fuck it, then it's no bloody use to you' (**Wright, 2006: 34**). He brags about how he has raped most black women of the Pricklebush clan, including Angel Day, Normal's wife; further, Angel Day' and Normal's daughter Girlie is sexually harassed by the corrupt local white policemen Truthful. Whilst Angel Day's attempt to escape a persistent wretched condition (she is considered a property by her husband Normal too) is not successful – and her voice remains at best projected in the statue of the Virgin Mary that she colors and textures into an Indigenous Australian woman who lives by the sea –, the other female character of the novel, Hope, acquires agency in the last pages of the novel. After the arrival of the cyclone, helped by the tide and the gropers, Hope leaves to find her husband Will Phantom:

> *The groper fish circling the boat, building up speed, crossing each other under the boat, picking the boat up and moving it back to sea through the surging flow of the changing tide. Hope rowed with all her might with the ongoing tide. She was so blinded by her mission she did not see the gropers helping her* (**Wright, 2006: 498**).

Kate Rigby notes that Hope's agency is different from the 'autonomous individual valorised within eurowestern liberalism (including liberal feminism)', but it is rather closer to the 'recognition of interconnectivity shared by indigenous and ecofeminist philosophies' (**Rigby, 2013: 133**). Hope becomes part of a multi-species collective, just as Oblivia in *The Swan Book*.

The novels also respond to the crisis of imagination in dealing with climate change, and to the anthropocentric conventions of popular cultural responses to the Anthropocene. *The Swan Book* ends with some very significant lines about the swan's language: 'you had to hear those soothsaying creature creating glimpses of a new internationally dimensional language about global warming and changing climates for this land. Really listen to what they were saying' (**Wright, 2013: 298**). Similarly, *Carpentaria*'s conclusion places the language of the land at its center:

> *Neither [Norman Phanton and his grandson, Bala] spoke, because neither would have heard the other. It was so much better to listen to the mass choir of frogs - green, grey, speckled (…). It was a mystery, but there was so much song wafting off the watery land, singing the country afresh* (**Wright, 2006: 499**).

This 'new language' writes the land into fiction: the Country is not just the background for human action, or, most importantly, a *terra nullius* and an inert resource to be developed and improved for profit, but it is rather an active, vibrant and living land with agency. Quoting *Green Utopias*, by Lisa Garforth (**2018**): 'a truly ecological thought should not offer the beauty of landscape or harmony with nature but instead unsettle us by gesturing the enormous scale of an interconnected universe and the uncanny experience of living without stable ontological categories' (**Garforth, 2018: 146**).

Alexis Wright also responds to the 'unevenness of that *unsettling* prefix *anthropo-*' (**Crane, 2019: 5**) that compounds the term Anthropocene and fails to consider that some bodies are more vulnerable than others to human-induced climate change. By casting a new light on the continuities between colonial exploitation and climate change, the author questions and challenges the depoliticising universalism intrinsic in the Anthropocene. Both *Carpentaria* and *The Swan Book* address the alignment of ecological imperialism, environmental racism, and the denial of rights to Indigenous Australian people, and give voice to the long-term processes of slow violence that lead to final extreme catastrophes, amplifying the marginalised and forgotten experiences of those who are already experiencing the climate apocalypse.

However, unlike the hopeful portrayal of the power of the Country represented in *Carpentaria* (**Gleeson-White, 2016**), *The Swan Book* is an overwhelmingly dystopian novel ending with the death of the black swans. If *Carpentaria*'s utopian conclusion is facilitated by the spiritual and militant resistance to environmental damage, *The Swan Book* portrays the bleakness and despair that will predominate in the future if the voices of those who have cared for the land the longest keep going unheard. The reasons behind what we can consider by all odds an environmental apocalypse, as Holgate notes, might be related to 'a lack of advancement in Indigenous Australian affairs on a political front in the early twenty-first century as well as increasing global anxiety about climate change' (**Holgate, 2019: 61**).

