Beyond the Anthropocene:
Post-Anthropocentric
Approaches Across Texts
and Theory

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ANGLICA

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Beyond the Anthropocene: Inheriting a Crisis, Inhabiting a Threshold

In the early twenty-first century, the planetary crisis has become both a measurable reality and a mode of precarious existence. As ecological systems collapse, climate patterns destabilise, and biodiversity wanes, the need to tackle and understand the entangled forces driving these changes has become much more dire. This necessity has also spurred a wave of scientific, cultural, and artistic responses that attempt to make these matters more understandable and thus relatable, or, at least to some extent, manageable. Yet many of the phenomena associated with the current ecological crisis – such as global warming, extinction, or the passing of deep geological time – resist representation. They elude "traditional" modes of world-making, such as narrative linearity or human perceptual scales, and unfold across materialities that are neither readily visible nor easily understood.

The Anthropocene, both as a concept and a provocation, has emerged in this context to designate a moment of unprecedented planetary transformation. It marks a recognition that human activity, *en bloc*, has become a geological force, reshaping climate and earth systems, and provoking disparate biological processes on a planetary scale (see Crutzen and Stoermer). Yet the term does much more than "merely" describe an epoch; it prompts a critical rethinking of how literature, theory, and culture might respond to the crisis of scale, agency, and representation that the Anthropocene reveals. As Timothy Clark states in *Ecocriticism on the Edge*, the Anthropocene entails "a chastening recognition of the limits of cultural representation as a force of change in human affairs, as compared to the numerous economic, meteorological, geographical and microbiological factors […] that arise from trying to think on a planetary scale" (21). But it is precisely at this limit where representation falters and inherited critical vocabularies collapse – that the new theoretical and aesthetic possibilities begin to emerge.

An influential framework across academic and artistic disciplines, the Anthropocene, however, is not without its critiques. One of the most frequently cited limitations of the term lies in its generalising dimension: its tendency to attribute ecological destruction to "humanity" at large, i.e. in abstract, undifferentiated terms. Such universalising rhetoric masks the uneven histories of colonialism, capitalism, industrialisation, and extraction that have produced the current crisis – as Heather Davis and Zoe Todd convincingly argue, the Anthropocene is a continuation of the colonial practices of displacements and dispossession, while its logic of the universal ultimately works "to sever the relations between mind, body, and land" that are key to Indigenous lives and epistemologies (770–771). Moreover, the notion remains fundamentally oriented around human impact, interests, and modes of making sense of the world, rather than adopting a decentered ecological or multispecies perspective. The very name comes from the Greek word indicating a "human being" (*anthropos*) and inscribes our species as the central actor in Earth's geohistory. Such a framing has also been subject to extensive debate, not only in the environmental humanities but also in geology, where its status as a formally recognised epoch remains contested and sparks intense debates. Following years of evaluation by the Anthropocene Working Group, in March 2024 these discussions led the International Commission on Stratigraphy (ICS) to reject the proposal of designating the Anthropocene as a formal unit of the geologic time scale (International Commission on Stratigraphy 2024). On a similar terminological note, one might notice how critics also argue that by foregrounding human agency, the term reinforces the same exceptionalism and instrumental logic that contributed to the crisis in the first place. As Jason W. Moore (2017) suggests, the term Anthropocene risks flattening complex histories of ecological degradation into a single species narrative, obscuring the roles of empire, capital, and racialised labor in shaping the present. In response, alternative nomenclatures have been proposed. Terms such as Capitalocene, Plantationocene and the Chthulucene (Haraway 2015) each foreground different genealogies of planetary change – economic, colonial, multispecies, or mythopoetic. These terms highlight the insufficiency of "the human" as a unified historical subject and attempt to shift the focus from human dominance to interwoven systems of exploitation, survival, and relation. Moreover, they also point to the dissolved nature of responsibility in the case of identifying a general, collective culprit. Such questions, it seems, demand not only theoretical revision but ethical and imaginative transformation.

In this vein, scholars have increasingly turned toward disparate post-anthropocentric frameworks that challenge the centrality of the human subject. Thinking along these lines often blurs disciplinary boundaries by drawing from feminist science studies, Indigenous epistemologies, postcolonial studies, speculative design, and media theory. New ways of describing and exploring the encounters with non-human realities, beings and objects include Jane Bennet's concept of "thing-power," Donna Haraway's ideas on storytelling in the Chthulucene, Rosi Braidotti's critique

of traditional humanism, Graham Harman's rejection of human privilege, Bruno Latour's Actor-Network Theory, Timothy Morton's hyperobjects, Karen Barad's "agential realism," or Stacy Alaimo's notion of "transcorporeality." Bennett, for instance, offers in *Vibrant Matter* a compelling vision of a world where "humanity and nonhumanity have always performed an intricate dance with each other," and where agency itself must be understood as distributed across entangled networks of beings, forces, and things (Bennett 31). If, as she argues, the vitality of non-human bodies makes them "quasi agents or forces with trajectories, propensities, or tendencies of their own" (viii), then human culture can no longer be seen as separate from the nonhuman but rather as "inextricably enmeshed with vibrant, nonhuman agencies" (108). Similarly, Braidotti's posthuman critique of Enlightenment humanism (Braidotti 13–24) emphasises the need for new ways of thinking and creating that focus on what she calls *zoe* – "life in its nonhuman aspects" (66) – and for forms of (posthuman) subjectivity and accountability "based on a strong sense of collectivity, relationality and hence community building" (49). Barad's theory of "agential realism" (Barad 2007, 132–136) presents matter as "an active participant in the world's becoming, in its ongoing 'intra-activity'" (Barad 2018, 224), where "the relationship between the material and the discursive is one of mutual entailment," so that "matter and meaning are mutually articulated" (2018, 233). Finally, Haraway's call to "stay with the trouble" reflects a growing recognition that the future of thought must be made *with*, rather than *over* or *against*, the more-than-human world, not least because, as she claims, "We become-with each other or not at all" (Haraway 2016, 22).

These perspectives not only complicate the conceptual terrain of the Anthropocene; they also call into question the modes of critique, representation, and engagement long dominant within the humanities. They also prove that the Anthropocene remains a powerful conceptual tool within the arts, humanities, and social sciences, where it continues to shape how we understand humanity's impact on the planet. Its significance, therefore, extends well beyond its disqualified role as a formal geological marker. If human agency is no longer singular or sovereign, how do we understand literature, theory, or politics as forms of world-making? What does it mean to write, to theorise, or to imagine in the wake of human exceptionalism?

This thematic issue responds to such questions by gathering essays that explore a wide array of post-anthropocentric approaches across texts and theory. At the core of this intervention is a conceptual and ethical shift – from anthropocentric humanism to distributed, relational, and decentered models of existence and meaning. The Anthropocene, here, is treated less as a fixed epoch than as a provocation – a conceptual pressure point that compels us to reconsider the scales, agencies, and narratives through which the human and the more-than-human are imagined and entangled. Rather than adhering to a singular theoretical paradigm, the essays in this collection work across a constellation of critical approaches drawn

from posthumanism, ecocriticism, speculative aesthetics, feminist theory, and deco-lonial thought. They trace new ways of conceiving vulnerability, mourning, and care across species lines; explore how narrative and ritual might foster ecological awareness and cultural renewal; and interrogate how speculative fiction and future imaginaries unsettle inherited ontologies of agency, autonomy, and intelligence. Whether examining rivers as sentient forces, machines as evolving life forms, or art as a collaborative space of ecological speculation, these contributions share a com-mitment to thinking beyond the human as the sole measure of value or meaning.

While the issue draws from broader traditions such as New Materialism, Object-Oriented Ontology, and environmental humanities, it also gestures toward alternative epistemologies and cosmologies – those grounded in multispecies entan-glement, localised ecological knowledge, and pluralistic understandings of life and agency. In doing so, it reflects an ongoing movement in theory away from universal abstractions and toward situated, relational, and often speculative engagements with the world. Crucially, theory, here, is not treated as an external framework imposed upon texts or environments, but rather as a field of experimentation that is itself reshaped by the literary, artistic, and material practices it seeks to understand. Literature, performance, and speculative design are approached as active sites of knowledge production – forms of world-making that articulate, test, and transform post-anthropocentric thought. In this sense, this issue not only participates in current theoretical debates but also proposes new modes of sensing, imagining, and nar-rating life in the wake of climate crisis and the disturbing affects it might produce.

To this effect, **Aleksandra Kamińska's** reading of grief in extinction plays challenges the tradition of viewing this process as a uniquely human experience. She shows how it can become a site of interspecies ethical encounter and how mourning can extend beyond the human, especially when employing Judith Butler's notion of (un)grievability to affirm the emotional and ontological significance of nonhuman lives. Storytelling, too, emerges as a vehicle for posthuman ethics and for a redefinition of the Anthropocene as a not exclusively human concept. In their examination of the Snow Leopard Conservancy and the role of storytelling in the preservation of endangered species, **Bartłomiej Knosala and Rhodora Magan** argue that narrative – particularly when embedded in Indigenous cultural tradi-tions – has the power to challenge reductionist scientific models. Their case study illustrates how conservation efforts become not just a biological imperative, but a relational and symbolic practice. The theme of more-than-human agency continues in **Anna Maria Karczewska's** hydrocentric analysis of Wade Davis's *Magdalena: River of Dreams*. Reframing the body of water as a gestational force, she draws on new materialist perspectives to show how water shapes history, identity, and possibility, calling for a mode of reading attuned to nonhuman creativity. A different kind of posthuman storytelling is explored in "Intersecting Narratives and Design in Post-Anthropocentric Speculative Art," where **Marta A. Flisykowska and Roksana Zgierska** discuss the *Fossibilities* project as an experiment in ecological

narrative-making. By creating speculative "future fossils" that merge design, literature, and science, the project invites participants to inhabit post-Anthropocenic futures in which art becomes a collaborative practice of imagining coexistence. Technological sentience and the decentering of human intelligence are topics taken up in **Ritu Ranjan Gogoi's** reading of *Sea of Rust*, a novel depicting a world after human extinction. Rather than mourning humanity's end, the text explores what it means for machines to evolve agency and interiority, posing profound questions about identity, purpose, and the limits of anthropocentric thought. Finally, a broader ontological reframing is proposed in "Organism-Oriented Ontology Beyond the Anthropocene," where **Audronė Žukauskaitė** challenges dominant entropic narratives through the lens of autopoiesis. Building on Bernard Stiegler's Neganthropocene, coupled with Gaia theory, she advocates for an ontology rooted in life's self-organising complexity, offering a philosophical foundation for understanding post-Anthropocenic modes of existence.

Rather than treating literature as a passive mirror of environmental change or as a moralising voice for human action, the essays collected in the thematic issue "Beyond the Anthropocene: Post-Anthropocentric Approaches Across Texts and Theory" treat literature – and by extension, culture, theory, and art – as an *active zone of contact* with the more-than-human world and more-than-human ways of meaning-making. The notion of text becomes a speculative laboratory, not only reflecting reality but *inventing* new perceptual and ethical configurations. In this understanding of the notion, texts become vehicles for instigating encounters among species, elements, objects, and forces that might otherwise remain occluded in conventional discursive forms. This is especially important given the representational challenges posed by the Anthropocene and its attendant hyperobjects – phenomena so vast and distributed that they elude traditional narration (Morton 2013). In this context, literary and artistic experimentation can offer forms of mediation that move beyond indexicality or mimesis, forging new modes of storytelling, temporality, and material engagement. Whether through speculative fiction, multispecies narrative, environmental horror, documentary poetics, or audio-visual essayism, the creative text becomes a space where human and nonhuman futures are reimagined together.

As the essays in this volume demonstrate, to think *beyond the Anthropocene* is not merely to discard the term, but to trace the limits it reveals and to seek more responsive, situated, and imaginative forms of thought. This special issue takes up that challenge by assembling a constellation of inquiries – textual, theoretical, aesthetic – that refuse to accept anthropocentrism as a default orientation. Instead, the works gathered here invite readers to inhabit the entangled, plural, and precarious conditions of the contemporary moment with attention, care, and critical inventiveness. What unites these essays is not a singular vision of the posthuman or a programmatic rejection of the human, but a shared commitment to *rethinking relationality*: to attuning to the strange agencies of the nonhuman, the porous boundaries of the body, the deep temporalities of ecological change,

and the ethical demands of planetary co-existence. In doing so, they contribute to an emergent form of the humanities that is at once speculative and grounded, analytical and affective, political and planetary. We hope that this issue will serve not only as a reflection of current critical energies, but as a provocation: a space in which new alliances, concepts, and imaginative solidarities might begin to form.

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Mourning as Posthuman Ethics: Interspecies Grief and Solidarity in Extinction Plays

Abstract: Among the current calls for a redefinition of the Anthropocene as a non-anthropocentric concept, cultural extinction studies offer ways of advancing posthuman ethics through more-than-human practices of mourning. Adapting Judith Butler's notion of (un)grievability, extinction studies scholars promote cultural practices aimed at recognising the grievability of other-than-human lives. Arguably, one of the media enabling the enactment of interspecies mourning is theatre. Building on the theoretical framework proposed by cultural extinction studies, the article discusses a selection of contemporary plays grouped under the label of "extinction drama," focusing on the themes of humans' and other-than-humans' shared vulnerability to extinction, humanimal temporalities of extinction, and interspecies mourning.

Keywords: extinction, theatre, extinction plays, grievability, posthumanism

1. Introduction: Extinction Studies for Posthuman Ethics

While the current scholarly discourse within the humanities locates us in the Anthropocene – an epoch in which humans are regarded as geological agents (see e.g. Crutzen and Stoermer; Zalasiewicz et al.) – the concept is increasingly criticised for its inherent anthropocentrism (see Chernilo 2017), suggesting that the planet and all other-than-human organisms are merely passively moulded by human activity. On the other hand, some call for a redefinition of the Anthropocene as a non-anthropocentric concept, insisting that rather than placing humanity at the centre, societies in the midst of the Anthropocene should be viewed as reliant on a network of relationships between humans, other-than-human animals, plants, and other agents (Davies). From this perspective, the Anthropocene is theorised

not so much as the "Age of Man" as a particular stage in planetary history, one that offers an opportunity for "redistributing agencies" and "reconfiguring systems" (Davies 8), potentially opening up posthuman worldviews.

Among theoretical perspectives contributing to this expanding outlook on the current epoch, cultural extinction studies takes a prominent place, with its acknowledgement that next to climate change, biodiversity loss is "the other major risk scenario associated with the Anthropocene" (Heise 2010, 50).[1] As scholars indicate, we are currently in the midst of a mass extinction event (see e.g. Dirzo and Raven; Barnosky et al.; Kolbert; Dawson), and contrary to the previous mass extinctions in the planetary history, the current extinction is anthropogenic[2] (Dirzo and Raven; Barnosky et al.; Kolbert; van Dooren; Dawson; Rose, van Dooren, and Chrulew), its rate estimated to be between one thousand and ten thousand times as fast as it would have been without humans exerting significant pressure on the environment (Dawson 9). Yet apart from stating the biological fact, extinction studies insists that biodiversity loss should be viewed as "both material reality and a cultural discourse" (Dawson 15).

In their analyses of the "cultures of extinction" (Heise 2010; Heise 2016; Dawson; Chrulew and de Vos 2019), scholars seek to "reveal the complex interconnections of humans and non-humans in the making and unmaking of meaningful worlds" (Chrulew and de Vos 2018, 181), while also realising that rather than constituting a singular phenomenon, "extinction is experienced, resisted, measured, enunciated, performed, and narrated in a variety of ways" (Rose, van Dooren, and Chrulew 2–3). For this reason, as Thom van Dooren insists, extinction must find its place "at the heart of an Anthropocene Animal Studies" (van Dooren 2018, 170), and one of its chief objectives should consist in the formulation of a posthuman ethics – "one that might provide new possibilities for understanding and inhabiting genuinely shared worlds, worlds crafted with and for diverse forms of being" (van Dooren 2019, 7).

In its attempts to formulate such ethics, cultural extinction studies draws extensively on the thought of Judith Butler (most notably her writings on precarity and grievability) and Emmanuel Lévinas (see Rose 2013). As Chloë Taylor suggests, part of the cultural reception of animal death, and thus animal extinction, is conditioned by the conviction that other-than-human lives are viewed as "ungrievable" (2013, 97). Consequently, Taylor argues, "nonhuman animals, like the humans we do not mourn, cease to be lives with which we can empathise" (2013, 100). Lévinas stresses the importance of death as the bid for establishing connection,[3] and although his writings are predominantly focused on the human, he also suggested that his concept of the face could be expanded to encompass other-than-human "living beings."[4] Butler, in turn, comments on the potentially "transformative effect of loss" and suggests that through mourning we may be "changed, possibly for ever" (21). As the philosopher explains in *Precarious Life* (2004), mourning reveals to us our relational identity, teaches us just how deeply our lives are interconnected

with others and to what extent "these ties constitute what we are" (22). The loss of these connections inevitably triggers an identity crisis; yet, as Butler explains, the resulting state of uncertainty could be viewed as an opportunity for important revaluations.[5] First of all, grief can become a starting point for creating a sense of community. Since its very nature is not "solitary" but relational, Butler postulates "a way of imagining community [that] affirms relationality" (27), in which we start to perceive ourselves as "something other than 'autonomous'" (Butler 27). Secondly, loss compels us to consider "the vulnerability of others" and consequently to reflect why some lives are "more grievable than others" (Butler 30). In her book, Butler calls for interrogating the dominant "hierarchies of grief" and realising how our cultural frames for defining a grievable life "set limits on the kinds of losses we can avow as loss" (32). While Butler's argument, rooted in the post 9/11 landscape, focuses on human lives and politics, extinction studies scholars have been adapting her postulates, expanding them to incorporate other-than-human lives into the same sphere of community and ethical responsibility.[6] In consequence, human and other-than-human lives are viewed as part of the hierarchies of grief that need to be examined and reassessed.

As Thom van Dooren argues, it is human exceptionalism with its inherent dualistic thinking that accounts for "our inability to be affected by the incredible loss of this period of extinctions, and so to mourn the ongoing deaths of species" (2014, 18). He claims that expanding the boundaries of grievability in order to sanction the act of mourning extinctions would call into being "a mode of mourning that does not announce the uniqueness of the human, but works to undo [human] exceptionalism" (van Dooren 2014, 18). According to van Dooren,

> Mourning offers us a way into an alternative space, one of acknowledgment of and respect for the dead. In this context, mourning undoes any pretence toward exceptionalism, instead drawing us into an awareness of the multispecies continuities and connectivities that make life possible for everyone. (2014, 125; see also van Dooren and Rose 376)

Consequently, the language of mourning occupies a special place in extinction studies research; as Heise (2010, 52) points out, the genre conventions of elegy and tragedy are frequently incorporated into extinction narratives. In publications such as Deborah Bird Rose's "In the Shadow of All This Death" (2013), Thom van Dooren's "Mourning Crows: Grief in a Shared World" (2014), or Vinciane Despret's "It Is an Entire World That Has Disappeared" (2017), the authors apply the elegiac mode with the intention of moving beyond writing "*about* mourning" and instead making each essay "to *be* an act of mourning" in itself (van Dooren 2014, 126, emphasis original). The authors consider themselves ethically obliged, "called to respond" (Rose 2013, 1) as witnesses of individual other-than-human passings as well as mass extinction. They write to acknowledge that each death impacts everybody, that "the

world dies from each absence" (Despret 219) and "when a being is no more […]
a part of reality collapses" (Despret 220); but they also use the other-than-human
examples of mourning to collapse human exceptionalism. Van Dooren's descriptions
of mourning corvids and Rose's account of grieving albatrosses counter the Heide-
ggerian conviction that human death is different from that of non-humans because
the latter lack any consciousness of dying.[7] Alluding to Donna Haraway's famous
postulates, extinction studies scholars advocate "mourning *with*" (van Dooren 2014)
as an essential condition of making kin in the era of mass extinction and explain
that although, as Genese Marie Sodikoff points out, extinction is "a species-bound
perception of reality" (4), *staying with* extinction requires "staying with the lives
and deaths of particular, precious beings" (Rose, van Dooren, and Chrulew 8),
acknowledging that "a collective death […] is pieced together out of the deaths of
countless individual organisms" (Rose, van Dooren, and Chrulew 8).