It becomes clear, then, that the events described in Wright's novels are urgently real, and that the term Aboriginal realism used to describe her fiction is rather appropriate. As recent record-breaking heatwaves have revealed, Indigenous Australian people living across central Australia fear becoming the country's 'first climate refugees' (**Allam & Eveshed, 2019**). The recent Australian bushfires crisis has added another layer of trauma to multiple Indigenous communities, whose cultural identity comes from the land and grieves for non-human relations as well. As Williamson, Weir, and Cavanagh (**2020**) have written, this sense of 'perpetual grief' also

stems from 'the as-yet-unresolved matter of the invasion and subsequent colonisation of our homelands', although the long-term consequences of colonisation have rendered them accustomed to living with environmental damage. Calls for the reintegration of Indigenous Australian fire management techniques to lessen the damage of the fire have grown louder. And yet, as Alexis Wright has pointed out in a recent interview, Indigenous Australian knowledge 'of caring for the land is questioned or largely ignored' (**2020**). Similarly, in *The Swan Book* no one listens to the voices of those who have cared for the land and adapted to changing climate conditions for millenniums. The novel is replete with forced silences, muteness and denial of Indigenous voices, hence the final invitation to listen to the language of the swans. It is only here, outside the story and the dominant narrative of human and non-human exploitation, that a form of resistance is possible.

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What on Earth Can Atlantis Teach Us: Cli-fi and the inconvenient truth behind our pre-history

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Abstract

This article presents and contextualises my recently completed cli-fi novel, Chameleon, which is set during the fall of Atlantis and presents a scenario of extreme climate change some 12,000 years ago. I argue that by referring back to our pre-history we have much to learn and uncover about our earlier experiences of surviving climate change, and of coming to terms with its devastating impact, which has caused us to couch flood stories as myth and legend. Cli-fi has the potential to go beyond narratives of fear and humiliation to show us hope that our planet can survive a climate catastrophe as did our predecessors and live to tell the tale, just as the Atlanteans did.

Keywords: cli-fi; Atlantis; Younger Dryas; catastrophism; antediluvian; demythologisation; pre-historical climate change

Shortly after the final instalment of my climate fiction debut, *The SeaBEAN Trilogy,* came out in 2014, I was commissioned by The Guardian to write a piece entitled 'What is Cli-fi and Why I Write It'. Cli-fi was still regarded as an obscure emergent genre, so the Guardian's brief was to articulate not only my own motivation for writing climate fiction for younger readers, but also to scope the genre as a whole. This led me to realise the need for climate fiction above all to instil among readers a sense of hope as well as urgency in relation to the plight of our planet, a precept which came up in an article published earlier this year on *Literary Hub,* entitled 'Can Climate Fiction Be Hopeful?' (**DiFrancesco & Shelby, 2019**).

Six years on and everything has changed: cli-fi has burst into the mainstream with articles about its ambiguous relation to 'climate fact' popping up everywhere from the *BBC* ('The Cultural Frontline, What is Cli-Fi?') (**2019**) to *Phys.org* ('Scarier than fiction: climate worry driving 'cli-fi' boom') (**Marhic, 2019**) to *CNN* ('Cli-fi on the big screen changes minds about real climate change') (**Christensen, 2019**). This rise in popularity is attributable to the undeniable rise of climate change activism among young people, inspired by teenage activists like Greta Thunberg, who have not only irrevocably changed the debate about climate change, they've taken ownership of it. At the same time, cli-fi has been driven further into the limelight by the fact that world leaders have drawn back from their commitment to a greener future and further enraged an already disenfranchised young demographic all around the world.