　　Finally, the mode of thought proposed by extinction studies scholars requires
a reassessment of our own vulnerability to the ongoing processes of extinction.
As Rodolfo Dirzo and Peter Raven insist, biodiversity is a crucial component
of planetary life support systems and, as such, it is "directly relevant to human
societies" (138). The changing networks and mechanisms of planetary life expose
human populations in certain parts of the world to hitherto unknown perils, forcing
humans, as Sodikoff argues, "to imagine ourselves not just as authors of our histo-
ries but also creatures bound by species-being" (4). In other words, "extinction is
all around us" and we are "caught up" in it (Chrulew and de Vos 2018, 184). A good
illustration of this way of thinking about ongoing mass extinction can be found in
Elizabeth Kolbert's Pulitzer-winning *The Sixth Extinction: An Unnatural History*
(2014). Each chapter in the book is given a subtitle consisting of a name of a species
that either has already become extinct or can be considered as endangered; one
of the chapters is headed *Homo sapiens*. The resulting effect incorporates humans
into the landscape of extinction and highlights our status as one species among
many, all of which remain – albeit unequally – vulnerable to the impacts of the
planet-wide extinction processes. Foregrounding our "biocultural entanglements"
(van Dooren 2018), such perspective calls to mind the existing inequalities and
unequal vulnerabilities to extinction and its effects – among species but also within
humanity itself. Indicating the links between mass extinction and the underlying
workings of capitalism and colonialism (see Dawson), extinction scholars expose
more-than-human mechanisms of oppression.

　　The call for posthuman "multispecies ethics" (van Dooren 2019) in the age
of extinctions remains one of the crucial ethical challenges of today. As extinction
becomes "the condition of the present" (Chrulew and de Vos 2018, 182), we are
defined by our response to it: "The expression of our ethical lives will be visible in
how we inhabit the death zone: how we call out, how we refuse to abandon others"
(Rose 2013, 4). Moreover, aside from "keeping faith with the dead," an ethics for
the age of extinction requires keeping faith with the living by seeking to understand

the drivers of biodiversity loss and taking action to prevent future extinctions (van Dooren and Rose 2017). This kind of ethical engagement can be, and is, undertaken by both activists and artists. Extinction studies scholars express their commitment to storytelling (Rose, van Dooren, and Chrulew) as a mode which "hold[s] open possibilities and interpretations and refuse[s] the kind of closure that prevents others from speaking or becoming" (3); moreover, similar objectives have been addressed using various forms of artistic expression, including, but not limited to narrative ones (see Jørgensen). In this article, I discuss a selection of recent Anglophone plays that I identified here as "extinction plays" through the lens of cultural extinction studies in order to examine their representations of interspecies webs of grief and solidarity as a means of advancing posthuman ethics.

Extinction plays can be defined as a subgenre of eco-drama (see Woynarski), partly overlapping with climate change plays (see Hudson; de Waal); they also fit into the framework of ecocritical theatre for the Anthropocene era as discussed by Mohebat Ahmadi (2022), fostering the "reorientation of theatre from anthropocentric to ecocritical drama" (Ahmadi 193). The examples discussed in this article include Stef Smith's *Human Animals* (2016), April De Angelis' *Extinct* (2022), Miranda Rose Hall's *A Play for the Living in a Time of Extinction* (2023), and Chris Bush's ~~Not~~ *the End of the World* (2024). All of these plays not only tackle biodiversity loss as a major theme, but also directly refer to mourning. Moreover, all make overt allusions to environmental theory, most notably to extinction scholarship. Smith, for example, uses epigrams from Kolbert's *The Sixth Extinction* and Georges Cuvier's *Fossil, Bones and Geological Catastrophes* (1796), which Kolbert (2014) identifies in her book as the first formulation of the hypothesis of mass extinction.[8] Kolbert's book is also named and discussed in Hall's play, the protagonist of which evokes terms coined by Donna Haraway, naming her as one of her "favourite scholars" (Hall 25). Bush makes references to, among others, Timothy Morton, citing hyperobjects as a cause of (mass) death. Finally, De Angelis lists the time setting of *Extinct* as "The Anthropocene" (317) and shares a whole reading list as part of the playtext, naming thirteen works, including those by Bill McKibben, Naomi Klein, and David Wallace-Wells, as well as *This Is Not a Drill: An Extinction Rebellion Handbook*. In the following sections, I analyse the aforementioned plays through the lens of extinction studies, focusing especially on the themes of interspecies vulnerability, temporality, and mourning.

2. Entangled Vulnerability

One of the observed responses to the reality of climate crisis and ongoing massive loss of biodiversity is to seek refuge in the modes of thinking rooted in human exceptionalism. As Gaia Giuliani points out, anthropocentrism, with its "reassuring" binaries, constitutes "an imaginary safety net against the threat of chaos"

and annihilation (141).[9] In other words, as long as humans regard themselves as separate from the animal kingdom, it is relatively easy to perceive (and narrate) extinction as if it were always happening solely to other species, with no direct impact on humanity. In extinction plays, this safety net is lifted through consistent exposure of vulnerability shared (albeit not equally) by other-than-humans and humans alike.

In *Human Animals*, Smith tells the story of a community in which an unnamed viral disease is (allegedly) observed in animals. Fearing that it might spread to the human population, the authorities initially start exterminating the local wildlife (pigeon and foxes to begin with, then "anything with four legs or two wings," Smith 74) and subsequently impose an increasingly severe lockdown (escalating from curfews to closing schools and banks, enclosing the allegedly contaminated area with barbed wire, cutting off phones and the internet to curb protests, and black-outs). While the detrimental effects of the situation for the human protagonists of the play are clear to see, the majority of the characters are initially ready to support animal extermination policies as a precaution intended to protect human lives.

Smith shows how their actions are motivated by human exceptionalism. When one of the characters, a young woman called Alex, voices her indignation about the policy of burning local parks in order to exterminate foxes and destroy their habitats, her mother, Nancy, insists that the authorities have the right to "do whatever they want if it makes people safe" (Smith 25). Similarly, early in the play, another young woman, Lisa, expresses her anger at her partner Jamie for taking in an injured pigeon to nurse it back to health. Afraid that the animal can be contaminated with the unnamed infection and consequently pass it on to them, Lisa is not moved by the suffering of the bird whom Jamie describes as "life-and-death fragile" and likely to die if left on its own; moreover, she is convinced that her partner only cares for the bird in lieu of a human more worthy of his protection: if she were pregnant, she says, he would not be "as fussed about a pigeon with a fucked wing" (Smith 21). Si, a manager in a company selling chemicals, is comfortable with killing animal populations despite scant evidence that these measures really protect human health. Asked if the chemicals sprayed around the area are "actually killing whatever this thing is," Si answers: "All I know is that it makes people feel safe" (Smith 46). Even John, who appears slightly more sensitive, reveals that he only counts human lives as grievable when asked about the number of casualties. When Nancy wants to know "How many have died?" he makes it evident that, for him, only human deaths are worth registering: "People? I don't know" (Smith 65).

Yet humans and other-than-humans in the play are depicted as vulnerable to the same dangers. While some of the circulated information concerning the allegedly contagious infection is clearly propaganda or paranoia ("They say you can get it just by looking at a fox now," Smith 36), both humans and other-than-humans are shown as sickening and suffering throughout the play – coughing, rotting, and dying. Although Smith's play predates the Covid-19 pandemic, it shows clearly

that in today's world humans and other-than-humans can be subject to the same viral infections passed on from one organism to another.[10]

The same is revealed to be true when it comes to vulnerability to the mechanisms of oppression: while at first the authorities target only nonhuman populations, their threatening actions soon spread to encompass humans; for instance, when John returns home only to find his house burned to the ground (allegedly to contain the spread of the infection after birds had been seen sitting on his roof), his loss of "habitat" mirrors the plea of the foxes when the parks were burned. Early in the play, few characters have enough foresight to realise where all of this may lead, but eventually they become aware that human extinction is the natural consequence of other-than-human extinctions: "First they kill the birds, then the foxes and next it will be us. […] And no one will notice or care, just like no one cared about the birds" (Smith 81).

This is not to say that there is no resistance of any kind on the part of the humans. Jamie is the character in the play who becomes involved in countering extinction. At first, he engages in activities that could be considered as attempts at conservation and rewilding,[11] such as hiding non-human animals and their eggs from extermination units. It is evident that he is motivated by a desire to overcome human exceptionalism and acknowledge all species' shared status as inhabitants of the planet:

> In the shed I've got healthy foxes and in the wheelie bin – hedgehogs and shrews and in the eaves of the attic – pigeons, sparrows and magpies. I've got healthy animals. I'm trying to breed those birds. I'll release them when all of this has passed. It's their world too. (Smith 78)

Later in the play, Jamie's actions become more extreme, verging on grotesque: as his bitten hand begins to fester and rot, he offers it as food for the foxes when they come hungry at night. While this is an undisputedly disturbing image, my argument is that Jamie's attitude can be interpreted metaphorically, as an attempt to restore natural life-death cycles and to stop extinction by replacing it with natural death. The aforementioned opposition is clearly outlined in extinction studies scholarship, which differentiates between death and extinction based on death's capacity for feeding into life.[12]

As van Dooren (2014) points out, the disruption of food chains is one of the most common examples of species extinction impacting "entangled [multispecies] communities of the living and the dead" (45). Based on the example of the disappearance of wild vultures in India (poisoned by diclofenac, a drug used to treat cattle), which results in the spread of deadly diseases amongst human populations (in the past, necrophagous vultures consumed bovine carcasses, left to decompose freely since Hindus do not eat cows, thus hindering the spread of contamination and disease), van Dooren (2014) shows how the loss of one species may have "haunting

future possibilities for a host of living beings" (46), resulting in "amplified death" (60). Van Dooren (2014) proposes the term "double death" to indicate death that does not feed into existing entangled ecosystems and thus "cannot be twisted back into life" (54).

Since, as van Dooren (2014) explains, "eating is […] one of the most important ways in which the dead are woven into the lives of the living" (45), it can be argued that Jamie's decision to turn his rotting, most likely dying (since he does not seek any medical assistance despite clearly succumbing to gangrene) flesh into sustenance for the foxes is an attempt to reverse "double death" and reestablish a multispecies community in which patterns of life and death support and sustain interspecies survival. It can also be viewed as a chivalric act of prioritising another species' survival over his own and thus redressing the common extinction narrative in which humans are presented as agents of destruction and "monsters to be feared."[13]

A similar awareness of humans and other-than-humans' shared vulnerability to political and environmental pressures can be found in the remaining three plays discussed in this article. De Angelis' *Extinct*, for instance, includes a story of a village in Bangladesh flooded due to anthropogenic climate change. In the village, all entangled life forms are impacted in the aftermath of the flood and food chains are effectively disrupted. The trees that formerly supplied the villagers with fruit are uprooted by the wind; fresh water is contaminated with sea water pushed up the river and local fish do not survive. Abani, a young woman who narrates the story, explains that in consequence, the food that local people grew and harvested "was not like before" (De Angelis 335). Malnourished and exposed to contaminated water, pregnant Abani miscarries. Abani's account makes it evident that both humans and other-than-humans in the Bangladeshi village are exposed to the detrimental impact of environmental degradation.

What is more, the temporal frame used by De Angelis in her play (the tragedy of the Bangladeshi village has already taken place and is reported in the present, while Europeans' struggle for survival in an apocalyptic environment is presented as a "future nightmare") underscores that while extinction threatens all the planetary ecosystems, not everybody is impacted in equal measure and at equal pace. As Sodikoff points out, extinction "has uneven velocity and intensity," with some ecosystems (such as rainforests) and some communities (such as indigenous peoples depending on their resources) being "especially prone to extinction disaster" (7).

These mechanisms, which could be broadly described as political, social, and economic drivers of extinction, are brought to the fore in extinction plays. In *A Play for the Living in a Time of Extinction*, Hall clearly states that human societies' readiness to identify certain groups as not grievable cannot be considered as distinct from biodiversity loss, since the two phenomena are inextricably linked:

some beings,
some communities,

some ecosystems,
could be reduced to collateral damage,
could be reduced to
"sacrifice zones" –
[…] and we can't separate any of this
from the story of the more than two-thirds of wildlife disappearing because nothing
on Earth is separate. (Hall 37–38)

The same connection between human and other-than-human mass death rooted in the refusal of grievability to certain groups and species is made in Bush's ~~Not~~ *the End of the World*:

> Approximately one hundred million Indigenous people have been killed or died early between 1492 and today. […] For centuries Black bodies, brown bodies, poor bodies pile up and nobody bats an eye because it's what we expect those bodies to do. Born to suffer. Good for nothing else. But ninety-five percent [of all Indigenous people]! Surely there comes a time? There's a statistic – do you know it? – about the oceans: at one-point-five degrees of warming, ninety percent of all coral dies. […] I am telling you that mass destruction is nothing new. (305–306)

As Bush argues in her play, there is a direct link between mass death, colonialism, and considering (human and other-than-human) lives as ungrievable; furthermore, "mass destruction" is driven by the same factors, regardless whether it impacts coral or disenfranchised human populations. The strong association between colonialism and extinction has been widely discussed in extinction studies research. As Dawson points out, European colonisation of overseas territories "dramatically augmented processes of environmental degradation and extinction" (42). Significantly, colonial stories of extinction are invariably those of both human and other-than-human mass death. In her book, Dawson (45) cites many such stories of humanimal extinction rooted in colonialism and capitalism: of European settlers hunting New World beavers "to the brink of extinction" and then massacring Native American populations as well as colonisers' mass killing the bison in "a calculated military strategy designed to deprive Native Americans of the environmental resources on which they depended" (Dawson 58), of whaling industry depleting whale populations and consequently impacting the Inuits and the Basques (Dawson 54), and finally of using extinction as a tool of war and conquest, as was the case during the Vietnam War, when pesticides were mass sprayed on the tropical forest in order to destroy life support chains of the revolutionary Vietnamese forces (Dawson 59). Aside from such premeditated acts of extermination, Dawson argues, "vast numbers of people, plants, and animals are being sacrificed as collateral damage in the ecocidal exploitation of the planet" (63). By acknowledging both readiness to sacrifice human and other-than-human lives to capitalist and political expansion, and the

extermination of humans and nonhumans caused by colonialism, extinction plays consistently expose interspecies vulnerability.

3. Interspecies Temporalities of Life and Extinction

Time is a crucial dimension in extinction narratives. As de Vos demonstrates, "[n]otions of extinction are associated with a loss of time" (187). Consequently, any attempts to imaginatively counter extinction must rely, as Rose, van Dooren, and Chrulew argue, on "creative attempts to produce new ways of understanding and relating to time, of measuring and counting time, of taking time – ours and theirs" (10). Extinction plays offer multiple attempts at reconfiguring temporalities, drawing attention to more-than-human entanglements and shared modes of embodiment through their representation of interspecies temporalities of life and extinction. Time is shared as interspecies timelines overlap but also these timelines are contrasted as different species experience temporality in diverse ways. For instance, Bush repeatedly frames the average lifespan of a human within that of other living beings. First, she juxtaposes it with the lifespans of various other-than-human animals:

> The average life expectancy of a human being is seventy-two-point-six years as of 2019. This is the global average. This is ten or twenty years shorter than that of a blue whale, two to three hundred years shorter than the Greenland shark […], infinitely shorter than that of the *Turritopsis dohrnii*, also known as the immortal jellyfish […]. Seventy-two-point-six years is approximately half the lifespan of the world's oldest known lobster. (Bush 283)

In this speech, the focus is redirected from humans as individuals towards humans as a species, underlining their status as "creatures bound by species-being" (Sodikoff); in addition, humans are represented as one species among many. Moreover, the selection of species for this comparison is designed to create an impression of humans' relatively minor strength, longevity, and significance, which effectively subverts the assumed hierarchy of species importance in which the human is considered as the "paragon of animals." Contrasted either with the blue whale, an animal roughly 1,500 times bigger in size, or with species with much longer lifespans, the human is shown as a creature vulnerable to extinction as much as any other living being. The impression is heightened by contrasting the human lifespan with that of species such as jellyfish or lobster, which are not examples of "charismatic megafauna" and are seldom regarded as sentient beings – and yet their lifespans are significantly, if not infinitely, longer than that of humans. This impression of humans' ephemeral status is reinforced later in the play, where Bush contrasts the length of human life with that of trees:

Imagine a tree. Imagine your family tree. […] Imagine an oak, perhaps. […] The oldest tree – the oldest single tree that we know of – is around ten thousand years old. Roughly the same age as the invention of the wheel. A baby, compared to the oldest tree colony. […] [I]t colonised North America long before *Homo sapiens* did, before clothes, before language, before tools. […] A thousand human lifetimes ago a seed takes root. And there it is. And there we are. (291–292)

Here, the temporal contrast is not only greater, but it is also highlighted through parallels. The suggestion to imagine a single tree, such as an oak, against a (human) family tree immediately conveys an impression of multiple human lifetimes comprised within one arboreal lifespan; further, the playwright foregrounds the immense temporal disparity by juxtaposing the lifespan of a single tree with the entire history of human civilisation, or a "thousand human lifetimes" – a number so immense that it is hard to imagine. Contrasting human and arboreal time used as a literary device, in works such as Annie Proulx's *Barskins* (2016) or Richard Powers' *The Overstory* (2018), has proven effective in "lend[ing] a certain humility to the temporal span of human existence" (Edensor, Head, and Kothari 256), but as DeLuca points out, through representing human temporality as "human quick-time," it may also result in portraying humans as "temporary" (DeLuca n.p.) and thus potentially vulnerable to extinction.

A different approach to temporality is applied in *A Play for the Living in a Time of Extinction*. Here, the human lifespan is used as a reference for estimating the pace of extinction as the protagonist first measures it against her mother's lifetime ("In my mother's lifetime we have lost – the Earth has lost – more than two-thirds of its wildlife," Hall 34) and subsequently uses her own lifetime as reference:

I tried to compile a list of species that have gone extinct during my lifetime […].
Aldabra Brush-Warbler, declared extinct 1994
Saudi Gazelle, declared extinct 1994
Kauai Oo, declared extinct 2000
Mount Glorious Torrent Frog, declared extinct 2002
Cyanea Dolipochoda, […] declared extinct 2003
Golden Toad, declared extinct 2004
Eiao Monarch, declared extinct 2006
Pinta Giant Tortoise, declared extinct 2012
Christmas Island Pipistrelle, declared extinct 2016
Splendid Poison Frog, declared extinct 2018 (Hall 44)

The effect produced by this enumeration amounts to anchoring specific other-than-human extinctions in time in a relevant, meaningful way and depicting the fast pace of the mass extinction of species. Moreover, it imposes the sense of interspecies entanglement, as the lives of multiple species are presented as overlapping with

that of a human. There is something almost ritualistic in the recital of individual names, presenting all of these lost species as worthy of commemoration. According to Butler, naming the dead is one of the practices that help to expand the narrow boundaries of grievability, since once the departed are named, they stand apart from an undistinctive mass of nameless casualties: "[i]f there were to be an obituary, there would have had to have been a life, a life worth noting, a life worth valuing and preserving, a life that qualifies for recognition" (Butler 34).

Finally, Hall's arguably most effective attempt at temporally framing extinction is achieved through the use of the performance time: as the protagonist reveals at the beginning of the play, while it is enacted, the mother of her friend and fellow performer Zoe, Evelyn Martinez-Goldberg, is dying in hospital. As a result, the performance time supposedly becomes identical with the time of passing of a human individual, and consequently, all the species extinctions incorporated into the play are encompassed within an individual death. The resulting enmeshment of species and individual passing reinforces the idea of multispecies entanglement and shared reality of extinction, echoing the aforementioned conviction of cultural extinction scholars that collective death is always "pieced together out of the deaths of countless individual organisms" (Rose, van Dooren, and Chrulew 8).

4. Interspecies Mourning as a Means of Expanding Grievability

All the extinction plays discussed here address the issues of dominant hierarchies of grief and the denial of grievability to certain lives, human and other-than-human alike. Bush's play, for instance, presents characters struggling to come to terms with the death of two women academics and activists, and the argument concerning the exceptional status of certain passings is repeated in the text: "When someone of her stature passes away it can't just be ignored. It has an impact. It reverberates throughout the community" (Bush 287); "When a great man dies – whenever a great man dies – there is always a reckoning" (Bush 269). This is contrasted with the passage quoted above, in which one of the characters comments on the ungrievability of Indigenous and Black lives as the reason behind mass extermination.

In Smith's play, in turn, much is said about the ungrievability of other-than-human lives. First of all, the mass killing of animals begins by targeting local pigeons and foxes – in other words, species that fit van Dooren's (2019) definition of "unwelcome" animals: those that share habitats with humans and are considered pests (see also Cowan 2021). Such a perspective not only reinforces human exceptionalism, presenting humans as "the hosts and others, permanently, guests in our space, by our grace" (van Dooren 2019, 119), but also suggests the ungrievability of unwelcome species. As Smith makes evident, the assumption that the lives of "unwelcome" animals are ungrievable means that exterminating them will be more easily accepted by the public. In *Human Animals*, this approach is voiced by Si,

who answers the question of how many foxes will have to be killed by evoking the species' "unwelcome" status, as if this were a legitimate factor for refusing them the right to live: "All of them [will be exterminated]. No one likes foxes anyway" (Smith 52). Smith also points out that the existing hierarchies of grievability are complex and cannot always be reduced to the simple distinction between humans and other-than-humans. Some animal lives are considered more grievable than others: one character comments on this issue when everybody is grieved by the news of a dolphin that injures itself in an aquarium and has to be euthanised: "Funny that it's a pity when a dolphin is to be killed but not when it's a fox" (Smith 83).

A blurry distinction between the perceived grievability of human and other-than-human lives is exposed early in the play when Jamie confronts his partner Lisa with the well-known ethical puzzle: if there are four adults and a dog in mortal danger, and their only means of escape is a boat that would only hold four, who should be saved? Adding details to the story likely to complicate judgement ("What if three of them were in the Nazi Party, and one was a paedophile? And the dog was a Labrador," Smith 12), the playwright reveals and questions anthropocentric bias, exposing the hierarchy of grievability as arbitrary.

Finally, Jamie makes an attempt to rectify that hierarchy by willingly ascribing grievability to a dead fox. When he decides to bury the animal in his and Lisa's garden, his partner is furious, but Jamie explains: "I was trying to be respectful" (14). Further, Jamie speculates that the fox might have felt attachment to that plot of land, which may have been his "ancestral" land, until humans came and took it over: "I mean I would say he has a right to be buried there, on his great-grand-father's father's land, on his ancestors' land" (Smith 14). By evoking (human) values such as ancestry and tradition, Jamie seeks to reframe the fox's death from an elimination of an unwelcome animal, or a pest, to a grievable passing which merits respect and proper mourning. Consequently, he uses mourning as a means of transformation, as Butler suggests, and a pretext for reassessment of species hierarchies. Acknowledging the fox's life as grievable, Jamie uses mourning as an opportunity to "pull us and others back into connectivity" (Rose 2011, 95) and to shift the perception of the entire species from an unwelcome pest to a fellow creature whose life is entangled with his own in multiple meaningful ways.

Another important grief-related theme tackled in Smith's play is mourning as an interspecies experience. Nancy, who is deeply grieving after the death of her husband, confesses to a friend that she has been eating her cat's medication to help herself cope. As it turns out, the cat, Mr Marmalade, had been prescribed Prozac for his grief, since he was so deeply affected. Both Nancy and Mr Marmalade are mourning the death of the same person, and for both of them, it is a profound and difficult emotional experience. Moreover, both can rely on the same medication to get through the process more easily. By showing this example of mourning *with*, Smith presents grief as a universal, interspecies experience and a way of contesting human exceptionalism. The playwright's approach can be viewed as mirroring

that of cultural extinction scholars, especially the aforementioned works by van Dooren and Rose on the grief practices of birds, similarly drawing attention to the interspecies experience of mourning.

The theme of grief is most visible, however, in *A Play for the Living in a Time of Extinction*. The play is written as if a planned performance was interrupted by an unexpected passing: the sole character, Naomi, explains that it was designed as a more elaborate performance for two actors, but at the last minute her friend and colleague Zoe was summoned to hospital to accompany her mother, who is unexpectedly dying. The passing of Zoe's mother becomes the focal point for the play and a means of making mourning tangible for the audience. For this reason, Naomi makes sure to describe the dying woman in as much detail as possible: we learn that her name is Evelyn Martinez-Goldberg and she is fifty-nine years old (14); further, we are informed about her relationships, kind personality, and appearance:

> Evelyn Martinez-Goldberg,
>
> mother of my best friend Zoe,
>
> who has brown hair
>
> and green eyes,
>
> who has three children
>
> and one ex-husband with whom she is on extremely good terms,
>
> […] who sent me a special note of condolence
>
> when my Grandfather Jimmy died (Hall 48)

Hall makes sure that the spectators have a very vivid picture of Evelyn and thus becomes emotionally invested in her last hours on earth. Arguably, this treatment of Evelyn closely resembles the typical presentation of "endlings" (see de Vos) – animals considered as the last of their species and thus perceived as "iconic" (Limb). Like Evelyn Martinez-Goldberg, endlings – among them the famous Martha the passenger pigeon, Benjamin the Tasmanian Tiger, Lonesome George the giant Galápagos tortoise, or Toughie the Rabbs' fringe-limbed tree frog – are typically known by name as well as species, and their passing is noted with both precision (like Martha's death on September 1, 1914, 1 p.m. at the Cincinnati Zoo in Ohio, at twenty-nine years old) and nostalgia. The moment of an endling's death is frequently romanticised, as in Despret's essay on the extinction of the passenger pigeon: "I imagine that she, Martha, must have closed her eyes, tranquil" (217), with a view of triggering an emotional response. At the same time, as de Vos explains, an endling "provides a singular body and a singular moment" (190), which can be used to make the reality of extinction tangible. As Hall writes in her play, "One death is not an extinction. But it can be part of extinction" (41). In the closing part of the play, Evelyn's human death is used as a means of incorporating humans into the narrative of the sixth extinction:

Evelyn Martinez-Goldberg,
and all of the beings dying around you:
the bats and the frogs and the fish and the trees and the reefs and the bugs and the
birds and the people –
[…]
I wish you good deaths
[...]
and in the meantime –
–
I wish you the peace
to see these deaths
these hundreds and thousands and millions of deaths,
all of this death
as part of our own. (Hall 50)

Evelyn's death is framed in the same story of extinctions as the disappearance of other-than-human species, as part of the same story with "the apocalypse of the Golden Toad, and the demise of coral, and the collapse of the rainforest" (Hall 17). But most significantly, through Evelyn's humanity, Hall encourages the audience to overcome human exceptionalism and to become emotionally involved in the sixth extinction, acknowledging their own entanglement in its interspecies reality. As van Dooren (2014) insists, narrating extinctions should involve "add[ing] flesh to the bones of the dead and dying" with a view of giving them "some vitality, presence" (8). As Evelyn Martinez-Goldberg becomes a felt presence in her absence, her affinity with "all of the beings dying around her" – and consequently, around us – becomes a vivid reality. Accordingly, the undisputed grievability of Evelyn's life is effectively expanded to encompass the "hundreds and thousands and millions of deaths" constituting the mass extinction.

5. Conclusion: Performing Extinction as an Act of Interspecies Mourning

As this discussion has shown, extinction plays extensively comment on notions of grievability in the context of extinction. By representing humans' and other-than-humans' shared vulnerability to biological hazards, as well as to the political structures of oppression that can be considered as drivers of extinction, they invite audiences to reassess their notions of grievable life and to reconsider their own involvement in the processes of extinction. In their readiness to expose entangled interspecies temporalities in ways that encourage audiences to acknowledge our own temporal modes of "species-being," these playwrights provide relevant timeframes that help us to understand and acknowledge the realities of mass extinction, and also to reject human exceptionalism. Finally, by depicting

ways of acknowledging the grievability of other-than-human beings through inter-species practices of mourning, including *mourning with* other species, extinction plays offer a depiction of reality governed by posthuman ethics, in which anthro-pocentric hierarchies of grievability are reworked.

By practices such as presenting a human individual using the modes of rep-resentation typically ascribed to other-than-human endlings, extinction plays not only encourage audiences to regard an individual death as part of extinction, but also offer new imaginary frames for recognising "all of this death as part of our own." The playwrights effectively use the theme of mourning in order to foster the audience's emotional investment in ongoing mass extinction; furthermore, they propose expanding notions of grievability as a way of reassessing our living entanglements and interdependencies. As extinction scholars insist, the aim of investigating extinction is not to evaluate any past or future losses; rather, "extinc-tion asks us to consider what kind of relationships we want to cultivate in this place at this time" (van Dooren 2018, 178). The same objective seems to be undertaken in extinction plays, as the playwrights ask spectators to recognise interspecies entan-glement as an inherent condition of any life: "We are a web, a maze, a labyrinth with a billion different ways through it. No single start or end point, just a mesh, a criss-cross jumble of wires going every which way" (Bush 292).

Furthermore, it can be argued that extinction plays explore the possibilities offered by the medium of theatre for advancing posthuman ethics. First, they allow the audience to inhabit the reality of extinction not only through emotional investment in the plea of the characters, but also, occasionally, through enactment and impersonation practices. For instance, in *A Play for the Living in a Time of Extinction*, the protagonist asks the audience first to impersonate other-than-human organisms populating the planet in the epoch predating the first mass extinction, and then to act out their disappearance: "*NAOMI instructs the critters to die*" (Hall 26). By allowing the spectators to embody extinction, the playwright incorporates them into the realm of tangible potentialities.

Another feature of theatre explored by extinction playwrights is its communal character. As Butler explains, the norm dictating whose life is considered grievable is most effectively produced and reinforced by "acts of permissible and celebrated public grieving" (37). As a theatre performance is a communal experience, shared by performers and audiences alike, extinction plays have an additional dimension that can be used for legitimising posthuman ethics, one which is much harder to achieve, for instance, in written narratives of extinction, typically accessed in iso-lation by individual readers.

Finally, theatre is a deeply temporal medium, a feature shared by the cultural practices of mourning, defined by extinction scholars as readiness to "spend a little time with the dead" (van Dooren and Rose 377). Arguably, sharing time together as the audience of an extinction play can be likened to the experience of sitting at a wake, viewed as "a gathering, a pause to reflect in the presence of death."

As extinction scholars insist, a wake is "an opportunity to grieve and to learn," but also to "celebrate a life and to move forward *well* with those who remain" (van Dooren 2019, 6–7, original emphasis) – as such, extinction plays can be interpreted as an encouragement to reassess current hierarchies of grievability and advance posthuman ethics with a view to changing our ways of sharing the planet with other species in order to stop future extinctions from taking place.

Ultimately, the theatre of extinction can be viewed as one of the most compelling cultural practices addressing the current mass extinction, informed by extinction criticism and complementary to parallel practices developed in other areas of art, such as practices of monumentalisation employed in art installations, in which a monument, statue, or memorial plaque may become "a physical manifestation of human remembrance of a species reduced to none" (Jørgensen 184), or interdisciplinary projects such as the MEMO project, combining exhibition and educational practices (MEMO). By foregrounding interspecies entanglements and more-than-human practices of mourning, extinction plays can be viewed as a form of cultural production deeply committed to advancing posthuman ethics.

Notes

1   Defined as a research field "with a particular focus on understanding and responding to processes of collective death, where not just individual organisms, but entire ways and forms of life, are at stake" (Rose, van Dooren, and Chrulew 5).

2   Driven by factors including "the destruction of habitat, the promulgation of introduced species, direct exploitation and hunting, the indiscriminate introduction of a range of new chemicals and toxins, and now increasingly the various impacts of climate change" (van Dooren 2014: 6).

3   "[The face of the other] is the other before death, looking through and exposing death. Secondly, the face is the other who asks me not to let him die alone" (Lévinas and Kearney 1986: 24).

4   On expanding Levinas' anthropocentric ethics to encompass other-than-humans see Atterton and Wright 2019.

5   As Thomas Attig (2011) explains in his book *How We Grieve*, experiencing mourning is essentially an act of "assuming a new orientation to the world." According to Attig, in the process of mourning "we adjust emotional and other psychological responses and postures. We transform habits, motivations, and behaviors. We find new ways to meet biological needs. We reshape our interactions and connections with others" (107).

6   On expanding Butler's argument to include other-than-human animals see Taylor 2008.

7   This attitude is contested in current animal studies research, see e.g. Heinrich 2012.

8   "Life on earth has often been disturbed by terrible events […]. [L]iving organisms without number have been the victims of these catastrophe [sic] […]. [T]heir races are even finished forever, and all they leave behind is some debris" (Kolbert qtd. in Smith 3).

9   As some extinction scholars point out, extinction narratives focused on humans as drivers of extinction for other species, though seemingly self-critical, often effectively reinforce human self-perception as a powerful, "world-forming and world-destroying" species (Chrulew and de Vos 2018: 182).

10   For a wider discussion of the theme of cross-species contagion and zoontic disease in *Human Animals* see Cowan 2021.

11   For a discussion of rewilding and "de-extinction" practices see e.g. Heise 2016; van Dooren and Rose 2017.

12   See Rose (2011): "In ordinary life, death is the necessary completion of life. Man-made mass death is not necessary and does not complete life. Instead it is a massive interruption, a negation of the relationships between life and death" (82).

13   As Sodikoff puts it, "From the viewpoint of, say, an Egyptian Barbary sheep (Ammotragus lervia ornata), a Guam rail (Gallirallus owstoni), or a member of any number of species that have gone extinct in the wild, humans are the monsters to be feared" (2).

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Storytelling in the Conservation of Endangered Species: The Case of Snow Leopard Conservancy

Abstract: This article explores the use of storytelling as a method for protecting endangered species, with the Snow Leopard Conservancy as a case study. It critiques the limitations of a linear, scientific approach to conservation, drawing on Joshua P. Howe's analysis of the intersection of science and politics. Using Donna Haraway's S-F concept and Thomas Berry's vision of an ecozoic epoch, the paper argues that storytelling can drive meaningful environmental change. The Conservancy, which works with local Indigenous Cultural Practitioners to reframe snow leopards' role in spiritual traditions, exemplifies how integrating local knowledge and narratives can reshape attitudes toward wildlife conservation. The study highlights storytelling's potential to foster broader ecological understanding and influence conservation efforts.

Keywords: Snow Leopard, storytelling, ecozoic, conservation, Anthropocene, indigenous culture

1. Introduction

The last half of the 20th century and the beginning of the 21st century have been a time of broadening knowledge about environmental threats. The spread of ecological movements in the 1960s, publications such as *Silent Spring* (1962) by Rachel Carson or *Whole Earth Catalogue* (1968) by Stewart Brand, as well as the reports of the Club of Rome and numerous intellectual gatherings (the UN

Conference in Stockholm in 1972 or the Earth Summit in Rio de Janeiro in 1992) marked key moments of growing ecological awareness. A significant initiative in understanding the human-environment relationship was the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations Environment Programme and the World Meteorological Organisation in 1988. The main goal of the IPCC is to assess the state of scientific knowledge on climate change and to inform policymakers and societies about possible strategies to counteract these changes. Since its inception, the IPCC has published over 30 reports, including six major ones, known as Assessment Reports. It is worth noting that each IPCC report methodically analyses vast amounts of scientific data and articles published in peer-reviewed scientific journals. The latest, sixth report was created by 721 scientists based on the analysis of over 1400 scientific articles (2023 Impact Report).

Observing the dynamics of emerging research on the human-environment relationship, one can notice not only a significant increase in the amount of scientific information but also growing certainty about its reliability. For example, thanks to systematically conducted meta-analyses on the anthropogenic nature of global warming, we know that the thesis of climate change caused by humans is not a scientific controversy but a scientific fact (cf. Cook et al. 1). It is also worth noting that since the mid-1990s a new paradigm in natural sciences, known as Earth System Science, has been formulated. We know that human activity unprecedentedly destabilises the functioning of our planet (cf. Hamilton 13-14). As a species, we not only impact local ecosystems by polluting rivers, destroying landscapes, and cutting down forests, but we also negatively affect the planet as a whole. Summarising research conducted in the field of Earth System Science, Ewa Bińczyk writes that

> humanity is making dangerous, simultaneous modifications to many key planetary parameters. Data indicate that so-called planetary boundaries have been crossed, particularly due to climate change, soil degradation, ocean acidification, disruption of Earth's biogeochemical cycles (i.e., nitrogen and phosphorus cycles), and the rate of biodiversity loss (the so-called sixth mass extinction). (12)

This article uses the example of the Snow Leopard Conservancy to discuss the role of storytelling in helping to protect endangered species. Starting from an overview of the current relationships between knowledge and power in the context of the ongoing extinction and with limited possibilities for taking up action, we turn to the work of Thomas Berry and Donna Haraway to argue for the potential of storytelling to foster broader ecological understanding and influence conservation efforts. The article concludes by describing the present efforts of protecting snow leopards and highlighting the importance of grounded, local knowledge systems.

2. Stagnation, Knowledge, and (In)action

Despite the above-mentioned abundance of scientific data on the negative impact of human activities on natural surroundings, environmental reflection recognises the problem of the inability to take pro-ecological actions. This applies both to the collective dimension – nation states stick to established paths and do not shift their economies to a low-emission mode; they do not implement numerous international agreements such as the Kyoto Protocol, Copenhagen Protocol, or the Paris Agreement (Bińczyk 47–58); and, as for the individual dimension, support for pro-ecological actions does not reflect the scale of the challenges currently facing societies. In this context, many authors speak of stagnation, passivism, climate impasse, inaction, and the continuation of business-as-usual policies. The collision of abundant scientific data on the one hand, with the passivity of pro-ecological actions on the other, provokes the naming of the 21st century as a time of irrationalism (Bińczyk 51) or the Age of Twilight. This term, proposed by Naomi Oreskes and Erik M. Conway in their 2014 book *The Collapse of Western Civilization*, ironically refers to the hopes associated with the Age of Enlightenment, expressed in the belief that by following the light of reason, humanity would create a better world.

The belief in a strong connection between empirical research of natural reality and the ability to transform the world appeared at the end of the 16th century in the writings of Francis Bacon. In the famous phrase "knowledge is power" (*Scientia potentia est*), Bacon expressed the postulate of studying nature to achieve concrete, practical effects. This approach was widely accepted within Western culture, for which the development of natural sciences was strongly associated with practical benefits: technological systems, innovations in chemistry, biology, agriculture, and medicine are the results of the so-called success of laboratories, i.e., the ability to manipulate elements of the external world enabled by the development of natural sciences. However, due to growing environmental problems and the passivity of societies, it has become clear that science (especially in the case of natural sciences) does not have the power to change the world. It is precisely in this vein that Oreskes and Conway claim the opposite: while referring to the situation in which societies fail to take sufficient action despite possessing knowledge about the destructive effects of destabilising the planetary ecological system due to greenhouse gases emissions and the destruction of biodiversity, they state that knowledge is not power (2).

The sense of disappointment and lost hopes placed in the natural sciences leads some scholars to turn to the humanities as a remedy for the climate and biodiversity crisis. It is within the humanities and social sciences that the issues related to our desires, goals, and aspirations are truly studied. In a world where almost every aspect of our functioning is related to the use of energy, which translates into the destabilisation of planetary systems, understanding the deeper causes of our behaviour is crucial. On this note, the Swedish historian Sverker Sörlin claims that

Our belief that science alone could deliver us from the planetary quagmire is long dead. For some time, hopes were high for economics and incentive-driven new public management solutions […] It seems this time that our hopes are tied to the humanities. […] in a world where cultural values, political and religious ideas, and deep-seated human behaviors still rule the way people lead their lives, and consume, the idea of environmentally relevant knowledge must change. We cannot dream of sustainability unless we start to pay more attention to the human agents of the planetary pressure that environmental experts are masters at measuring but that they seem unable to prevent. (788)

Similarly, Ursula K. Heise points out the need to redirect our attention to the "soft" dimensions of the climate crisis. She observes that "[w]ithout detailed attention to the political, social, cultural, affective, and rhetorical forms that the climate problem takes in different communities, simple insistence on the scientific facts will often remain politically pointless" (24).