While cli-fi is now a hotbed of creativity, spawning novels, films and TV shows, very little real political progress is being been made, and the kind of progressive intergovernmental climate action that is sorely needed is not being implemented. Even now, the United Nation's IPCC website claims that its role is merely to 'provide regular assessments of the scientific basis of climate change, its impacts and future risks, and options for adaptation and mitigation' rather than propose strategy and oversee its implementation. [i] This hands-off approach means that it is still up to individual countries to formulate their climate policies in light of the IPCC's findings in the form of 'Nationally Determined Contributions' (NDCs), and there is as yet no global entity providing a more executive role where climate action is concerned.

To my mind, these circumstances give cli-fi a renewed imperative: back in the 1950s during the cold war, science fiction speculatively led the way in terms of imagining ground-breaking technologies and mind-boggling future scenarios, showing us fascinating glimpses of a possible future world and spurring inventors and engineers to try and realise some of it. As time went on, Hollywood blockbusters favoured the dystopian end of the science fiction spectrum for delivering maximum impact. This 'fear

programming' is what we've all grown up with and is what enables influential organisations like McKinsey to implore their clients to shore up their operations against the onset of climate change, as in their September 2019 article 'Earth to CEO: Your company is already at risk from climate change' (**McKinsey, 2019**).

Rather than play into this theatre of 'climate fear', to my mind cli-fi authors now need to double down and, rather than offer *more* fear-mongering and reactive 'what-if' stories involving climate change, write in such a way as to assert the need for a more ethical and equitable approach to technology, environmentalism and social engineering where climate action is concerned. In other words, cli-fi needs to foster a change in the way we approach problem-solving. Contrary to what Katy Waldman asserted in her November 2019 piece for *The New Yorker* entitled 'How "Cli-Fi," Forces Us to Confront the Incipient Death of the Planet' (**Waldman, 2018**), cli-fi needs to demonstrate that with significant and ingenious acts of intervention, species and habitat decimation is not a given.

The academic community has now accepted that the dinosaurs were most likely wiped out by an asteroid making landfall at Chicxulub in Mexico some 66 million years ago, and new evidence reveals that this colossal impact came after a long build-up of CO^2 in the atmosphere, acidification of the oceans etc, according to recent studies involving calcium isotopes in clamshells from that period, which has lead scientists to concur that 'understanding how our planet responded to past extreme warming and CO^2 can help us prepare for changes due to human-caused climate change' (**Cockburn, 2019**). However, rather than look back as far as the cretaceous period, there was a much more recent mass extinction event after the last glacial maximum (LGM) at the end of the Younger Dryas (YD) period, when not only were most of the Earth's megafauna wiped out, but the human race almost entirely perished too, around 12,000 years ago.

The Younger Dryas Impact Hypothesis, first proposed in 2007 by Firestone (**et al., 2007**), is now widely regarded as the reason for the near total loss of megafauna and also led to 'peak concentrations of platinum, high-temperature spherules, meltglass and nanodiamonds, forming an isochronous datum at more than 50 sites across 50 million km² of Earth's surface' according to a March 2019 article in Nature (**Pino, et al, 2019**). It is this more recent period of abrupt climate change in our pre-history that has been throwing up some new inconvenient truths in the last few years: huge impact craters have been discovered under the Hiawatha Glacier in Greenland and at the archaeological site Pilauco Bajo in Chile, both large enough to explain why almost every culture in the world has a flood myth and a residue of megalithic sites built by our antediluvian ancestors. These

recent discoveries are so stunning that the summary of the research findings from southern Chile, published in Science Daily in March 2019, even sounds like the blurb for a cli-fi novel: 'When geologists set out years ago to examine signs of a major cosmic impact that occurred toward the end of the Pleistocene epoch, little did they know just how far-reaching the projected climatic effect would be.' (**Science News, 2019**).