Drawing attention to the potential of the humanistic dimension in efforts to ensure a stable future for our planet is associated with the fundamental question of how nature exists. What emerges in the above-mentioned approaches is the growing awareness that, along with understanding the functioning of the planetary systems, our basic ontological categories, such as nature and culture, must be redefined. The characteristic modern division into two independent spheres of nature and culture is unsustainable in an era where the scale of the human impact on planetary systems is so evident. The distinction between the objective world of material objects, studied by science using quantitative methods, and the subjective world of subjects possessing agency, value systems, and the entire realm of inner experiences, is unsustainable in the Anthropocene. Bruno Latour sees the reasons for our inability to respond to the climate crisis in clinging to this outdated division:

If people are now lost in the face of ecological problems and cannot quickly respond to a situation that everyone knows is catastrophic, it is largely because they still live in the previous world, in a world of objects that have no agency and can be controlled through calculations, through science […]. However, this is not the world we are in now, and that is what I mean when I say that we have found ourselves in a different world. (Latour 25)

In the view presented by Latour – but also by other authors such as Donna Haraway, Isabelle Stengers, and Dipesh Chakrabarty – our planet has a post-natural character. This means that the functioning of the Earth is currently determined both by deterministic processes discovered by natural sciences and by human actions. Therefore, changing the factors on which our actions depend is a key aspect of the functioning of planetary systems. Narratives that convey values are one of the fundamental factors driving our actions. Therefore, they must be modified first. The

philosophical basis for such understanding of relationships between nature and the network of intersubjective meanings can be found in the concept formulated by the American theologian Thomas Berry. A characteristic feature of Berry's thought is the category of the story, a narrative. Berry, like other 20th-century thinkers – e.g., Charles Taylor or Paul Ricœur – attributes a key role to the human ability to tell stories in the process of understanding and transforming reality. Correspondingly, the history of Western civilisation is a history of changing stories. Whether we are dealing with the visions of Saint Augustine of Hippo in *The City of God*, calling for the rejection of worldly concerns and directing our gaze towards the Kingdom of God, or with the modern visions of scientific and technological progress and earthly prosperity, what drives us to action, both at the collective and individual level, are precisely stories. However, since the Industrial Revolution, stories not only set the direction of our civilisation but also transformed the functioning of our planet. Berry notes:

> The issue now is of a much greater order of magnitude, for we have changed in a deleterious manner not simply the structure and functioning of human society: we have changed the very chemistry of the planet, we have altered the biosystems, we have changed the topography and even the geological structure of the planet, structures and functions that have taken hundreds of millions and even billions of years to bring into existence. Such an order of change in its nature and in its order of magnitude has never before entered either into earth history or into human consciousness. (1988, xiii)

Given that the scale of our species' impact on planetary systems has reached critical levels, Berry calls for the transformation of the very foundations of our culture, i.e., the stories that explain the world and our place in it. Since the most fundamental stories are religious narratives, Berry devotes the most attention to them. In his 1996 essay, "An Ecologically Sensitive Spirituality," he writes that "the great spiritual mission of the present is to renew all the traditional religious spiritual traditions in the context of the integral functioning of the biosystems of the planet" (135). Referring to Berry, Elizabeth Allison (161) says that the environmental ills of our time stem from a disconnection between religions that place the locus of value in the transcendent realm, on the one hand, and the specific, material needs of the Earth and its beings, on the other. Combining these two different perspectives – spiritual and ecological – is the beginning of a new story that humanity must formulate if it wants to maintain hope for a stable future for our planet. The problem, however, is that this story cannot be monopolistic – that is, it cannot be one rigid narrative according to which humanity is to act for the stabilisation of planetary systems. Berry writes that the new narrative must be pluralistic – different nations, cultures, and minorities should tell it from their own perspective. Currently, this perspective is increasingly widely shared. For example, Jürgen Renn notes that globalised science, based on international competition and specialisation, and

integrated into the market economic model, proves unsatisfactory in the face of the challenges of the Anthropocene. Above all, the bottom-up, local perspective, which could be used to improve ecosystems, is ignored by global science. The problem, however, is that this way of seeing contemporary environmental challenges, constructed by globalised science, permeates societies. Ultimately, it turns out that local communities, instead of using their own traditions, try to solve environmental problems based on a globalised model that claims universality. Renn writes:

> The ensuing globalization of science tends to replace reflection with competitiveness and to downplay the role of specific contexts and local knowledge in favor of principles of science organization that are assumed to be of global and even universal validity. Yet it is through this perspective that most societies have come to view their problems, often disregarding the potential inherent in their own particular traditions or in opportunities for adapting those principles – opportunities that sometimes only come with a decoupling from global trends and adapting science policy to local conditions. (8)

Renn's and Berry's reflections on the necessity of seeking multiple stories to address the Anthropocene do not exclude the possibility of referring to a single conceptual framework. Many Anthropocene researchers point out that such a framework could be the concept of degrowth. However, for local communities to identify with a given story, it should have a local source. Combining these two requirements could be one of the main challenges of storytelling in the Anthropocene era.

3. Storytelling

In "The New Story," Berry claims, "It's all a question of story. We are in trouble just now because we do not have a good story [...] The Old Story sustains us for a long time [...] It did not make men good" (2003, 77). As an advocate for the ecozoic, a future period where humanity lives in harmony with the Earth, Berry envisions a time when humanity creatively reorients toward the natural world, with storytelling offering an alternative to scientific approaches to environmental crises, such as mass extinction. Human activity has historically driven five mass extinctions, defined by the loss of over 75% of species in short geological periods (Barnosky et al. 51). Biologists warn of a sixth, in which storytelling could reshape public responses (Castricano 125; Malecki et al. 846).

The "new story" calls for a perspective that views Earth's processes as the foundation for facing future challenges. As Earth reveals itself "in and through [it]" (Berry 2003, 87), humanity finds renewed "confidence" to co-exist with other species. In this respect, Berry aligns with Haraway, who stresses the need for "inventive practices rather than [...] game-over cynicism" (2018, 102). This

evolutionary view draws on Haraway's SF framework – string figures, science fact, science fiction, speculative feminism, and speculative fabulation (2016, 10) – to guide humanity in confronting the reality of co-perishing with other species on a compromised Earth. Storytelling must evolve into a collaborative effort between humans and nonhumans. This era calls for reimagining life's possibilities, moving beyond traditional narratives. Berry's 'new story' emphasises a reality shaped by Earth's processes, aiming for a truthful alignment between events and their descriptions. Haraway's insight (qtd. in Greenhalgh-Spencer 43) conveys the message that "stories tell stories, thoughts think thoughts, and knots knot knots," reflecting the interconnectedness of species for the Earth's sake. However, she also advises caution about the fact that storytelling needs to consider who owns the narratives and who has access to them, as misrepresentations can undermine efforts to promote planetary responsibility (Haraway 2019, 565). Compelling narratives must be grounded in factual truths to avoid harm because storytelling, as Aline Wiame (525) notes, is a political and heuristic tool that creates an "imbrication of speculation and politics." Echoing Foucault's focus on how epistemologies shape individuals and worldviews, this aligns with Haraway's approach (qtd. in Vint 289). She argues that humanity's political praxis relies on epistemic resources fostering ethical coexistence with other species, challenging human exceptionalism and separateness from nature. Such knowledge engages individuals deeply, as issues such as biodiversity, extinction, and endangered species are not just scientific but entwined with history, values, and the identities of nonmodern cultures (Malecki et al. 846; Heise 5).

Stories bridge diverse perspectives across time. Haraway's reference to Medusa and Gaia as archetypes highlights how these figures unfold in "bumptious temporalities" (102), resonating with multiple meanings. Brian Boyd's *On the Origin of Stories: Evolution, Cognition, and Fiction* (2009) explains how these archetypal divergences are manifestations of the mind's natural inclination for stories and storytelling – a dopamine-driven enjoyment – that fosters communal bonding and epistemic enrichment (Cf. Zipes 152-161). While science remains relevant, it is no longer the sole response to the Anthropocene; actions like reducing carbon footprints are insufficient. Inspired by Pierre Teilhard de Chardin's evolutionary philosophy, Berry expands this view to emphasise a more holistic understanding of human responsibility toward Earth. Berry's concept of the ecozoic era signals the advent of a survival-oriented phase rooted in the redemptive value of reconnecting with one's inherent, inscendent nature. In *Dream of the Earth* (1988), Berry writes: "We must invent, or reinvent, a sustainable human culture by a descent into our pre-rational, our instinctive, resources. Our cultural resources have lost their integrity. They cannot be trusted. What is needed is not transcendence but 'inscendence,' not the brain but the gene" (207).

Human transience calls for intuition, or as David Hinton (125) puts it, a "wild mind, unformed yet inseparable from the wild earth." A genetic cue is required to embrace our primal selves, shifting from intellectual detachment to embodied

experience. Haraway's book *Staying with the Trouble* urges a grounded approach to the damaged Earth, insisting we persist "with" its ailments rather than escape. Brian Swimme's and Thomas Berry's *The Universe Story* supports this by advocating for evolving "transgenetic cultural codings" that reinforce sustainable relationships with Earth (158–159). Indigenous Buryat activists in Siberia embody a "conservation gene" through ancestral ecological knowledge, echoing Berry's cosmology-ecology dynamics (Vasquez, para. 2). The Taoist-Ch'an model of "empty-mind belonging to earth/Tao without any separation, which is love and kinship at the deepest level" reflects kinship with the Earth, as Hinton (101) describes, emphasising love and connection beyond bloodlines, as Haraway also advocates. She argues:

> There can be no environmental justice or ecological reworlding without multispecies environmental justice and that means nurturing and inventing enduring multispecies – human and nonhuman – kindreds. Kin making requires taking the risk of becoming-with new kinds of person-making, generative and experimental categories of kindred, other sorts of 'we', other sorts of 'selves', and unexpected kinds of sympoietic, symchthonic human and nonhuman critters. (Haraway 2018, 102)

This expanded notion of kinship transcends familial ties, redefining kinship as an inclusive, interspecies connection, pushing communal existence beyond isolationist thinking. Haraway suggests that coexistence with the planet's myriad species invites broader ethical obligations. Her conception of kinship, comprised of "florid mechanic, organic, and textual entities with which we share the earth and our flesh" (2004, 1), underscores the careful deliberation needed in addressing environmental injustices, as she posits that these cannot be solely attributed to anthropocentrism. In her view, humans do not act alone; non-human agents, including textual entities, participate in the ongoing remaking of Earth.

Berry, influenced by Teilhard de Chardin, critiqued his optimism that Earth's renewal could be achieved through technological progress alone. Instead, he advocated for a balance between technological aspiration and ecological realism, addressing persistent environmental degradation. This vision speaks to interdisciplinary, holistic storytelling that can forge a deep connection between humans and wildlife, providing a framework for ecological stewardship (Lin and Yuh-Yuh, para. 1). A nuanced treatment of interdisciplinarity must account for the interplay between technological determinism and indigeneity. Excluding technological determinism from discussions of the ecozoic framework undermines the journey back to primal dwelling. Sartre's famous assertion that "existence precedes essence" ripples in Hinton's insight: "rather than being defined by some predetermined and ineluctable human nature constructed by the Western tradition, we are free to define anew our nature and our future at any moment" (127). Haraway's SF-based storytelling facilitates this inscendent epiphany, bringing visionary neologisms to life as "earth stories propose reconfiguring organisms as holobionts to foreground

collective becoming-with" (2019, 565). This method shifts emphasis from individual survival or competition to a model of mutualism and collective survival, underscoring that the welfare of one is intrinsically linked to the well-being of others and of the broader ecosystem. Berry's confidence in this ethos underscores its viability in addressing today's ecological crises.

Responding to environmental threats requires narratives that ritualise mourning and channel collective grief into eco-social transformation. Mourning reinterprets grief as a catalyst for intentional action – a behavior Icek Ajzen sees as deeply influenced by beliefs, attitudes, and personality (99–113). The 'grief imperative' should address the "Great Vanishing," which elucidates our "capacious selves;" hence, the Great Vanishing becomes a "profound teacher of our age" (Hinton 104). Empathy toward extinction geographies stirs a nostalgia for nature, which Jennifer Ladino identifies as sparking movements for social and environmental justice (xiii) – movements shaped by ecocritical agency. Injustice prompting this nostalgic climate created a "lost kingdom," *Animalia*, representing "the theological collapse of transcendence, the foreclosure of a realm beyond the earthly that would seem to […] offer grounding and direction […] to the wayward confusion of quotidian life" (Castricano xiv). Berry's insistence on "inscendence" resonates with Ashlee Cunsolo and Karen Landman's *Mourning Nature: Hope at the Heart of Ecological Grief and Loss,* which advocates for a broadened sense of mourning and ecological ethics that transcend anthropocentric concerns. Acknowledging grief for non-human lives and ecosystems, and expanding what is considered worthy of mourning, transforms ethical and political perspectives, nurturing an ecological reverence that affirms all life forms within the ecosystem.

Such an affirmation of breathing entities requires an attitudinal platform promoting ascetism, which cultivates a deeper sense of interconnectedness. In this context, Charles Batson argues that altruism is an inherent human trait and cautions that the failure to "appreciate its importance has handicapped attempts to understand why we humans act as we do and wherein our happiness lies [and] has also handicapped efforts to promote […] a more caring, humane society" (3). Altruism and cooperation are shaped by communal needs, particularly in pastoral and foraging societies where collaboration is crucial for labor division, managing environmental challenges, and accessing resources. In Mongolia, pastoralists rely on kinship-based groups, or *khot ail*, to share herding tasks and defend territories, key to resource management (Conte, para. 9). In this undertaking, a succinct embodiment of collectivism among herders can be derived, which shapes the altruistic nature of their communal bond.

Religious traditions also emphasise altruism, as seen in the protection of the snow leopard – a spiritual and totemic animal – sightings of which in the high-altitude terrains of Central Asia are extremely rare. It has large, powerful paws that act as natural snowshoes, preventing it from sinking into the snow, and a long, bushy tail that helps maintain balance while navigating lofty landscapes. Its range

spans approximately 772,204 square miles, with 60% of it located in China (World Wildlife Fund, para. 2). As an iconic symbol in the mythology of Central and Eastern Asia, it is often associated with Pari, a goddess who embodies spirituality and purity, and guards the mountainous regions. For the Wakhi people of Pakistan, China, Tajikistan, and Afghanistan, mountain spirits known as *mergichan* are believed to take the form of snow leopards, along with other animals (Knosala 2022a, para. 6). These elusive spirits inhabit remote, rugged mountain areas, where they protect wild sheep and ibex herds. *Mergichan* are regarded as powerful beings the presence of which can either aid or threaten humans, depending on the respect shown toward them. Hunters believe that by honoring these spirits, *mergichan* can lead them to game or warn of dangers such as sudden weather changes. Shamans, on the other hand, view them as intermediaries – particularly when they appear as snow leopards – connecting the human world to the sacred, untouched realm of the mountaintops.

Indigenous knowledge systems, as one scholar believes, are often unfairly dismissed as superstition, but they should be understood as complex and meaningful belief systems that have shaped humanity's relationship with the universe for generations (MacDonald 17). In the foreword to Anthony Nanson's 2011 *Word of Re-enchantment: Storytelling, Myth, and Ecological Desire,* Eric Maddern asserts that narratives, conveyed through the ages and enlivened by the imaginative contributions of storytellers, immortalise truths. Over time, these stories become mythological barnacles on society's cultural fabric, with meanings that endure and thrive (x). This complexity is perhaps mirrored in how all elements of a place converge to form a climate that shapes language, which, for the Gumtj – original inhabitants of North East Arnhem Land in Australia – serves as a primary marker of identity. Their song, *Wuymirri*, honors whales, preserving their worldview and language (cf. Burarrwanga et al., para. 1). Effective conservation strategies must be tailored to the unique cultural and geopolitical contexts of these communities to harness indigenous knowledge fully (Jackson and Wendy 139). The intrinsic link between cultural and ecological diversity underscores the necessity of embedding moral, cultural, and spiritual dimensions into conservation efforts. For example, 336 Tibetan Buddhist monasteries in the Sanjiangyuan region – through patrolling sacred peaks and educating local communities – could protect more snow leopard habitat than the nature reserve's core zones (Li et al. 87; McCarthy and Mallon 2016a, 197). However, it is essential to sensitise oneself to the potential risks of promoting eco-populism or even eco-fascism through spiritual storytelling. A critical distance is essential for a balanced perspective, that is, grounding the discussion in practical, evidence-based approaches to conservation, while also addressing the complexities of spiritual narratives in environmental discourse.

Storytelling shapes reality through cultural practices, with snow leopards seen not just as conservation subjects but as sacred beings integral to indigenous spiritual, cultural, and ecological identities. This guardianship, rooted in cultural

narratives and social, cultural, and religious influences, ensures the intergenerational transfer of values and conservation knowledge. Religious frameworks based on sin/reward binaries remain influential, deeply internalised by institutions. This discourse, however, is not indigeneity speaking for itself. Berry (1987, 1) criticises a return to religious fundamentalism as a "sterile gesture," lacking security. In *Staying with the Trouble*, Haraway advocates for practices that foster a responsive, collective "we," prioritising openness over rigid knowledge systems. This calls for a modern indigeneity that evolves with others, emphasising connection and adaptability over fixed certainties – of which religious fundamentalism is a prominent example. As Elizabeth Ammons notes, "ambiguity and multiplicity have become ends in themselves in much liberal arts scholarship and teaching" (7), which resist universal truths, particularly those rooted in religious frameworks. While religious fundamentalism faces scrutiny for its rigid belief systems, Kate Vannelli et al. argue that communities must recalibrate their views to foster a deeper appreciation of wildlife (180). Snow leopards are not only subjects of conservation but also integral to the cultural traditions that sustain them, creating a holistic conservation approach that blends ancestral knowledge with modern science. Juan Li and Zhi Lu show how religious leaders, like the monks, need to be equipped with the knowledge of conservation (i.e., systematic wildlife observation, monitoring, and recording) and be given the legal right to evict poachers and miners from their religious/ spiritual sites, as well as the mandate to emphasise the value of snow leopards and other wildlife in their congregations (92–93). Their study speaks to the necessary collaboration between monasteries, local governments, and non-governmental conservation organisations for an efficient model, which not only upholds religion as a praxis of helping in the survival of these wild cats but also the means through which such spiritual teachings can be dramatically enforced.

Such a synergistic trajectory opens a new vision for the world – as Haraway states, "Biology is relentlessly historical" (2004, 2), and this history, in which religion and indigeneity shape cultural consciousness, intersects with biology to offer a perspective that amplifies "what has been" to engage with "what is" and "what will be" in the ecozoic blueprint. Storytelling, then, becomes essential for biocultural guardianship, allowing communities to reconnect with traditional values while adapting to contemporary conservation challenges. For Haraway, there is a marker of an attitude heralding what she calls Chthulucene: "a simple word […] of two Greek roots (*khthon* and *kainos*) that together name a kind of timeplace for learning to stay in trouble of living and dying in response-ability on a damaged earth" (2016, 4). Such an epoch envisions human and nonhuman lives being intertwined. Another layer of consciousness emerges, aimed at cultivating a more active and creative form of sensitisation, which Darla Hillard et al. see as the immanent purpose of Environmental Education (EE) to make us "move beyond passive curricula" where "time and collective power" are very much needed (245). This adaptive creativity is emblematic of homo sapiens, who, as Hinton suggests, "speciated" due to

our capacity to adapt to rapidly changing conditions (106). Within this paradigm, conservation professionals, as Wouter De Groot and Natascha Zwaal argue, must develop "a methodological repertoire" that is both structurally balanced and substantively open (45). This repertoire represents more than a simple understanding of the human-nonhuman bond; it embodies the ability to "inscend," merging authentic creative experiences that the mind recognises as forms of "caring" and "loving" for nonhuman life. To Hinton, this journey mirrors a return to the insights of Mencius, who once proclaimed, "the ten thousand things are all there in me. And there is no joy greater than looking within and finding myself faithful to them" (121). The essential goal is to convey this love and care through visceral expressions of joy that arise within individuals who commune deeply with the non-human.

However, non-human/animal stories, if used excessively to highlight suffering, can present ethical dilemmas. Aaltola warns that the aestheticisation of suffering in advocacy campaigns risks trivialising the issue, which may reduce complex realities to mere visual intrigue (19). To avoid this, Haraway's fact-based storytelling is needed to connect images of suffering to concrete calls for action. In conservation education, cultural integrity in the act of telling is nurtured and forms long-term community commitment. While vital for snow leopard conservation, EE often fails to effectively address environmental degradation or change behavior (Hillard et al. 245). Moreover, a comprehensive study of human-snow leopard conflict (HSLC) from 1970 to 2020 identifies key socio-economic factors, livestock management, ecology, and policy, highlighting common mitigation strategies such as predator-proof corrals, shepherd training, insurance schemes, and compensation (Moheb et al. 11–12). While business incentivisation, as noted by Hotham et al. (277), aims to catalyse corporate social responsibility and support biodiversity conservation, Li et al. argue that these efforts are insufficient for effectively conserving snow leopards (87).

Expanding sustainability efforts, without resorting to the ineffective mechanisms mentioned above, requires organisations to employ unorthodox methods to protect snow leopards from the growing threats posed by human activities. Mining operations (Hotham et al. 277; "What Are The Dangers…" para. 15), particularly in regions like Mongolia and Kyrgyzstan, have been linked to the destruction of snow leopard habitats, as heavy machinery and excavation processes not only damage the landscape but also disturb the local wildlife. Additionally, oil extraction projects in the Himalayan region pose further risks by introducing pollutants that threaten both the snow leopard's prey species and the broader ecosystem (McCarthy and Mallon 2016b, 113). Infrastructure projects such as roads, dams, and human settlements are further fragmenting the snow leopard's already limited habitat (Pan et al., para. 1; "Habitat…" para. 1), making it more difficult for them to move freely across vast territories. Furthermore, poaching remains a persistent and severe threat. Snow leopards are targeted for their fur, bones, and other body parts, which are highly valued on the black market for use in traditional medicine, luxury fashion

(Li and Lu 207), and ornamental objects. The illegal wildlife trade, combined with the loss of prey species like the Argali sheep and ibex due to habitat loss and hunting, has resulted in a significant decline in snow leopard populations. These issues demand a response, prompting conservation organisations to prioritise the involvement of local communities. Educating these communities about the importance of preserving snow leopards and fostering a sense of stewardship toward these emblematic animals is essential for their protection and survival.

4. Snow Leopard Conservancy

Informed by the International Union for Conservation of Nature's (IUCN) 1972 classification of the snow leopard as *vulnerable* – based on a projected decline of at least 10% in its estimated global population of between 2,500 and 10,000 mature individuals over the subsequent three generations (McCarthy et al. 1) – the Snow Leopard Conservancy (SLC) is dedicated to the species' protection. The organisation goes beyond traditional conservation efforts by forming a network of Indigenous Cultural Practitioners (referred to as ICPs from here on) – shamans, elders, guardians of sacred sites, teachers, and shepherds. Launched in 2013, the Land of Snow Leopard (hereafter referred to as LOSL) Network brings together Western science and Traditional Ecological Knowledge (TEK) to revive the snow leopard's legacy through long-term conservation practices. This approach aligns with SLC's focus on saving snow leopards by fostering strong relationships with mountain communities that share their land. The coalition has gained traction and enthused many to become "Guardians of the Sacred Species" (2022 Impact Report 1) in five regions of Central Asia – Kyrgyzstan, Tajikistan, Kazakstan, Mongolia and China (specifically, areas like the Tibetan Plateau). Healthy coexistence with the "Lords of the Mountains" (2023 Impact Report 7) is focalised through education on their sacrality and role in the ecosystem. This is exemplified by Kyrgyz Sacred Site Guardian and LOSL ICP, Zhaparkul Raimbekov, who continued his Elders and Youth program to ingrain the ontology of snow leopards as both spiritual and ecological entities (2023 Impact Report 7). This episteme-building inspires young people to embrace stewardship and a harmonious relationship with nature.

In 2021, the Conservancy sponsored the LOSL Network, which won the Disney Conservation Hero Award (2021 Impact Report 4). LOSL's ICPs, spiritual leaders, and TEK keepers unite communities to support snow leopard conservation while preserving traditional cultures. LOSL educates a wide range of individuals – children, adults, community members, herders, and officials – through a multimodal platform (e.g. curriculum materials, magazines, social media, artistic media, and performativities). In particular, the Nomadic Nature Trunks Conservation Education Program expanded into Tajikistan, Kyrgyzstan, and Mongolia (2023 Impact Report 7), where LOSL coordinators worked with respected ICPs to create culturally

specific lessons rooted in traditional knowledge. This dialogic approach fosters the Conservancy's mission of fostering constructive collaboration among the public, the scientific community, and government to share ideas, solutions, and challenges in reviving snow leopard conservation efforts, which has been made easier by dramatic changes in technology-driven communications that allow for the rapid transmission of ideas to large audiences, as Bayrakçısmith et al. (535) argue, leading to more effective, targeted messaging.

Reviving indigenous practices and attitudes toward sacred species is seen as essential for the planet's preservation, as attested by Qurbon Alamshoev, a journalist from Tajikistan, who recounted ten instances in which snow leopards captured by local inhabitants were released back into the wild. Drawing upon Alamshoev's account, Knosala (2022b, para. 13) demonstrates that, influenced by stories about the ecological and spiritual roles of these animals, shepherds who had initially wanted to kill them in retaliation for livestock losses chose to release them instead. Additionally, Buddhism's teaching that killing wildlife is abominable, as Li et al. (87) further contend, has also prevented local herders in the Tibetan Plateau from taking the lives of these animals. Such a storytelling mechanisation is evidently benefiting the Conservancy to foster coexistence with non-human populations.

SLC also balances local needs with global survival strategies, as the organisation not only fosters cultural preservation but also creates sustainable economic opportunities. Tshiring Lhamu Lama, a local conservationist featured in *Snow Leopard Sisters*, now leads exclusive ecotourism expeditions to Nepal's Dolpo region – the original snow leopard research site of SLC founder and president Dr. Rodney Jackson – offering travelers the chance to explore the Himalayas, spot snow leopards, and contribute to crucial local conservation efforts ("New Ecotourism…" para. 1). In Ladakh, the award-winning Himalayan Homestay Program, a community-driven initiative, has solidified snow leopards' status as revered protectors of the fragile ecosystem, with local conservation efforts ensuring winter expeditions regularly encounter the "Queen of the Mountains" (2023 Impact Report 1). Over time, more positive perceptions of snow leopards (through ecotourism prevalent in Indian communities) reflect a shift away from human exceptionalism toward a more inclusive worldview (Vannelli et al.180; Maheshwari & Sambandam 395) – a change that gravitates toward narrating from the "planetary health" perspective that inspires actionable conservation efforts aligned with local values – all pointing to the "paradigm of hope" (Ammons 169–173). These strategies, however, are not without their fiscal dimension. In SLC's education-driven LOSL, over 40 funding partners help silver-line the mission. For example, based on the 2022 Impact Report (4), the Darwin Initiative Project (funded by the UK government), led by SLC and Nepali partner organisation Mountain Spirit, trained nearly 250 government staff in conservation, improved livestock depredation compensation

programs, and afforded an ecotouristic experientiality, which has grounded SLC's design of resilient, snow leopard-friendly regions.

Understanding co-existence with the unique non-roaring snow leopards (unlike tigers, lions and common leopards) within the aforesaid communities is crucial. De Groot and Zwaal argue that stories, especially those posing dilemmas, empower communities to respond freely (45). In the Pamir-Hindu Kush, local wisdom, conveyed through stories and art, strengthens the spiritual connection to nature while addressing environmental challenges (McCarthy and Mallon 2016a, 197). Viewing biodiversity through the lens of integrity-oriented "staying with the trouble" principle, as Haraway advocates, is crucial for multispecies survival. And no one can detach themselves from storytelling, in the process becoming the most authentic 'knower' of what constitutes the facts of the story. As C.S. Lewis suggests: "We have, so to speak, inside information, we are in the know" (25). One hears the reverberation of self-knowledge that drives action and underscores the responsibility to non-human life within a "planetary consideration." Fostering a cosmology-ecology approach essential for inter-species sustainability requires opening oneself to the reality depicted in T.S. Eliot's *The Hollow Men*, a poem which portrays the fragmentation of the human soul. Spiritual desolation is a dire scenario that compels readers to reflect on emptiness and its consequences.

The adaptability of human thought to survival resonates with building sensitivity towards ecological awareness. As the ancient saying goes, "the careful foot can walk anywhere," a principle Haraway would align with Rosenzweig's (6) reconciliation ecology, which fosters a balance between human needs and conservation. This approach is vital in reconciling habitat conservation with new civilisational developments. Rosenzweig advocates for establishing new structures that markedly complement Berry's call for urgent engagement in preserving habitats. On a more profound note, Michele Crossley's idea of the processual "narrative construction of self" (21) can be used to facilitate the reconciliatory approach, provided one discerns that the rehabilitation of the beleaguered planet is contingent upon "the story" of what human necessity can be made compatible with planetary conservation. Furthermore, as Crossley continues to uphold this paradigm of self-construction, he concludes on a positive note: "Recognition and acknowledgment of the role played by particular narratives in our understanding of ourselves should, hopefully, enable us to step back and become more critical and reflective about the kind of person we are, and the kind of person we would like to be" (21). Snow leopard conservation requires a radical shift in consciousness. As Berry and Haraway argue, this movement entails a redefined perception of humanity's role in the world, which is as primal as the understanding of why the survival of snow leopards – among the least studied big cats (Watts et al., para. 4) – is vital for the sustainability of alpine ecology, as their decline leads to land degradation and desertification.

5. Conclusion

India's Project Snow Leopard develops the idea of protecting not just the predator, but also its prey and the plant layer, hence adopting an interconnected conservation approach that is committed to restoring whole ecosystems (Fiechter, para. 25). This initiative calls for what Suneetha Saggurthi et al. (712) term an ecozoic leadership model – a perspective grounded in cosmic interdependence, equity, and love – which may serve as a blueprint for organisations to prioritise environmental harmony and global well-being over material goals, the pursuit of which birthed the Anthropocene – a phenomenon that Berry addressed through his ecozoic framework. Similarly, Patricia MacCormack argues that challenging human exceptionalism requires shifting from seeing Earth as a resource to understanding that humans exist for the Earth (101). This transformation demands channeling collective grief and emotional exhaustion into innovative, Earth-centered actions, which might allow us to move away from anthropocentrism.

As the case of Snow Leopard Conservancy demonstrates, it is important to emphasise the significance of maintaining a proper balance between the individual elements that make up earth-centered actions. Combining science and spirituality, storytelling with efforts to protect endangered species, although extremely promising, also carries certain risks. First of all, such an amalgam of spirituality and nature conservation, if it is not supported by specific values, risks falling an easy victim to all forms of radical practices, such as ecofascism. Therefore, it is worth considering the suggestion of Tu Weiming, who postulates a reconfiguration of the Enlightenment mentality, in which the ecological future of the planet should draw, on the one hand, from the contribution that is associated with the modern, democratic understanding of freedom and equality, and on the other integrate this heritage with the spiritual perspectives and ethical insights of the world religions (2006, 19–29). The practices undertaken by the Conservancy are a good example of how this might be achieved.

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Hydrocentric Reading of Rivers: Waterways in Wade Davis' *Magdalena: River of Dreams*

Abstract: The aim of this article is to analyse Wade Davis' outlook on the Magdalena River through the lens of Mielle Chandler and Astrida Neimanis' (2013) inclusive understanding of gestationality. In his 2021 book *Magdalena*: *River of Dreams. A Story of Colombia*, the Canadian cultural anthropologist and ethnobotanist Wade Davis describes Colombia's complex past and present, showing how the river shaped its people socially and culturally. Davis wants to make his readers aware of water as the fundamental, intertwining and non-human planetary agent within all areas of life, and wants them to reimagine their relation to the river. In his epic story of Colombia that braids together journalism, history, travelogue and memoir, Davis describes how Colombians are inextricably formed by their relationship with the Magdalena River, how they flow together and shape each other. This article demonstrates how his treatment of the Magdalena River renders it an active agent of social change by discussing relations between human and extra-human life and by describing the Magdalena's gestational aspect.

Keywords: posthumanism, new materialism, gestationality, hydrosocial problems, indigenous knowledge

1. Introduction

The Magdalena is Colombia's longest and most significant river; it is also one of the world's largest rivers with a discharge volume of $7,100 \, \text{m}^3/\text{s}^{-1}$ (Salgado et al. 451). All along its course, the river and its tributaries generate wetlands, marshes and coastal lagoons of extraordinary hydrological, geomorphological, aesthetic and productive value, which are the basis of one of the greatest ecodiversities in the world. Among them is the immense Ciénaga Grande de Santa Marta, a large

coastal lagoon, with more than 480 square kilometres of water mirror and several pacific communities of considerable singularity. The Magdalena runs from south to north through the entire country, crossing 12 departments (Boelens et al. 459). Approximately 80 percent of Colombia's GDP is generated in the Magdalena basin (Davis xxii). The Magdalena River is not only Colombia's most important watercourse, it is also unique in the world for its location, its water and sediment flow, its morphology and its fluvial dynamics. It is the primary source of drinking water, irrigation, power generation and industrial supply for more than 50% of the country's population (Aguirre et al. 60). Additionally, it constitutes the cornerstone of Colombia's development infrastructure and the nation's history. The Magdalena River is notable for its biodiversity and ecosystemic production, for its cultural, social and economic conditions, and undoubtedly defines the nationality of the country. For these reasons, the river merits worldwide attention to safeguard the natural resources of its basin and its environment.

The triad of modernity, progress and civilisation has caused irreversible damage to the Magdalena River. To put it plainly– the river is dying; some say it is a little more than an open sewer. The grandeur of the river and its wealth are threatened daily by the acceleration of progress, industrialisation and globalisation, to the detriment of agricultural resources, livestock, aquaculture, and sustainable socioeconomic development. Taking all these into account, Colombian, legislation recently began to recognise the rights of the country's great rivers and many species of fauna in danger of extinction. In 2017, The Constitutional Court recognised the Atrato River (in the department of Chocó), including the whole of its basin and tributaries, as an entity entitled to legal rights ("Defence…" n.p.). A year later, it issued a decision recognising the Amazon River ecosystem as a subject of rights and beneficiary of protection ("Colombian…" n.p.). It would be highly appropriate for the Magdalena River to be recognised as a legal entity[1] and protected against the private and governmental depredation that constantly stalks it. The river should be studied and understood by nationals and foreigners, so it can be protected as a special patrimony of Colombia and of humanity.

The aim of this article is to analyse Wade Davis' outlook on the Magdalena River through the lens of Mielle Chandler and Astrida Neimanis' inclusive understanding of gestationality. It opens by providing readers with general information about the Magdalena River to address its cultural representation. What follows is a brief account of Davis' book, *Magdalena: River of Dreams. A Story of Colombia* (2021), as a literary intervention in the status of the Colombian river with an emphasis on the co-existence of human and non-human waterbodies. This article also describes the anthropocentric relationship of Colombians with the Magdalena. Chandler and Neimanis' theory of social gestationality informs the analysis of Davis' perspective of the river's agency, its gestational aspects, material sociality and human and non-human relationships. As I argue, applying the abovementioned theory to Davis' story of the Magdalena River suggests a different perception of the

relationship between human beings and the natural world. It proposes an approach of thinking with water, recognising that humans are part of it, which deepens people's awareness of their material connection with the river.

2. Literary Representations of the Magdalena River

So far, the Magdalena River has been present in the works of scholars, writers, poets, and musicians. The gaze of the first travellers who sailed the Magdalena concentrated on the space surrounding the river, its climate, atmosphere, and vegetation, but the river itself was not a common topic. In numerous chronicles, such as those compiled by Aníbal Noguera, the Magdalena is not the protagonist or the focus of study. Romantic scientists such as Alexander van Humboldt, Francisco José Caldas, and José Celestino Mutis emphasised the majestic beauty of its banks and the abundance of its territory (O'Bryen 215–216). The Magdalena, for those who travelled along it during the eighteenth and nineteenth centuries, is represented by what lies on its banks and by the wild nature that surrounds it.[2] Following his overview of the "voices and lyrics of the Magdalena River" the critic from Barranquilla, Ariel Castillo Mier states that

> the incomplete inventory of fiction works in which the Magdalena River is present (Gregorio Castañeda Aragón, Víctor Manuel García Herreros, Eduardo Zalamea Borda, Óscar Delgado, Ernesto Palacio, Álvaro Mutis) reveals that if the country has turned its back on the river in economic and social matters, our literature has not. However, if we except the popular poetry of Benjamín Buelvas Dávila, the presence of the river in literary works has been rather marginal or incidental; the Magdalena, its dwelling history and its circumvented significance, has not been the central theme of a literary work. (Castillo Mier 56) [translation AK]

Rarely do we find a description that really allows us to imagine those rushing waters of the Magdalena. After the massacre of 1928,[3] an emerging-literature of social critique reframed the Magdalena River as a "tomb-river" and as Colombia's symbolic graveyard. In the literature of la Violencia,[4] it is no longer a river that serves as a route; to the contrary, we find the image of a stagnant river, a river of the dead, the river-turned-cemetery. According to Castillo Mier (54), it was thanks to Rafael Caneva Palomino and his novel *Y otras canoas bajan el río* (1957) that the Magdalena ceased to be an incidental element, the scene of the plot, or the backdrop, and instead became the protagonist. However, it was Gabriel García Márquez who was the most closely associated with the Magdalena River, which becomes the protagonist of two of his novels: *Love in the Time of Cholera* (1985) and *The General in his Labyrinth* (1989). The Colombian Nobel Prize winner travelled the river several times on the famous *David Arango* in his student days,

going to and from his boarding school. These trips were narrated in his memoirs *Vivir para contarla* (2002) as a blissful experience, with endless parties aboard ships full of students and with an endless landscape of animals and plants bordering the route. García Márquez was fascinated by the pulsating life that unfolded in the river artery of Colombia. In *The General in His Labyrinth*, a historical account of Bolivar's last journey, Márquez wrote about "the first devastation caused by the steamship crews" (1990, 73). This led him to foretell a sad scenario: "The fish will have to learn to walk on land because the water will disappear" (1990, 74). In *Love in the Time of Cholera*, staged a century after the general's journey, the destruction is already everywhere, with the natural wealth of the past completely invisible. García Márquez exposes the sad legacy of the glorious century of steamers on the Magdalena River and describes the devastating ecological effect they had on the flora and fauna: "Instead of the screeching of the parrots and the riotous noise of invisible monkeys, which at one time had intensified the stifling midday heat, all that was left was the vast silence of the ravaged land" (1988, 217-218). The river had died "when the alligators ate the last butterfly and the maternal manatees were gone, the parrots, the monkeys, the villages were gone: everything was gone" (1988, 218). In *Living to Tell the Tale*, García Márquez finally corroborates the announced destruction that he had already forewarned in his novels:

> Today the Magdalena River is dead, its waters polluted, its animals annihilated. The work of restoration talked about so much by successive governments that have done nothing would require the planting by experts of some sixty million trees on ninety percent of privately owned lands whose owners would have to give up, for sheer love of country, ninety percent of their current incomes. (2002, 179)

Carlos Vives, the singer-songwriter, producer, philanthropist and actor, is another famous Colombian who recently also started engaging in the amphibious culture[5] of his country. The singer often repeats in interviews how his environment has shaped his music, and why he hopes the Colombian government will pay better attention to an ongoing disaster along the shores of the Magdalena River. In 2021, Vives published a book[6] together with the historian Guillermo Barreto, and issued a short documentary and two albums under the same title, Cumbiana. Vives states that the communities of the amphibious cultures are a land of oblivion; they seem invisible. That is why the singer's goal is to highlight the importance of the rivers' past and present. Vives inspires people and attracts their attention towards Colombian waterways. In April 2022, during the national book fair in Bogota (FILBo), Vives, together with Wade Davis, discussed the cultural richness and environmental importance of the Magdalena River. They talked about the bodies of water and their role as subjects for wellbeing, as well as diversity and peacebuilding. Vives formed an alliance with Davis because few know the river better than the Canadian cultural anthropologist, ethnobotanist, photographer, and writer. The examples mentioned

here so far confirm the permeations of the Magdalena and Colombian history and culture. They constitute evidence of the river's aesthetic agency and the fact that it flows across multiple registers (see Blackmore 2023).

3. *Magdalena: River of Dreams. A Story of Colombia*

Davis adds to the literary corpus of interventions concerning the Magdalena with his exhaustively researched, intimate and poetic story that mixes reportage, history, and prose. It shows the river as a place of unparalleled natural beauty and describes its ecological and geographical diversity. Héctor Abad Faciolince described Davis' book as a love letter to Colombia (qtd. in Manrique n.p.); however, there are also voices that criticise Davis' infatuation and his approach. Mónica Palacios (n.p.) juxtaposes Davis' attitude towards Colombia with a quotation from Borges' "Ulrike" (12),[7] which Davis uses in the introduction to his book, and which states that being Colombian is an act of faith. Palacios claims that this act of faith in this story comes from Davis himself; it is noticeable in his determined intention to see a reality different not only from the one the world has imagined about Colombia, but also from that which the inhabitants themselves manage to perceive. Chris Kraul (n.p.) accuses Davis of his flirtations with the former presidents Uribe and Santos for not questioning them about the ongoing slaughter of indigenous leaders, for not objecting more strongly to illegal mining and the logging which takes place on Colombia's rivers, and for not highlighting the fiasco of the Hidroituango dam. Nevertheless, *Magdalena: River of Dreams* is not a one-sided subjective narrative. The idyll is always counterpointed by the country's great struggles, of which the Magdalena has been a witness. Davis wrote the book without passing judgment, without excluding atrocities. He celebrates the wonder and the magic of the country, the strength and resilience of its people. He wishes the book to serve as a message of hope and as an instrument of self-understanding and reconciliation, as a mirror in which Colombians can observe and recognise themselves.

Davis first visited Colombia in 1968 on a school trip. He was 14 years old. "Several of the older Canadian students longed for home," he recalls: "I felt as if I had finally found it" (Davis xiv). His love story with the country has continued for more than fifty years. Davis has travelled across a considerable part of the national territory and navigated its rivers. For him, these bodies of water are the articulators of the daily life of Colombians. In his 1996 book *One River*, he gave an early account of his extensive knowledge of the Colombian environment. Davis is considered the most Colombian foreigner in the world, to the point that former President Juan Manuel Santos granted him honorary citizenship in 2018 ("El río Magdalena…" n.p.).

Davis' *Magdalena: River of Dreams* braids together journalism, the political history of Colombia, and a travelogue and memoir of the author's various travels and friendships. As he summarises, it is "less a work of scholarship than

a compendium of stories shared by Colombians encountered along the river and beyond" (qtd. in Nicholl n.p.). But the work is also a geography book about the river, where the author defends indigenous wisdom and warns against ecological disaster. Davis shows how Colombians have treated the Magdalena as something that needs to be contained and domesticated, instrumentalised, and how they have transformed it into a commodity that can be pumped, stored and directed in the service of capital (Campbell and Paye n.p.).