Until very recently, geological and tectonic theories have steered a uniformitarian course set by Charles Lyell [ii] and Charles Darwin, away from notions of catastrophism, by insisting that any shifts in our bedrock and even in our evolution must have taken place very slowly over millions of years. Their narrative has been so successfully implanted that for the last 200 years we have not only failed to question the lack of crucial evidence to support it, we have also overlooked the abundance of hard evidence that would lead us to draw the opposite conclusion: change can take place on Earth so fast and so suddenly, that as noted by several peer-reviewed articles (**Ghose, 2014; Robinette, 2013**), mammoths were frozen solid within seconds in the permafrost with fresh buttercups still in their mouths, preserved until now at latitudes far from their original habitat.

A much more calamitous version of our geological past was explained and evidenced in meticulous detail back in the 1950s by writers like Charles Hapgood (**1999**) and Immanuel Velikovsky (**1950, 1955**), but despite even Albert Einstein's words of support, their work was seen by the scientific community as worryingly heretical; it was simply too challenging and controversial to accept that momentous and unstoppable events like crustal displacement or celestial bombardment could threaten our sense of security when we had other more pressing global issues to deal with. When I came across these ideas for the first time, my mind started racing with new questions about our pre-history and how little we really know about what earlier generations might have lived through many millennia ago. I began looking in earnest for alternative answers and uncovering more inconvenient truths than I had previously thought possible.

The result of this voyage of discovery is my new novel, a YA title set during the fall of Atlantis entitled *Chameleon*, which comes out later this year. I am curious to see whether, like the work of Hapgood and Velikovsky, it too will be regarded as controversial or heretical in the sense that it 'holds an opinion at odds with what is generally accepted', because in this story I have worked on the assumption that Atlantis was lost during a previous episode of extreme climate change some 12,000 years ago, precipitated by extra-terrestrial impact which humanity almost didn't survive. As far as I am concerned, this is not fanciful supposition on my part, but stems from a disparate but compelling weight of evidence which supports Plato's

detailed descriptions of the location, orientation, layout and life of Atlantis that taken together, indicate that it really did exist. [iii]

In constructing *Chameleon* as an antediluvian cli-fi narrative, I used a familiar framing device whereby an archaeologist, Dr Camille Warden, unearths at different sites three ancient documents, each written in the same pre-cuneiform script and describing a climate catastrophe that brought about the destruction of Atlantis. Dr Warden, confounded by her discovery, appeals to a prominent climate change scientist, Professor Ian Clyffe, who is well known for challenging the consensus view of the Anthropocene era and is prepared to consider alternative theories about the underlying causes of climate change, and as a result an unlikely research collaboration is initiated.

This epistolary structure gave me the opportunity to present *Chameleon* as a series of recently translated archaeological artefacts, 'the Dogon Scrolls', 'the Sphinx Codex' and **'**the Sirian Disks', which when juxtaposed corroborate startling insights about how Atlantis disappeared and how its citizens struggled for their survival. I then ended *Chameleon* with a fictional journal article from the year 2024 entitled 'What On Earth Can Atlantis Teach Us?', in which a journalist interviews Warden and Clyffe about their joint research, on the eve of an important climate summit in Cairo. This fictional interview functions as a coda to the novel and allowed me to imagine and characterise the contemporary reaction to the fact that Atlantis was destroyed by the last bout of extreme climate change. By locating this interview in the near future, I was able to present the two fictional researchers reflecting on the upset in scientific thinking brought on by the realisation that, as recently as 12,000 years ago, our planet was thrown into unimaginable turmoil.

By turning to our pre-history as a useful precedent rich in narrative potential, cli-fi can in some small way impel the science community to review the inconvenient truth of our ancestral survival at the end of the Younger Dryas period, bringing fresh insights that allow us to extend the scope of the causes and consequences of climate change. Then we might see the kind of breakthroughs that climate activists like Thunberg so desire. As a cli-fi author, I am trying to push the boundaries of our understanding by adopting a greatly expanded perspective on cause and effect, which allows for extra-terrestrial impact and intervention by races from other solar systems, but I account for this by way of ancient Dogon tribal knowledge that is well-documented within the anthropological community [iv] and recent ideas about the true purpose and age of the pyramids at Giza [v] which are now being put forward.