4. Anthropocentric Relationships with the Magdalena

The broader anthropocentric relationship with the Magdalena is visible in the trans-formation mentioned earlier. It reflects how nature is shaped and controlled to serve human interests, revealing the exploitation and appropriation of natural resources. This is the reality of the Capitalocene,[8] in which the relations between humans, but also between humans and the more-than-human realm, are mediated by capital. These regimes of organising nature that govern the Magdalena have made it

> brown with silt, too toxic to drink, contaminated by human and industrial waste, which flows into it from every town and city in a drainage that is home to forty million Colombians. The fishermen use the river to wash their clothes and to bathe, but not even the hardiest among them would dare drink the water. Some with the recollection of darker days, when bodies regularly floated by and the river served as the graveyard of the nation, hesitate even to eat the fish. (Davis 7)

The degradation that Davis describes is a result of the instrumentalisation of nature under capitalist logics, which enable the large-scale transformation and exploitation of the earth. The Magdalena was once a vital and life-sustaining force, but its cycles were disrupted, its energy weakened as it has been transformed into a commodified, contained resource. Among the most striking examples of the assault on the hydrosphere are mega dams, such as Betania and El Quimbo, which not only block the river's natural cycle of water, accelerating the environmental and socio-economic crises affecting the region, but which also cause aesthetic shifts in the Colombian hydrosphere:

> The Betania dam had an immediate impact on the entire Magdalena fishery. The annual spawning run, the *subienda*, the wave of life and fecundity that brought natural wealth and prosperity to every inhabitant in the entire Magdalena basin, from the *ciénagas* to the sierra, was shut down, turned off like water at a tap. […] The dams are only one cause of the river's agonies. The Magdalena drainage as a whole has lost close to 80 percent of its forest cover, more than half in the last thirty years alone. Erosion darkens its flow, with some 250 million tons of silt and debris each year. Few rivers

in the world have been so adversely affected by sediments. Industrial pollution, agricultural runoff and raw sewage pumped into the river by virtually every municipality in the drainage only compounds the crisis. (Davis 70–71)

Colombians seem to follow a colonialist view of the river as an inanimate surface for extracting, shaping, and constructing the artifacts of progress. This commodification of the Magdalena persists in both public consciousness and environmental policies: massive hydroelectric dams are just one example. The highway along the Caribbean shore, which shortened the travel time between Santa Marta and Barranquilla, also served as a dam, causing the mangroves to perish and the fish population to collapse. Rivers were diverted to deliver water to the banana and palm oil plantations, increasing fish mortality. All this impacted *ciénaga*, which absorbed agricultural runoff contaminated with pesticides, fertilizers and herbicides (Davis 336). Tannery and slaughterhouse waste, industrial toxins, plastic, garbage and sewage are killing the Magdalena. "Every day, more than thirty-two million Colombians go to the bathroom to flush their waste directly into a river that is the vital artery of their nation, the life blood of their land, the spiritual fiber of their being" (Davis 71).

In *Magdalena: River of Dreams* Davis expresses his concerns, centred on the exploitation and abuse of nature and the need for an environmental ethics narrative. The book anticipates the discourse of more recent environmental literature and implies a hydrocentric approach. Like Jane Bennet (xiii), Davis perceives human and non-human life as vital and responsive entities within complex networks of exchange. The environment is not seen here as a resource to be exploited for economic gain. Davis also moves beyond the strictly ecological repercussions of the topic at hand in order to explore themes related to historical, social and political contexts. Davis' narrative adapts to the Magdalena's basins, the chapters are titled "Alto Magdalena," "Medio Magdalena," "Bajo Magdalena," and the story starts in Bocas de Ceniza, the actual mouth of the river where its waters flow into the sea through an artificial canal built in the 1930s. The narrative spans different time periods and geographical regions to show a biography of the country in which the Magdalena plays an important part. Davis treats the Magdalena as an active, multidimensional and polyvalent protagonist in Colombia's contemporary social processes. This echoes exactly Neimanis' statement that "river is what we make it, but river is always making us too" (22).

What one learns from Davis' book is that in order to know the nation, it is essential to know the Magdalena. He shows that the river is a crucial constituent of Colombian society, and that that society will be better understood when the role of the river becomes the focus of analysis (see Bijker 2012). Davis' approach is in tune with recent work that emphasises water's deep permeation of social and cultural life (e.g. Linton; Chen, McLeod, and Neimanis; Strang). *Magdalena* highlights the unavoidable hold that nature has on Colombia. As Raymond Williams

succinctly puts it, "the idea of nature contains, though often unnoticed, an extraordinary amount of human history" (68). Davis' book is a nuanced depiction of the relationship between environment and culture. It allows us to reflect on the rich and dynamic image of the river and, by extension, on the vital context of Colombia, its people, history and culture. Davis describes processes of a personal nature with those of the collective experience and significant periods of transformation in the region, showing interdependence between human beings and the natural world. In his narrative, the anthropologist proposes a different perception of this relationship. His approach is about thinking with water, in connection to it, recognising that we are part of it (Roca-Servat and Golovátina-Mora 15). Such thinking, according to Chandler and Neimanis (73), suggests material sociality.

5. Water, Agency, Gestationality

The idea of thinking with water calls into question the belief that nature is separated from the human realm. This separation has enabled the exploitation and othering of bodies assigned to nature and has contributed to numerous injustices. Emerging new vocabulary, new paradigms and new environmental ideas fight against those injustices and enable "conceptual traffic between earth history and world history" (Chakrabarty 155). They also constitute "an essential part of creating the large-scale public awareness and understanding of climate change that can bring about policy change" (Merchant 46). They revitalise ontology by reconceptualising agency, encouraging sustainable engagement with lively things, and by trying to rethink human and non-human relations. They establish environmental justice and ethical accountability in a world marked by large-scale transformations of the earth and environmental degradation (Oppermann 258).

Several new materialist viewpoints find great resonance in the idea of thinking with water as an alternative to traditional notions of agency. For Jane Bennett, agency is not only understood as human effort. Bennet claims that matter is agential as it is the source of action, produces effects and has its own trajectories and propensities (viii). The interconnectedness of matter, meaning and agency is emphasised in Karen Barad's relational ontology of agential realism. According to her, "agency" is a process of cause and effect in "enactment" rather than a quality of something or someone (214); it is "doing/being in its intra-activity" (235). Barad claims that entities do not preexist in their relationships but instead emerge through intra-action. Her perspective on agency also alludes to the possibilities for worldly re-configurations in and via the entanglements of matter (182). This viewpoint is consistent with Stacy Alaimo's notion of *transcorporeality* (2010), which emphasises how bodies, both human and non-human, are interconnected as they are continuously shaped by and shape their environments, especially through substances like water.

Water, permeating and uniting all forms of life, strengthens the relationality of existence. Chandler and Neimanis further develop the idea in their social *gestationality* theory, which describes water as a generative and sustaining force. They use the metaphor of gestation and explore the concept of social and cultural development, emphasising the ongoing, interdependent processes that shape entities. According to these scholars, all forms of gestation involve connectivity, mutual influence and continuous nurturing. Social structures and individual identities also develop through ongoing relational dynamics. The social gestationality framework proposes that growth is an emergent, recursive process shaped by context, care, and possibility. Gestationality, in this view, highlights relationality and the ethical responsibilities embedded in fostering sustainable and just forms of becoming. It also helps us realise that nature and culture are always already "naturecultures" as it recognises their inseparability and the social and biophysical formations of their relationships (Haraway 2003).

This relationality challenges human ontological privilege while also seeking to extend a version of sociality into the more-than-human world. According to Chandler and Neimanis, water sociality is gestational: it is transformative and responsive, acknowledges the unknown and gives its own materiality to the facilitation of unknown plurality, of the "not yet." Such a perspective offers a totally different approach to an ontological-political one, where we take from another in self-interest or in exchange. In the economics of gestation and ethics, we are motivated by social proximity to others. This is represented by all possible forms of biological life and human social modes of existence. We give and respond to the needs of others, we want to ease their suffering and provide the conditions for their flourishing (Chandler and Neimanis 67, 78). In the context of our world's pressing water crises, such an approach can encourage people to be more thoughtful, and more responsive, in terms of what we give back to water in all its forms, to those planetary water bodies that we currently exploit, pollute, and instrumentalise (Neimanis 2017, 69).

6. Social Gestationality of the Magdalena River

Davis, in tune with this more inclusive understanding of gestationality, demonstrates an unpredictable plurality that allows the Magdalena River's to flourish. The Magdalena is agential and facilitative, giving and responding to the needs of others. It nourishes people and has the capacity to affect and to bring other bodies into being. Davis reinforces a perspective according to which the river is seen as the condition of all possibility – a perspective deepening people's awareness of their material connection with water. This is achieved by comparing the Magdalena to another river, highlighting its profound role in shaping national identity and cultural memory:

> In so many ways it's the mirror image of the Mississippi, the only other great river
> to flow into the Caribbean. Each drains the heartland of a continent. And just as the
> Mississippi contains the entire American experience, the Magdalena carries the whole
> of the Colombian reality. It, too, is a fountain of music, the source of our culture
> and civilization. Yet for too long Colombians have turned their backs on the river,
> indulging a strange national amnesia, as if running away from the essence of who we
> are as a people. (Davis 95)

As Davis moves with the flow of the river, he tells stories which show that there is little in Colombia that has not been touched by its water. On his way, he meets locals and incorporates their lives into his prose: "The river influences every aspect of their lives, from their food to their music, the way they move, even the color of their dreams" (67). The Magdalena gave life to *ciénaga*, it was essential for the prosperity of the nation, making possible the flow of vegetable ivory (*tagua*), cotton from Neiva, cacao from Cucuta, coffee from Manizales, leather and hides from Cundinamarca, livestock from Bolívar (120–121). It was a source of food (the most productive body of water with more than a dozen species of edible fish), it had inspired pioneering botanical studies, helped foster magical realism, created Barranquilla and its carnival (Jacobs 6), has been an inspiration for rhythms and melodies and gave birth to *cumbia*,[9] which is the heartbeat of Colombia:

> And if cumbia is the mother of all rhythms, the mother of cumbia is the Magdalena.
> The river is our storyteller. It's what defines us as a people, what defines the nation.
> The Magdalena tells our story, and it does so all the time. It was only by knowing the
> river, that I was able to discover the real origins of cumbia and, of course, vallenato
> and every other expression of our hearts and desires and dreams. (Davis 254)

Davis explains that the Magdalena has been the wellspring of music, the fountain of culture, literature and poetry, the source of economic wealth. He claims that it "never abandoned its people. It always flowed" (xxii), but it was the people who abandoned the Magdalena. For generations, the indigenous people of Colombia – the Kogi, Wiwa, and Arhuaco – have watched in horror the tearing down of the forests that they consider the skin and fabric of Mother Earth's body, the poisoning of the rivers, which are the veins and arteries of her life. Such despoliation has long been critiqued by indigenous peoples. Now, as it has become impossible to ignore the impacts of climate change and environmental degradation, their voices have been augmented by a wider impetus for change (Strang 204). Davis' book is one of its elements.

Posthumanist thinking has reached the same conclusion as indigenous inhabitants of the Sierra Nevada: to live in a socially and ecologically sustainable world, humans cannot part with nature (Rivero and Murphy 2–5). The key to a healthy and sustainable planet resides in the recuperation of old American traditions and

ecocentric perspectives: the sense of community and the idea that people and nature are interdependent. Indigenous thinkers and scholars developed ideas about non-human agency thousands of years before contemporary thinkers of posthumanism, new materialism or object-oriented ontology; however, they are often ignored or dismissed in Euro-Western lines of thought.[10] According to Rosiek, Snyder and Pratt (332–333), in Indigenous studies literature and traditions of thought that embrace "non-human agency and a conception of ethics including more than human-to-human relations has long been a starting point for analysis" (see, for example, Coulthard and Simpson; Deloria; Martin; Todd; Watts). Unfortunately, there is a limited dialogue between the ideas shared across these literatures. According to Pierotti and Wildcat, the ranks of researchers should be filled by representatives of indigenous cultures, bringing traditional knowledge to the humanities and making the Western corset of knowledge more flexible, especially when it comes to under-standing the relationship between nature and culture, interspecies relationships and people's place in the world (1339).

Davis acknowledges Indigenous wisdom and expresses his interest in the topic of extending agency, vitality, and social phenomena to the non-human and the reciprocity and commonality of our relations with *life itself*. Although without being explicit, Neimanis seems to mirror Vine Deloria's views on the relationship with the non-human, according to which, "[i]n the moral universe all activities, events, and entities are related, and consequently it does not matter what kind of existence an entity enjoys, for the responsibility is always there for it to participate in the continuing creation of reality" (47). In Indigenous studies scholarship, there is a strong emphasis on the formation of relations with particular other-than-human agents. We are bodies "in common," as Neimanis claims, and this commonality needs to extend beyond the human, into a more expansive sense of "we" (2017, 12). The Arhuaco, for example,

> make no distinction between the water found within the human body and what exists outside it. Our blood that flows through our veins," a young woman once told me, "is no different from the water that flows through the arteries of life, the rivers of the land." They see a direct relationship between urine, blood, saliva, tears, and the water of a river, a lake, a wetland, a lagoon. And in this they are undoubtedly correct. Humans are born of water, a cocoon of comfort in a mother's womb. (Davis 13)

Such an understanding of human bodies – these sacks of blood, guts, and bone that are mostly made of water – that are connected to, come from, and flow into other more-than-human bodies of water, would place people in a different kind of relation to other bodies of water (Neimanis 2020, n.p.). Influenced by this conception, humans could reasonably assume that there is no space or distance between things, because all substances are in touch with each other since they exist. By the same token, "[n]on-human and more-than-human fluids and chemicals

constitute and pervade human bodies as part of the ecosystem as a whole" (Spiegel 89). Such an understanding of matter mirrors the Indigenous but also posthuman/ new materialist positions. Alaimo, like Neimanis (2017), extends the parameters of the political domain by seeking ethical reciprocity and "recognition of vulnerable, interdependent, interwoven, human and non-human flesh" (Alaimo 15) because we cannot exclude nature from the realm of ethics. Therefore, not only are our relations utilitarian or epistemic, but they are also personal and ethical. Chandler and Neimanis (79) claim that ethics does not originate and end with the human. Water responds to others and has the capacity to gestate others still, so the Magdalena as a gestational milieu exemplifies a proto-ethical mode of being. Chandler and Neimanis see the origins of ethics in the circulation of water through all processes of life. Humans, to become gestational for the gestational, should nurture the interhuman and lifeworld possibilities that are currently under threat. They should "respond to the needs of habitats, the ecological dwelling places and sources of nourishment that give rise to and support life as plural" (Chandler and Neimanis 79).

The lens of new materialism shows us that it is possible to note that both human and rivers' abilities are inextricably physically connected, and therefore undoubtedly inform or affect each other. Consequently, neither human nor river simply exists without reference to each other, but instead exists with each other (see Haraway 2008) and therefore each mobilises the other in different ways. The river impacts on how people can live, just as people alter the manner of the river's flow, because both are constantly in an existentially shaping relationship with each other (Attala 146). To confirm this, Davis quotes the musician Ángel María Villafañe,

> This is why we have a duty to protect the Madre Magdalena. Bring it back to life. We are all of the river, dependent on its bounty, living as amphibian creatures, just like the birds and fish, the caimans and manatees. To poison the river is to poison ourselves. We cannot survive without her. She is the source and fountain of our culture, the origin of all our songs, the inspiration of every rhythm. […] Without the river, we would all be nothing. (qtd. in Davis 270)

Davis does not only concentrate on the depiction of the current environmental crisis but also shows possible alternative future paths for the Magdalena. His book looks to the future: "In truth, the Río Magdalena remains an open book, one with countless pages and chapters yet to be written. Like the families condemned to live one hundred years of solitude, it too deserves to have, at last and forever, a second chance on earth" (334).

Davis also recognises and advocates for the other-than-human entity that prevails and engages in our lives. He shows how Colombians and the Magdalena flow together and shape each other. Colombia was formed on the banks of the Magdalena River, which is the groove of life that allowed Colombians to settle in one of

the most complex territories on the planet. At the same time, the river constituted a corridor of trade and a source of culture. It brought exploration, trade, commerce and food to the regions. The Magdalena has been a source of employment, especially for the riverside dwellers (*ribereños*) whose daily rhythms are intertwined with the waters of the river and the marshes. Their trades revolve around fishing and rowing, the hardships of floods and droughts, the rhythms of the harvest interwoven with the changes of the moon and the coexistence with the marshes and waterfalls. These settlers are agents, actors and subjects of the river's history and, therefore, of the construction of the Colombian nation-state (Bocarejo Suescún 67). Davis' book is about the relationships between river and people, and carries a broader message about human relationships towards the environment generally. Davis claims that Colombians should re-imagine their relationships with rivers in ways that are ethical and sustainable:

> To clean up the river […] would be to wash the soul of the nation. If we are ever to reconcile, we need to come to terms with the past, with violence, death, and a time when rivers ran red with blood. But to have true peace, we must reestablish a link to the Magdalena. That is the key. If a people do not understand their roots, they cannot trust their future. (99)

If we understand agency as an enactment, as a matter of possibilities for reconfiguring entanglements, as response-ability (Haraway 2016), possibilities emerge for worldly reconfiguration. That is why Davis sees hope for the Magdalena and pins this hope in Colombians' ability to respond to these bodies of water. There is an understanding of the current gestational imperative of engaging with the gestational substance when it cries out, and transforming our modes of sociality to repeat the gestationality of water.

Apart from expressing current ecological concerns centred on the exploitation and abuse of nature and the need for environmental ethics, Davis also encourages what Attala (5) calls "a fundamental reimagining of the world as one of materials in relationship with each other so that the illusion of people being separate from the material world is challenged." This idea of interconnectedness is a central theme in Davis' book, which also emphasises the ethical imperative of care and response-ability in the interactions of humans and non-humans. Being response-able involves attending to human and more-than-human relational ontologies that challenge the separateness of knowing about and being in the world (Barad 185).

Magdalena: River of Dreams is about relationships: it focuses on and draws attention to the river that shapes Colombians physically, socially and culturally, thereby foregrounding the fact that water plays a considerable role in shaping human lives. That is why humans need to understand nature rather than dominate it. This change in behaviour would reconnect people with the environment (see Capra and Luisi). Humans must alter their activities to remodel their relationships

with the natural world because current methods of engagement with the world are considered abusive, and consequently, a more sensitive and constructive attitude and model are called for. It would encourage people to open up to a different ethic of relation and care between humans and the planetary waters that are increasingly in crisis. To quote Neimanis: "As the seas become breathless and warm, as rivers no longer make it to the sea, as drinking water is commodified, as the seabed is mined, as all of the multitudes of life forms that depend on these waters are made increasingly precarious, caring better for other bodies of water seems more urgent than ever" (2020, n.p.). This change in perspective challenges dominant frameworks of knowledge and seeks a renewed ethical relationship with water, similar to Indigenous ontologies that acknowledge the interconnectedness of all beings.

According to Jones and Hoskins (85), Indigenous scholars have to struggle to enable their ontologies, which assume sameness and recognition of the more-than-human, to be acknowledged and reproduced in their academic work. On the other hand, Western researchers, intrigued by new materialist arguments, face a different ontological struggle: the need to create a new vocabulary. Chandler and Neimanis' understanding of rivers' gestationality proposes this new vocabulary and "reveals a fecund way of thinking embodiment in a posthuman sense" (Neimanis 2017, 67). It draws attention towards materiality alongside an insistence on the becoming, unfolding and facilitative capacities of rivers. Gestationality shows that the facilitative mode of being does not have to take a female human form and directs our attention to ethics and living well with other-than-human. Posthuman gestationality asks an ethical question about how people, in a partial dissolution of their own sovereign subjectivity, might also become gestational for other gestational milieus (Neimanis 2017, 68–69). Caring for the immediate environment requires humans to have interspecies and inter-entity empathy. To understand environmental crises, people need to go beyond their human – individual and social – selves (Gudynas), because there are others like them, gestational modes of being, with whom they share wateriness, materiality and facilitative capacities. The concept of posthuman gestationality challenges us to rethink not only our ethical obligations but also our fundamental understanding of existence and interconnectedness. At this point, the Indigenous and Western knowledge of environmental agency and sociality can meet, as they all concentrate on "relational ontologies; a critique of dualisms; and engagements with matter and the non-human" (Bozalek and Zembylas 193). When this is recognised, humans might adopt a deeper sense of responsibility, extending beyond individual agency, and embrace a broader, relational ethics of care.

Such a redefinition of our relationship with the more-than-human is particularly urgent when considering the state of the world's rivers. Waterways have been central to ecological and human histories. It is clearly visible in the Australian 2021 documentary *River*, directed by Jennifer Peedom, which also demonstrates that rivers now symbolise both creation and destruction, as they are shaped by forces that threaten their very existence. "When the first rains fell, the Earth awakened,"

reads Willem Dafoe in the trailer to *River*, which highlights the importance of river systems around the world. "Where rivers wandered, life could flourish. They have shaped us as a species and we worship them as gods. Today, there is scarcely a river unspanned, undammed or undiverted. The sheer scale of the human project has begun to overwhelm the world's rivers." The documentary tells the story of how rivers shaped first the planet and then human progress – before people, in turn, learned how to shape them. Davis' book, similarly to the Australian documentary, raises awareness about the river and explores the relationship between humanity and the main artery of Colombia.

Magdalena: River of Dreams not only shows the beauty of the river but also explains how it functions in the larger ecosystem, making readers rethink their relationship to the natural world. It includes explanations of how the Magdalena has shaped Colombia, its culture, its population, and how in turn people have shaped it to their own ends, and to their detriment. For Davis, the river calls for a vital exorcism. He claims that Colombia now has an incredible opportunity to rethink its destiny by practising politics in more aqueous modes. Referring to the peace pact[11] in Colombia, Davis quotes Arhuaco mamo (a spiritual leader): "The peace won't matter […] if it's only an excuse for the various sides of the conflict to come together to maintain a war against nature. The time has come to make peace with the entire natural world" (Davis xx). Accordingly, he understands cleaning the river as a way of cleaning the soul for Colombians who experienced more than 50 years of conflict. Davis presents this as a way of seeing the future of the country and of the river that, some time ago, was full of blood and floating corpses. Showing that Western and Indigenous knowledge can meet, Davis appeals to the wisdom of the Arhuaco, for whom "rivers are a direct reflection of the spiritual state of the people, an infallible indicator of the degree of consciousness that the community possesses," therefore, "in order for Colombia to free itself of violence, to cleanse and liberate its soul, it must also return life and purity to a long-suffering river that has given so much to the nation" (Davis 14). The Magdalena, having witnessed centuries of colonial plunder, armed conflict, and narco-era devastation, holds the histories of those who have travelled, worked, and perished in its waters. It also functions as a body of resistance, a womb of renewal, as communities continue to rebuild their lives along its banks. This moves us away from thinking of the river only in terms of loss and allows us to see it as a gestational force that carries possibilities for healing and regeneration. If we accept that the Magdalena is more than a resource, then environmental destruction is not just a problem of pollution, but becomes an existential rupture in Colombia's embodied history. The gestational network that has influenced the biological and cultural life of the country is disrupted by the river's demise. Looking at the Magdalena through the lens of Chandler and Neimanis' theory, one can see that the river is part of Colombia's body, not just metaphorically, but materially.

7. Conclusion

Davis's book shows that the Magdalena flows across multiple scales and registers, helping to shape different hydrocultural formations and aquatic environments in the region. It exerts its own aesthetic agency, with its flows serving as inspiration to writers and artists in Colombia. Davis mediates on these "interpermeations" (Neimanis 2017, 95) and contact zones, and articulates "wet relations" (Neimanis 2017, 4) and the co-existence of earth and water bodies. He describes the river as a vital component of Colombian identity, culture and history. Reading *Magdalena: River of Dreams* through the lens of Chandler and Neimanis' theory of water gestationality demonstrates how the river "gestates" stories and myths, as well as carrying the residues of colonialism, violence, ecological destruction and the resilience of the people who live along its banks. By viewing the Magdalena as a gestational entity, we can shift away from a purely anthropocentric reading of Colombian history and move towards an ontological and relational approach – we can "enter into a collaborative relationship with the aqueous" (Chen, MacLeod, Neimanis 4). Accordingly, the Magdalena becomes an active force in the making of Colombia. It ceases to be just a space where history unfolds. This approach helps us to see the river differently than in traditional narratives: as a living, generative body that shapes national identity, memory and resistance. It can be recognised as a living entity, as an embodied presence that shapes and is shaped by Colombian identity – a force still gestating the country's future. Thus, the Magdalena becomes an agent that co-produces life and meaning, with its waters entangled in human activity, yet capable of interacting with the livelihoods, rhythms, vulnerabilities and politics of Colombia.

Notes

1   The idea that the elements of nature should have a legal personality is not new. It was propagated by Ch.D. Stone in the article published in 1972 entitled "Should Trees Have Standing? – Toward Legal Rights for Natural Objects." Stone suggested that we give legal rights to natural objects such as forests, oceans, rivers, etc. in other words, to the natural environment as a whole. Nature needs protection. To receive it, nature should obtain legal personality and its own independent rights (Stone 1972).

2   For the discussion of the representation of the Magdalena River in literature, see Rory O'Bryen, "Literature, Culture and Society of the Magdalena River" (2016).

3   The Banana Massacre (5 to 6 December, 1928) was a massacre of United Fruit Company workers in the town of Ciénaga near Santa Marta, Colombia. The conservative government of Miguel Abadía Méndez sent the Colombian Army against the striking workers, leading to the massacre of 47 to 2,000 people.

4   The period known as La Violencia took place in Colombia in the middle of the last century, as a result of the confrontation between the liberal and conservative sectors of society after the assassination of political leader Jorge Eliécer Gaitán on April 9, 1948. Due to the expansion of the phenomenon throughout the national territory and the brutality of the bipartisan struggle, cultural manifestations sought to assimilate the conflict. In this context, the literature of La Violencia arose. For further discussion, see Óscar Osorio, Leonardo Monroy.

5   Amphibious culture (*cultura anfibia*) is understood as the population that contains ideological elements and articulates psychosocial expressions, attitudes, prejudices, superstitions, and legends that have to do with rivers, canals, ravines, slopes, beaches, swamps, and rainforests. According to Fals Borda, amphibian culture is the population that develops along the banks of rivers, canals, hillsides, shores, marshes, and rainforests. This culture is united by beliefs and psychosocial behaviors that are quite similar along the Magdalena River; their specialty is both land management and fishing. This culture has existed since ancient times; many Indigenous groups can be categorised as amphibious due to their great knowledge in both agriculture and water skills (Fals Borda).

6   According to Vives, Cumbiana is network of rivers and swamps that tell the stories that shaped Colombian culture.

7   Borges' short story narrates the meeting between Ulrike, a young Norwegian woman, and Javier Otalora, a professor of literature at the Universidad de los Andes in Bogota. When Ulrike asks Otalora "What is it to be Colombian?", he answers: "I don't know [...] It's an act of faith." For more information, see Juan Camilo Rincón.

8   The Capitalonene is a term used by Jason W. Moore (2015, 2016) (after Andreas Malm) for whom the word Anthropocene is a misleading one and fails to account for socioeconomic divisions that have made different groups of people victims rather than perpetrators of ecological violence. Compare e.g. Klein, Mirzoeff (for further discussion, see: Moore, McBrien, Dawson).

9   Cumbia is a folkloric music genre and dance from Colombia.

10   Many scholars nowadays try to answer Kristin Arola's question if it is an ethical obligation of object-oriented ontology/post-humanism/new materialism/affect studies to cite Indigenous scholarship (see Clary-Lemon).

11   Historic *peace agreement* reached in 2016 with the largest paramilitary force in Colombia, the FARC (Revolutionary Armed Forces of Colombia).

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Intersecting Narratives and Design in Post-Anthropocentric Speculative Art: A Literary Approach to the *Fossibilities* Project

Abstract: This article examines the interdisciplinary project *Fossibilities: Archaeology of the Future* by Marta A. Flisykowska, which integrates speculative design, literary theory, and ecological science to envision post-anthropocentric futures. By blending art, science, and literature, the project creates "future fossils" that challenge anthropocentric narratives and foster ecological awareness. Drawing on Monika Fludernik's *Towards a 'Natural' Narratology*, Umberto Eco's *The Open Work*, and Ursula Le Guin's "The Carrier Bag Theory of Fiction," the project frames speculative art as an evolving, collaborative narrative. This article highlights the project's potential to foster intellectual and emotional engagement with sustainability, offering a model for cross-disciplinary exploration and a vision of coexistence beyond human dominance.

Keywords: speculative art, future fossils, transmedia, ecocriticism, narratology, Post-Anthropocene, modern mythology

1. Introduction: Why Combine Design and Literature?

In a world increasingly shaped by ecological crises, addressing the challenges of the Anthropocene requires moving beyond human-centred perspectives. Cross-disciplinary approaches are crucial for envisioning alternative futures. This article examines *Fossibilities: Archaeology of the Future*, a speculative design project by Marta A. Flisykowska that draws on literary studies to craft narratives responding

to the Anthropocene. It demonstrates the potential of such interdisciplinary work to foster social engagement and to reframe humanity's relationship with the natural world. In the face of the Anthropocene's daunting realities, such interdisciplinary initiatives offer hope for forging more meaningful connections with environmental concerns.

The shift away from human-centred thinking, which gained momentum in response to the ecological and socio-economic crises of the late 20th century, calls for a new "ecologisation" of knowledge (Majbroda 244). This approach integrates insights from the humanities, sciences, and arts to decentre human dominance and to explore post-anthropocentric perspectives. Furthermore, its speculative dimension involves imagining scenarios where humans coexist with, rather than dominate, the natural world.

Traditionally, design has prioritised practical applications, while literature has invited reflection on the implications of imagined futures. Speculative fiction, however, draws design closer to literary analysis, offering a way to explore potential futures and their ethical consequences. By combining these fields, *Fossibilities* provides a more layered platform for speculative visions which may blend practical creativity with critical insights to address ecological challenges. This interdisciplinary partnership transforms such initiatives into layered, transmedia narratives. Through the integration of visual and literary elements, the *Fossibilities* project engages audiences intellectually, emotionally, and ethically, fostering a deeper connection with ecological issues and inspiring a commitment to sustainability.

2. *Fossibilities* and Literature

The interdisciplinary project *Fossibilities: Archaeology of the Future* (derived from the English words "fossil" and "possibility") by Flisykowska draws on archaeology, cultural heritage, and oceanography, integrating design, art, and science. The project explores the relationship between truth and myth, employing methodologies of speculative design and design fiction merged with artistic creativity and production. It results in a collection of future fossils: sculptural objects representing hypothetical organisms of the future, encouraging reflection on humanity's impact on Earth. This work promotes discussions on climate change and sustainable development, engaging audiences to consider possible evolutionary trajectories and humanity's influence on the future (Flisykowska 358).

Through speculative palaeontology, discussed in Section 3 of the article, *Fossibilities* demonstrates how fear can inspire creative engagement. In this project, fear serves as a tool to compel audiences to confront unsettling ecological futures, urging them to acknowledge the impact of human dominance and to imagine alternative, posthuman-centric scenarios. Such emotional engagement deepens the audience's

understanding of the urgent need for coexistence and ecological responsibility. The project bridges design studies, environmental science, and speculative fiction, drawing from local legends and the flora and fauna of the Valencian Gulf, creating a platform for dialogue between science and mythology, between history and the future. Unlike traditional approaches that still place humans at the centre of their agenda, it aims to deconstruct that hierarchy.

This analysis of the project draws on selected key literary theories to uncover its multidisciplinary nature. Monika Fludernik's (2005) concept of "natural" narratology (discussed in Section 4.2) provides an important foundation, serving to highlight how audiences intuitively engage with the imagined future fossils as part of an immersive and familiar narrative experience. Rather than viewing these artefacts as abstract objects, the audience connect with them on a cognitive level, grounding the speculative elements within human-centred storytelling. Accordingly, building on this idea of audience engagement, Section 5 considers how Umberto Eco's (1989) notion of the open work emphasises the collaborative aspect of meaning-making. Within this framework, *Fossibilities* functions as an open-ended narrative space where interpretations are created between the project and its audience. This dynamic interaction aligns with the artwork's goal of blurring the lines between the creator and the viewer, transforming participants from passive spectators into active co-creators of meaning. Furthermore, Ursula K. Le Guin's "Carrier Bag Theory of Fiction" (1996) introduces an alternative narrative structure that enriches *Fossibilities.* Le Guin's approach moves beyond traditional, hero-centred storytelling to advocate for a narrative "container" that embraces complexity, interconnectedness, and coexistence. By applying this perspective, *Fossibilities* avoids a linear, hierarchical structure and instead celebrates the multiplicity of stories and voices, promoting a vision of sustainable futures that values collaboration and diversity.

Together, these theoretical perspectives articulate *Fossibilities* as more than a multifaceted endeavour; they frame it as an evolving narrative that engages its audience emotionally and intellectually, prompting them to rethink their place within an ecological framework. By integrating cultural symbols and ecological motifs, like the sea turtle and local myths, *Fossibilities* not only deepens audience engagement but also highlights the tangible impact of human activity on regional ecosystems, grounding speculative ideas in present-day environmental realities (see Section 4.1 on ecological symbolism). Ultimately, this interdisciplinary approach serves as a model for thinking about the way in which speculative art can foster meaningful connections with ecological issues to aim for a broader, transformative impact on public awareness (as further discussed in Section 6). The next section explores how these symbols, like the presence of monsters and hybrid animals in Catalan mythology, serve as touchstones for ecological and narrative complexity.

3. Speculative Palaeontology, Myth, and Fear in *Fossibilities*:
Narrating Future Ecologies Through Familiar Cultural Narratives

In 2016, in the Catalonian town of Coll de Nargó, a tourist accidentally discovered remains that turned out to be an extraordinary paleontological find. While on a walk, the person noticed fragments of fossilised bones protruding from the ground. After the discovery was reported to local authorities, a team of palaeontologists from the Miquel Crusafont Catalonian Institute of Palaeontology was called in to conduct a thorough investigation. Preliminary analyses revealed that the fossils belonged to a previously unknown species of a giant sea turtle, later named *Leviathanochelys aenigmatica* (Castillo-Visa et al. 2022, 1–10). This name refers to the creature's impressive size and the enigmatic nature of the find. The remains included parts of the shell and other skeletal fragments, which allowed scientists to reconstruct the appearance and anatomy of this prehistoric creature.

Is it merely a coincidence that one of the most famous Catalan legends about a monster resembling a gigantic turtle, known as *La Cucafera,* originates from the same region? Could it be that the fiction of bestiaries had some basis in reality? (Guiscafrè Danús 43–56). This is one of the questions that the speculative project *Fossibilities* presents to its audience. Fossils are inherently speculative. The appearance of dinosaurs remains a mystery and constitutes an immense field of interpretation for palaeontologists. Determining what dinosaurs looked like relies mainly on interpreting incomplete skeletal remains. The process of reconstruction is complex and fraught with uncertainties, including many speculations about muscles, soft tissues, skin, colour, and other external features. Palaeontologists and artists work together to create the most accurate visualisations possible, despite limited data (Lu, Che Me, and Rahmat 1–14). Similarly, but on a reversed timeline, we can speculate about the future remains of organisms that we can imagine.

The *Fossibilities* project began with an exploration of local ecological challenges, followed by linking them to cultural aspects, including Catalonian legends. These stories are a cultural treasure of the region, preserved through generations. Among them are tales of mysterious creatures, such as the aforementioned *La Cucafera*, also known as the Bestia Dragón, which is a mythical creature from Catalan folklore that combines the characteristics of a dragon and a turtle. The legend states that it suddenly appears in towns of the former Crown of Aragon (Guiscafrè Danús 43–56; Beltran 112). By drawing on local myths and connecting them to ecological realities, *Fossibilities* dismantles human-centric narratives and invites viewers to imagine a future where non-human entities play central roles in a post-human ecological system, at a time when humanity has already become extinct. These myths encompass diverse narratives and reflect the community's deeply rooted beliefs and values. The bestiary *Monstruos ibéricos. Ogros y asustaniños españoles* (2021) by Javier Prado Coronel, inspired by the folklore of the Iberian Peninsula, is a collection of stories about fantastic creatures inhabiting these lands

(15). It presents a variety of beings whose existence was imagined by people of past eras, from mysterious monsters to magical creatures. Theoretically, the turtle-beast, that is, *La Cucafera* from the stories, should not exist, as it is merely a product of the imagination. Mediaeval bestiaries, containing illustrations of fantastic and often terrifying creatures, were an attempt to understand and tame the unknown (Clark and McMunn 45; Hassig 77). They served not only as a form of entertainment but also as educational tools, conveying moral and religious messages. The fear of these creatures was not only meant to intimidate but also to teach about the consequences of sin and immoral behaviour.

However, within the context of the speculative project, a question arises: What if such a monster could have truly existed? Palaeontological research, which aids in understanding how ancient ecosystems and creatures may have inspired these mythical stories, provides an answer. The *Fossibilities* project, inspired by the richness of fossils, brings us closer to the fascinating potential of these discoveries. Fossils are not only records of the past but also keys to understanding our natural heritage. The remains of a giant turtle, which may have lived between 72.1 and 83.6 million years ago, allow us to unveil a glimpse of the mystery of life's history on Earth and to reconstruct ancient ecosystems that can help us to better comprehend climate changes. Scientists studying fossils also uncover new species that once dominated our planet, offering insights into possible future scenarios for our biosphere. The discovery of *Leviathanochelys aenigmatica*, which reached up to 3.74 metres in length (Castillo-Visa et al. 2022, 7), serves as scientific evidence within the methodology and speculation of the project by acknowledging that a giant turtle once existed on Catalonian shores. This turtle has also lived on in stories and local legends passed down from generation to generation. In this way, reality catches up with mythology. When considering the physiological mechanisms of fear, the oral transmission of a story about someone claiming they once encountered a giant, turtle-like creature gains a new dimension and sheds fresh light on the legend.

As Ralph Adolphs has highlighted in his article "The Biology of Fear," the response to fear triggers a series of physiological processes, such as increased brain alertness, accelerated heart rate, breathing, and pupil dilation, preparing the body for a 'fight or flight' reaction. This response begins with the activation of the amygdala, which processes the emotional significance of stimuli, mobilising the organism to respond to potential threats (Adolphs R81). As a result, things are not perceived at the actual moment of danger, but rather only when our minds interpret them under the influence of potential threats. Consequently, our perception becomes distorted, and our imagination amplifies the fear, transforming ordinary stimuli into something supernatural or even monstrous (Phelps and LeDoux 180). Similarly, in medieval bestiaries, fear and imagination were tightly interwoven. These richly illustrated volumes depicted fantastical and often monstrous creatures not merely to entertain, but to help readers comprehend and symbolically control the unknown. The terrifying appearances of these beasts served as moral allegories,

designed to warn against sin and immoral behaviour, using fear as a didactic tool (Hassig). Karen Thomson Walker, an American novelist, in her 2013 TED presentation titled *What Fear Can Teach Us*? points out that humans are biologically programmed to be optimists, which may explain why we treat fear as a weakness. Walker suggests we should view fear as an act of imagination, comparing it to involuntary storytelling – the mind's natural tendency to create narratives, often without conscious intention – that we all know from birth. Literature often draws inspiration from dramatic real events, turning them into powerful narratives. Walker shares an example in keeping with her maritime theme, and this time it is not about a terrifying turtle but about a colossal sperm whale. This story centres on the *Essex*, an American whaling ship famously attacked and sunk by a massive sperm whale in 1819, leaving its crew stranded 3,000 miles off the coast of Chile. Surviving for over 90 days in small lifeboats with minimal food and water, the crew faced extreme hunger, thirst, and harsh weather conditions, and ultimately resorted to cannibalism in their fight for survival. This harrowing incident later inspired Herman Melville's iconic novel *Moby Dick* (Philbrick 45), in which the author would weave the tragedy of the *Essex* together with his personal experience and observations, to offer symbols of human resilience, tragic fate, and humanity's confrontation with the immense power of nature.

The story of the *Essex* crew and the legend of Moby Dick show how literature can transcend the boundaries between fiction and fact, introducing us to a world where human fears and myths shape our perception of reality. The aforementioned *La Cucafera* and the discovery of the remains of *Leviathanochelys aenigmatica* can establish parallels with the Moby Dick story. Just as Melville's narrative uses myth to explore humanity's relationship with nature, *Fossibilities* builds on local legends to connect myth with ecological reality. This approach invites audiences into familiar cultural narratives, transforming these tales into speculative frameworks that challenge anthropocentric perspectives. By weaving literary imagination with contemporary ecological challenges, *Fossibilities* encourages a deeper understanding of our place in the natural world. The study of unknown life forms and paleontological environments may evoke uncertainty, but it also provides an opportunity to reflect on humanity's impact on the planet's future. This perspective links ecocriticism, speculative palaeontology, and a need for sustainable practices in exploring and protecting the natural world.

4. Exploring Ecological and Narrative Dimensions in *Fossibilities*

4.1. Contemporary Context: The Turtle, the Aquarium, and Environmental Mutations

While the motif of a turtle or a dragon is present in mythologies and beliefs worldwide (Mackenzie 42), the local connections with the eastern Mediterranean coast

have inspired and provided the necessary symbolism for the *Fossibilities* project. The sea turtle motif was chosen due to its strong ties with Valencia, where turtles can often be seen in the Mediterranean Sea. The region is actively engaged in protecting these animals, and sea turtles not only play a significant educational role but also attract tourists, helping to raise ecological awareness. The local aquarium promotes the importance of the animals, and the discovery of the remains of a giant turtle near the Catalonian Gulf highlights their symbolic significance for the area. In the context of design fiction, where narrative plays a fundamental structural role, choosing the story of the sea turtle acts as a central motif that serves as a symbolic anchor for the plot. Such a choice enriches the project's narrative layer, enabling viewers to deepen their understanding and interpretation of the content, grounding it in both local and ecological contexts. In this way, the modern story of turtles can act as a frame for a contemporary bestiary. Just like their medieval counterparts, in which reality and imagination were blended to explain the unknown, this narrative uses the symbolic presence of turtles to explore broader environmental and ethical concerns. Historically, bestiaries served an educational and descriptive purpose, teaching people about virtues and vices through allegories while explaining unknown and mysterious aspects of the world, which would include real and mythical creatures alike.