This is the fictional interview from the end of *Chameleon*, where the interviewer, Kitty Carruthers (KC) is speaking to my characters Camille Warden (CW) and Ian Clyffe (IC):

> *It's abundantly clear that we are struggling to cope with the effects of climate change on our planet, not least because we are still arguing about its root cause. We urgently need to focus instead on how we are going to cope with the devastating impact of climate change. To do this, we need to open our minds to what has been staring us in the face for a very long time.*
>
> *Two brave researchers, archaeologist Dr Camille Warden and climate scientist Professor Ian Clyffe, whose controversial work earned them a Nobel Prize in December, have done just that. Apart from The Book of Revelation, their 'Atlantean Climate Change Hypothesis' is probably the best roadmap we've got, in terms of showing us what we're in for.*
>
> *I caught up with them last week at the Climate Summit in Cairo to ask them what's to be done if we're living through the same extreme climate change that led to the fall of Atlantis.*
>
> *KC: Dr Warden, what's the context for your discoveries, and why are people finally taking notice of the idea of Atlantis, long considered merely a myth?*
>
> *CW: Yes, it's true, for centuries people have written about the myth, the meaning, the location, and the fate of Atlantis, beginning with Plato's Timaeus, which inspired many others after him to propose alternative theories about Earth's mishaps. For example, books like Earth in Upheaval by Immanuel Velikovsky, which was seen as heresy in the 1950s, and the work of Ignatius Donnelly, Atlantis and the Antediluvian World, which was regarded as historical fantasy long after it was published in 1882. Many researchers have tried to link flood myths with the fossil record, and we're still in the process of piecing together the evidence provided by geological strata, ice cores and impact craters. We now know for sure how and when the dinosaurs were wiped out, and the public is well aware there have been other mass extinction events, but so far experts have been reluctant to say that humans were virtually wiped out too. I believe that's the real reason we've ignored Atlantis for so long: we have been in denial about what took place 12,000 years ago, but we're finally waking up to the fact that, back then, we almost became extinct too.*
>
> *KC: So, is this the conclusion that your work has led you to, Professor Clyffe?*

IC: Well, it's not all doom and gloom. The Atlanteans were smart people, they saw it coming and made a plan to not only survive the calamity but miraculously also save much of their culture and technological know-how in the process. We have long known there were sudden advances in human civilisation, when we went from being primitive hunter-gatherers to having the kind of highly developed systems of writing, engineering, medicine, mathematics, et cetera that you see in ancient Egypt and Mesopotamia, but this massive shift has never been properly accounted for. The truth is, the Atlanteans probably seeded many new survival colonies; 'New Atlantis' was really a legacy project, not a place, and we now think it led to the emergence not only of Egyptian culture, but also the Guanches, the Basque people, the Mayans, and possibly many others.

KC: Professor Clyffe, I understand you were initially sceptical of the extra-terrestrial aspects of Dr Warden's findings. Have you come to a new understanding of other forms of intelligence as a result of your collaboration?

IC: I have to admit, the 'aliens and outer space' factor challenged my credulity for a long time, given that we had no visible evidence, but the moment Camille's intern showed me how the Sirian Disks had been encoded, I knew this was no terrestrial technology. I had to expand my thinking to realise that the Dogon people were not making it up: their ancestral stories about having contact with beings from Sirius had always struck me as possible from a mathematical probability point of view, but, seeing those disks for the first time, I knew it had to be true.

KC: Camille, your research team, led by Major Jonathan Edwards, now includes many other disciplines, including astronomers and paleo-linguists, quantum physicists, even shamans and spiritual mediums. To what extent has your willingness to overcome the boundaries of academic disciplines been the secret of your success?

CW: It's all about putting our heads together and being open-minded. That should be the approach of all scientific enquiry if we are to discover something we didn't know before, something that only our combined knowledge and perspective can shed light on. It's been very exciting and at times challenging to work across our various disciplines, since we all have our own ways of doing things, but it's taken us somewhere new, for sure. The work we are presenting here at the Climate Summit, for instance, has meant that even the most stubborn Egyptologists are changing their minds about pre-Pharaonic culture, and are finally coming to accept the antiquity of the Sphinx, the proof that it was eroded by water, and the real reason for building the Great Pyramids. By holding the summit here in Cairo, we have been able to open up the

Hall of Records and various other chambers beneath the Giza Plateau for the first time, so that delegates can see for themselves what is described in the accounts of Kam, Mel and Leon.

KC: Ian, your work is now the subject of a major touring exhibition entitled 'The New Atlantis', and soon people all around the world will be able to see the Dogon Scrolls, the Sphinx Codex and the Sirian Disks first-hand. What impact would you like these ancient documents to have on modern human consciousness?

IC: They have already had considerable impact. I thought at first their main impact would be to silence the people who accused us of conducting pseudoscience. But now that we have unearthed the documents, translated the words and shed light on their meaning, the real impact will be measured by how quickly we as a species act. We know we're in the midst of a global catastrophe, but our findings show it is not unprecedented. We have faced climate change on this scale before. It is now up to the Intergovernmental Committee on Climate Change, as well as lobbyists and activists, to re-orientate their agendas to take into account our Atlantean Climate Change Hypothesis, and secure enough funding to make 'The New Atlantis' a living, breathing legacy project for today.

KC: And what would that entail, exactly?

CW: Like the Atlanteans, we need to evacuate our people permanently away from vulnerable coastal locations; we need to build hundreds of new cities in safe locations and find novel ways to ensure our survival. There is already a seed vault in Svalbard, north of Norway, containing the means to grow food again should all our plant species be wiped out, and many museums have created watertight, impact-proof vaults to store important artworks and artefacts, but without our survival this is all somewhat pointless. As individuals, we are not as resilient as we would like to think we are. We do not have the practical life skills that our predecessors had. Many of those who survived climate change back then did so by virtue of being at high altitude with access to fresh water and natural shelter. We can do better than this. We have the insight and the intelligence to secure an even better outcome than the Atlanteans. Our survival doesn't have to be a case of being lucky enough to be in the right place at the right time.

KC: Lastly, what do your findings have to teach us about the future of renewable energy?

IC: We can all do our bit individually, sure, but really, it's down to the big energy companies doing more than simply committing to becoming carbon neutral in the next quarter-century. It's going to take something

> *a lot more visionary and joined up. First and foremost, what the Atlanteans can teach us is not their strategic level of foresight, but their mastery and understanding of renewable energy. They were far more advanced at this than we are. The pyramids are not just extraordinary feats of construction, they were skilfully designed and built to harness, attenuate, balance and distribute energy entering Earth's atmosphere. We don't need to burn fossil fuels to obtain energy. According to our most radical scientists and engineers who believe we're living in an 'electric universe', we don't even need solar panels or wind turbines. We just need to tap into the flow of plasma and electrons in our upper atmosphere. If we do this, we can also boost Earth's magnetic field – much like boosting our own immune system – and protect ourselves from solar flares, mass coronal ejections and EMPs. We might even reduce the likelihood of anything impacting Earth and causing the sort of worldwide climate mayhem the Atlanteans had to contend with. The maths and the science has all been done. It's all up for grabs; we just need to implement it. I say 'us', but really, it's the next generation; they're the ones who are really fired up and angry about our governments' and industries' inaction. They've got the right idea – we just need to step aside now and let them get on with it.* (**Holding, 2020**) [vi]

By ending *Chameleon* with this final message about the need to step aside and let the next generation 'get on with it', I wanted to sow the seed in the minds of my readers that a better future, a rejuvenated biomass, a resilient, tolerant and conscious global community, and an ethical and equitable scientific and technological agenda are not out of reach. The tipping point of our times will come not when we reach peak carbon, but when we achieve peak open-mindedness and realise we need to relate to climate change in a different way, with more hope and proactivity and less doom and gloom, as Professor Clyffe suggests.

In *Chameleon*, a group of Atlantean refugees are trying to reach Giza, but it could just as easily have been a tale about a group of survivors heading for Guanches (the Canary Islands), the Basque country or Mexico. Atlantis may still be a mystery, but the tantalising megalithic evidence all around us should inspire a sense of wonder and respect that in an earlier antediluvian epoch, people could construct things we would still struggle to reproduce with today's machinery and computational knowhow. In all likelihood, their cosmological understanding was also much more sophisticated than ours. It that too much for our teleological mindset to entertain? We like to think we are at the forefront of progress, that nothing we have created in our current era has ever been surpassed by the output or knowledge base of a previous one. Would it be so terrible if we were to admit that we know less than our forebears did? Are we still so

traumatised by the deep collective memory of this experience that we can only relate to the Great Flood through myth?

In writing a cli-fi story set during our pre-history, I researched many troubling artefacts that are, like climate change, inconvenient truths which have given rise to denial, deprecation and dismissal, which may be regarded as human coping strategies. This lead me to surmise that the events which took place 12,000 years ago must have affected humankind so badly, they were only able to relate to them afterwards as myths. As such, it is my belief that cli-fi also has an important role to play in the demythologisation of our past, in order to prepare us mentally and emotionally for the likelihood of similar events occurring in our future. By re-presenting aspects of our current understanding of cosmology, our historical timeline and our physical reality, cli-fi can help readers to expand their thinking and allow other explanations to come forward and be considered, a practice which is no different to the healthy scepticism embodied in the modern scientific method. I believe that the modern science community is doing itself and us a disservice, in clinging obstinately to earlier so-called 'settled' theories, which scientists like Darwin himself advised should be abandoned should the fossil record not bear them out. We have been encouraged to let our thinking develop in response to the empirical evidence that stands before us, but it seems to me that we have tied ourselves in knots trying to explain away – or turn a blind eye to – empirical evidence that did not concur with prevailing hypotheses.

History, they say, is written by the victors. What happens when cli-fi rewrites history from the other point of view is a deep questioning of the received wisdom of our current understanding, raising the possibility of new 'a priori' thinking. Deduced through the speculative literary lens of cli-fi, we might as a society arrive at fresh conclusions and thereby precipitate more radical solutions to the very real scenario of extreme climate change in which we find ourselves today.

Formerly an architect and academic, Sarah Holding is now a full-time author. Her debut climate fiction title 'SeaBEAN', published in 2013, was a middlegrade time travel adventure set on St Kilda. Sarah has since given workshops and author events at over 150 schools, festivals and libraries and has featured on BBC Radio Scotland. In 2015 she was commissioned to write an article about 'cli-fi' for Guardian Children's Books and in 2016 gave a TEDx talk about 'cli-fi'. Her latest book, 'CHAMELEON' (2020), is set during the fall of Atlantis, which was likely a previous climate change catastrophe.

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Endnotes

[i] https://www.ipcc.ch/about/

[ii] https://evolution.berkeley.edu/evolibrary/article/history_12

[iii] Plato, http://classics.mit.edu/Plato/critias.html

[iv] The primary account of Dogon culture was captured in 'The Pale Fox', by French anthropologists M Griale and G. Dieterlen, in 1945

[v] Questions are being raised about the true age of the pyramids and the Sphinx by researchers such as Robert Bauval, Graham Hancock, Robert Schoch et al.

[vi] Extracted with permission from the author's book *Chameleon: Does it have to cost the Earth to find out who we really are?* Further details here: https://www.troubador.co.uk/bookshop/young-adult/chameleon/