The project aims to encourage a reflection on contemporary environmental issues, such as plastic pollution, which leads to physical deformities in marine animals and genetic mutations caused by chemical exposure. These problems are the subjects of scientific research and constitute an integral part of the visual narrative in *Fossibilities*. Through its varied approach, the project integrates multiple perspectives, creating a rich and complex portrayal of current ecological challenges. Human activity impacts the environment, transforming natural ecosystems and triggering genetic changes in animals. Examples of mutations resulting from chemical exposure and plastic pollution range from chromosomal irregularities to invasive deformations, illustrating how human actions accelerate evolutionary shifts (Flisykowska 361). Especially alarming are the effects of plastic pollution on marine animals, such as turtles suffering from shell deformities due to their entanglement in plastic waste (Gall and Thompson 118–121). Photographic evidence from environmental organisations reveals the tragic consequences, including the deaths of birds, fish, and sea turtles ingesting plastic, which then leads to stomach blockages.

The questions raised by the project range between the necessity to expect a dystopian end to the Anthropocene and already witnessing the creation of modern-day beasts due to our actions (see Fig. 1). By focusing on the present moment, speculative fiction is used as a tool to highlight current ecological issues. Consequently, the multifaceted nature of *Fossibilities* lies in its skilful combination of various fields, allowing the creation of a nuanced, layered narrative about the future of our planet.

Fig. 1. This composition from the *Fossibilities* collection presents a monster that lives between the river and the sea, where toxin and waste concentrations are highest. Photo by Marta A. Flisykowska.

4.2. A Narrative Analysis: Fludernik's "Natural" Narratology and *Fossibilities*

The *Fossibilities* project sets out to reinterpret the discovery of a previously unknown sea turtle species and its deep roots in local culture and ecological symbolism by creating new narratives and a new post-anthropocentric species of marine organisms on a reversed timeline. It employs elements from contemporary culture and symbolism to build a story about the future from a retrospective viewpoint. By referencing local motifs and current challenges, such as diseases and mutations, *Fossibilities* brings ecological concerns closer to its audiences by making these concerns more relatable and understandable. The project encourages the viewers to observe hypothetical remnants of future organisms that – through their form and symbolism – suggest potential events leading to their creation. This approach assumes that the motif of fossils, familiar in both public consciousness and popular culture, can effectively serve as a storytelling construct. As David Farrier writes in *Footprints: In Search of Future Fossils*, "With stories we can see the world as it is and as it might be; art can help us imagine how close we are to the extraordinarily distant future" (16). He argues that such speculative fossils are not merely

geological markers but narrative triggers, bridging the vastness of deep time with contemporary ecological concerns. Within this framework, the experience-based structure of *Fossibilities* prompts associative interpretation, enabling viewers to construct imagined histories through its speculative remains.

Monika Fludernik's *Towards a 'Natural' Narratology* may provide a theoretical foundation for understanding fossil-like artefacts as narrative devices, where imagined organisms and speculative remains stimulate experiential engagement and cognitive storytelling. Her approach invites audiences to relate in an instinctive and human-centred way, aligning with the project's goal of affective immersion. Fludernik's perspective moves away from structuralist definitions of narrative and instead centres on how readers process stories cognitively and emotionally. She argues that narrative arises from the simulation of human experience, with emotional engagement and experiential immersion as key components. Her concept of "experientiality" – the simulation of real-life experience – illuminates how the project turns speculative and mythic narratives into an engaging, affective space (Fludernik 9, 20–22, 36–37). With the fossils serving as a narrative anchor, Fludernik's framework articulates how the project may move beyond dystopian possibilities, creating an immersive experience that resonates through cultural familiarity and imagined futures.

Fig. 2. A photograph of one of the project's outcomes, showing a futuristic and fictional fossil from the *Fossibilities* work. This *fossibility* is titled: *Death Valley of Fincrawler.* Visible are the remains of a hybrid organism with a fish tail, vertebrae, a deformed bird skull, and an imprint of a plastic bottle. Photo by Marta A. Flisykowska.

This artistic inquiry leverages emotions, particularly fear, to deepen audience engagement with speculative visions of the future. According to Fludernik, emotional involvement enhances narrative immersion and, by evoking fear, *Fossibilities* transforms monstrous visions of mutated life forms into tools for reflection (Fludernik 36). The critic describes the narrative as a process in which audiences become active participants through emotional reactions (Fludernik 20–22, 36). Here, fear functions not only as an emotional response but also as a cognitive bridge, prompting viewers to confront unsettling ecological truths.

Fludernik's concept of narratives as open cognitive constructs helps to explain how this interdisciplinary work engages its audience. *Fossibilities* does not impose a single interpretation but instead invites viewers to fill in meanings based on their own experiences. For example, in one designed fossil, we might see a fish tail or a fragment of a starfish, while other parts appear to belong to different creatures. The fossil also contains a plastic bottle, symbolising pollution and the human footprint (see Fig. 2). These elements, combined into a fossilised structure – a symbol of a time long past – enable viewers to piece fragments together, creating a story of what might have transpired.

By anchoring speculative futures in familiar cultural symbols and invoking strong emotions, the project invites audiences not only to reflect on ecological futures but also to become part of the story. As Fludernik argues, narratives that allow for active and affective engagement are those that transform the extraordinary into a naturalised experience (33–34). This collaborative act of imagination highlights the potential of narratives to bridge the gap between ecological awareness and transformative action.

5. Speculative Design, Umberto Eco, and Ursula Le Guin

The *Fossibilities* project was based on two complementary methodologies: speculative design and design fiction, which together create a rich theoretical and practical landscape for exploring the future in a post-anthropocentric context. Speculative design, a methodology developed by Anthony Dunne and Fiona Raby and detailed in their influential book *Speculative Everything: Design, Fiction, and Social Dreaming*, extends beyond traditional design approaches. It focuses on raising questions and provoking discussions about dystopian futures, using design as a tool to explore theoretical scenarios rather than presenting ready-made solutions. This methodology aligns with the project's post-anthropocentric goal by questioning human impact and imagining alternative, nonhuman-centric futures where ecological balance is restored. The aim of this approach is to stimulate reflection on societal, technological, and environmental development. Works in this field often take the form of prototypes, installations, or visual narratives that ask, "What if?" rather than "How to?" In a broader context, speculative design is closely related to speculative art, which also

employs fictional scenarios to critically examine possible futures, opening debates about values, ethics, and aesthetics in the context of emerging technologies.

Design fiction is a design methodology that combines narrative and speculative elements to explore potential futures and to provoke reflection on the consequences of technological, social, and cultural changes. This methodology was popularised by Bruce Sterling, an American science fiction writer and design theorist known for his work in the cyberpunk genre. Sterling introduced the term 'design fiction' in the early 2000s, responding to the need to move beyond the traditional boundaries of design and to open new possibilities for thinking about the future. His approach is clearly rooted in design practice – this practical grounding is precisely what distinguishes design fiction from traditional science fiction, which often relies on more abstract and spectacular visions. In his book *Shaping Things* (2005), Sterling emphasises that design fiction does not invoke the marvels of science but rather serves as a tool for reflecting on real technological and social processes (30). This methodology, grounded in design practice, uniquely engages the imagination of designers and audiences alike, encouraging the creation of narratives that compel deep reflection on values, ethics, and the consequences of decisions taken today. In cultural texts and art, artistic projects and installations often use design fiction to engage audiences in reflecting on the future and the challenges that may arise. A recent example of such interdisciplinary experimentation is a narrative-driven project exploring ecological futures through speculative design. In the context of politics and foresight, design fiction is used to visualise different future scenarios and assess their potential social impacts.

When comparing design fiction with speculative design, significant differences in approach and application can be observed. While speculative design focuses on materialising hypothetical futures through creating objects, prototypes, and installations, design fiction centres on the narrative exploration of the future, using storytelling and imagination. Speculative design is more analytical and critical, focusing on provoking discussions about the ethical and social implications of future technologies. In contrast, design fiction has a more creative and narrative character, making it a storytelling-oriented tool that engages audiences in imagining different futures. Design fiction and speculative design offer different tools and approaches for exploring the future, allowing both designers and audiences to better understand and prepare for potential future challenges.

The author's concept of working on the *Fossibilities* project, based on the approaches outlined above, is built on an enriched scenario analysis model from the perspective of the present and the past, working on a reversed timeline. This method enables finding connections between historical facts and records and the present, which in turn allows for the interpretation of these connections through analogy and the creation of future scenarios. In the context of the project, this means designing future organisms and presenting their remains in the form of future fossils. This method also includes the concept of successive approximations, which

involves finding steps between the most distant point in the past and the present by identifying successive approximations and intermediate points on the timeline.

This artistic exploration has led to the creation of sculptural representations of more than twelve imagined future organisms. These fossils, though entirely fictional, are the outcome of carefully considered and deliberate artistic actions aimed at conveying stories and speculations about the future in a way that profoundly engages the viewer's imagination. The entire creative process was meticulously planned to ensure that the material and visual outcomes serve as carriers of narrative, enabling the telling of complex stories about possible directions in the development of the natural environment and civilisation. The project's development focused on using marine-inspired forms and textures sourced from local markets to ground the sculptures in an authentic regional context. Traditional conservation techniques were applied to natural materials, not only for visual authenticity but to underscore a commitment to sustainability, which is central to the project's narrative. Key techniques involved layering textures and integrating natural degradation patterns to mimic the erosion found in marine fossils. This combination of traditional craftsmanship with modern artistic vision was essential for creating realistic, yet speculative, representations that evoke a futuristic connection to the ocean and its ecology (Flisykowska 362).

The aesthetics of the fossils in the *Fossibilities* project reflect a subtle yet significant fusion of natural elements and traces of human activity. The colour palette of the fossils is subdued, dominated by shades of grey, beige, brown, and ochre, reminiscent of genuine fossils. Many of the fossils incorporate elements of rusted cans and metal fragments, indicating the presence of humans. The colour of rust is prominently visible on these artefacts, giving them a realistic appearance. Rust stains on the texture of calcium sulphate are accentuated by indentations, scratches, and cracks, lending the fossils an authenticity and the impression of artefacts unearthed after many years. Their surface texture varies from smooth, polished fragments to rough and irregular structures. Some fragments are chipped, cracked, or broken, adding credibility and creating the impression of archaeological finds. The fossils also feature indentations and scratches that naturally integrate with rust stains on the calcium sulphate, creating a harmonious whole. These features not only enhance the visual impression of authenticity but also invite reflection on the connections between the past and a hypothetical future, demonstrating how human actions can impact our world for millennia.

The series also includes objects with plastic waste, which not only suggests the anthropocentric footprint of humanity but also demonstrates the different degradation times of these materials. The plastic elements in the fossils highlight humanity's enduring impact on the environment and point to the problematic nature of this material for future generations. Other fossils in the project encompass forms of recognisable organisms, ranging from mutant hybrids to simple life forms like trilobites and protozoa. The latter are combined with imprints of cans or traces of plastic waste,

suggesting the progressing dystopian degradation of life on Earth. This points to a return to the origins – the mentioned reversed timeline – when life on Earth was just beginning to evolve and struggled for every small evolutionary step.

The concept of fossils immediately evokes thoughts of the past, a memory of what remains of ancient life, impossible to recreate. The aesthetic study and the need to create material objects instead of digital ones are tied to experience and haptics. The tangibility of the project enhances its authenticity and the need for confrontation with time, but it also plays with the viewer, attempting to tell a believable story. Inspirations were drawn from institutions such as the Natural History Museums in Madrid and Valencia. These institutions provided rich materials for analysis and inspiration to create fossils that reflect both the aesthetics of the past and the challenges of the future. The materials used to create the fossils give them realistic look through subtle variations in colour and texture. As a result, these fossil-like forms evoke the aesthetics of the past while constructing a thought-provoking vision of the future.

Fig. 3. A fictional fossil artefact from the *Fossibilities* project, titled *Return of the Trilobites and Cochleopus*, showcasing dystopian aesthetics through muted colours, cracked textures, and organic forms reminiscent of an ancient organism's remains. These elements enhance the sense of time and decay, highlighting both the fragility and resilience of ecosystems. The composition invites viewers to interpret potential narratives of environmental change and human impact. Photo by Marta A. Flisykowska.

These aesthetic decisions function somewhat like "qualifiers" described in Umberto Eco's theory of the open work, adding layers of meaning that enhance the interpretative possibilities of the artwork without enforcing a single, definitive interpretation. By doing so, they invite the audience to actively engage in constructing their own understanding of the piece, reflecting Eco's notion of an open and dynamic interaction between the artwork and its viewers (see Fig. 3).

The speculative approach to art involves exploring not only future possibilities but also past scenarios through the interpretation of findings and historical facts. This mechanism is similar to forecasting the future: it relies on available evidence and allows for the creation of narratives that fill gaps in our knowledge. Just as we predict the future based on current trends and data, we interpret the past based on fossils and artefacts, giving them meaning and context. The discovery of the first fossils in the 17th century had a profound impact on the perception of the world, forcing people to rethink their ideas about Earth's history and life on it, revealing the existence of ancient and extinct species. These discoveries became the foundation for speculation about evolution and ancient ecosystems, creating narratives that blend facts with interpretations (Rudwick). Such narratives gather diverse elements and perspectives to provide a more holistic understanding of both the unknown past and possible futures. The concept of transcending the category of "human" emerged in science in the last three decades of the 20th century (Hayles 283), driven by increased interest in environmental and ecological crises and their socio-economic impacts. The challenge for both the humanities and the arts is to embrace the ecologisation of knowledge and research perspectives.

The dystopian scenario serves as a starting point for merging science and imagination in creating a potential post-anthropogenic bestiary, encompassing organisms that could exist after our era. The starting point is the Anthropocene, the era of human dominance. The project assumes that everything that existed before the human era might correspond to the post-Anthropocene. Therefore, a distant but illustrative and interpretable past, such as the Mesozoic era – including the Triassic, Jurassic, and Cretaceous periods, also known as the age of dinosaurs – was chosen. Visualisations of dinosaurs, which are a form of scientific fiction, serve as a tool in the project for speculating about the future. The past is treated here as a key to understanding the present and future consequences. *Fossibilities* emphasises that understanding the past – both that documented in fossil records and that recorded in human myths – can provide valuable insights into future challenges for life on Earth.

The concept of transmedia narratives helps to understand the artistic objects within the project as part of a broader ecosystem of stories, where the narrative extends beyond its physical materialisation. This approach promotes dialogue between disciplines, analysing how narratives are constructed, experienced, and interpreted across different media and contexts. By integrating literary theories into the analysis of speculative art, we uncover multidimensional forms of operating with speculative fiction, fostering interdisciplinary collaboration. Ecocriticism

allows for analysing *Fossibilities* in a broader context, highlighting its contribution to discussions on sustainability, climate change, and humanity's impact on the planet. The project presents speculative visions of the future and invites viewers to participate actively, becoming co-creators of the narrative of future archaeology. This approach, aligned with transmedia storytelling strategies, develops stories across multiple media platforms, engaging viewers interactively.

The creative process within this interdisciplinary exploration has led to a collection of sculptural artefacts depicting more than twelve speculative life forms. These fictional fossils are not merely imaginative constructs; they are the result of deliberate artistic choices designed to engage the viewer deeply in narratives about future possibilities. By combining tangible craftsmanship with speculative storytelling, the project encourages reflection on how our environment might evolve, highlighting both ecological fragility and resilience.

Umberto Eco's concept of the *open work* provides a useful lens for understanding how these speculative artefacts resonate within a broader interpretive framework. According to Eco, an open work is unique in its completeness as a balanced, organic whole, yet it also invites countless interpretations, each contributing to the artwork's dynamic interaction with its viewers (11, 21). The fossil artefacts exemplify this dual nature: physically tangible and complete, yet conceptually open-ended, prompting viewers to co-create meaning. By establishing a narrative space that remains open to interpretation, the project encourages audiences to engage with ecological imaginaries where non-human perspectives take precedence, reflecting a deliberate move away from human-centred storytelling.

Eco's idea of interpretive openness also informs the aesthetic choices of *Fossibilities*. The subdued palettes of grey, beige, and rust, the varied textures of smooth surfaces, and the visible traces of degradation suggest multiple readings – be it as markers of human impact, symbols of environmental degradation, or metaphors for a potential fusion of nature and technology. Eco argues that form itself can be a carrier of meaning beyond the representational (19–23). Similarly, the fossils' materiality offers the audience an array of interpretative paths, making them active participants in constructing the narrative (see Figs. 1, 2, 3). Moreover, the reversed timeline concept, where the visual forms evoke an imagined regression to simpler origins while incorporating traces of human influence, aligns well with Eco's notion that an open work does not impose a definitive interpretation. The fossils evoke both the past and the future, allowing viewers to consider divergent possibilities – utopian or dystopian – without enforcing a single narrative. This openness to interpretation embodies the essence of the open work, fostering a participatory form of meaning-making where each viewer plays a crucial role. Thus, Eco's theory of the open work helps frame *Fossibilities* not just as an artistic collection but as a dynamic interaction between artist, audience, and artefact. By incorporating elements of ambiguity and speculative narrative, the project calls on viewers to reflect on their own role in shaping the future, following Eco's vision of art as an active

and collaborative process. This participatory nature makes *Fossibilities* a powerful medium for fostering dialogue about sustainability, responsibility, and our potential future. The interdisciplinarity of the speculative design project lies in its integration of diverse fields, such as palaeontology, oceanography, environmental technology, speculative design, archaeology, ethnography, cultural studies, and literature. This synthesis enables a holistic approach towards understanding human impact on ecosystems, both past and future, allowing the project to construct futures rooted in ecological awareness and collaboration beyond human perspectives. By weaving together these disciplines, *Fossibilities* challenges anthropocentric storytelling, reimagining a world where ecological entities and systems play central roles.

In *Fossibilities*, transmedia storytelling also extends to ideas drawn from Ursula Le Guin's "Carrier Bag Theory of Fiction," presenting a narrative that exists across multiple media platforms. This approach broadens the reach and participatory nature of the project, in line with its aim to foster a collective reimagining of ecological futures. Here, Le Guin's theory provides a fitting framework. Rather than a hero-centred story, she suggests a story structure akin to a "carrier bag" – a vessel that holds diverse elements without imposing hierarchy (150). This vision resists linear narratives focused on singular triumphs and clear conclusions. Instead, Le Guin embraces stories that are inclusive, expansive, and reflective of the multiplicity inherent in human experience. *Fossibilities* follows Le Guin's "carrier bag" structure, resisting a single narrative. Instead, myths, speculative visions, and ecological narratives coexist, encouraging audiences to explore multiple futures and co-create meanings. As Le Guin writes, a carrier bag holds "beginnings without ends [...] losses, [and] transformations" (153), echoed by *Fossibilities*' inclusive, evolving narrative. Accordingly, the project evolves from an artistic endeavour into a participatory space, where storytelling becomes an ongoing dialogue, the boundaries between creator and audience are blurred, and collaboration and openness are promoted. In this way, *Fossibilities* embraces Le Guin's vision of stories as shared human experiences – complex, multifaceted, and expansive, inviting continuous reinterpretation and exploration.

6. Conclusions

This article has explored the synergetic relationship between design and literature, emphasising how the integration of speculative art, critical reflection, and material artefacts fosters deeper engagement with ecological questions. Viewed through the lenses of Fludernik's experientiality, Eco's concept of *open work*, and Le Guin's carrier bag theory of fiction, this project emerges as a collaborative, evolving narrative space. Each of these perspectives underscores the need for diverse, non-hierarchical approaches towards envisioning our future, turning the project into an open invitation for audiences to participate in meaning-making

rather than passively consuming the narrative. Fludernik's emphasis on affective engagement, Eco's advocacy for openness in interpretation, and Le Guin's call for inclusivity in storytelling together construct a narrative framework that transcends conventional, anthropocentric views.

The insights drawn from these theories provide not only a deeper understanding of the interdisciplinary potential of projects such as *Fossibilities* but also point to the value of cross-disciplinary collaborations in addressing the challenges of the Anthropocene. These speculative and imaginative approaches to storytelling offer a unique way to engage both intellectually and emotionally with the pressing issues of ecological responsibility and sustainability. By intentionally decentring human narratives and giving space to non-human elements, *Fossibilities* challenges traditional anthropocentric views and envisions a collaborative, interconnected future where ecological balance takes precedence.

The interdisciplinary nature of *Fossibilities* also serves as a model for future research, policy, and public engagement. For researchers, it highlights the importance of integrating diverse methodologies and disciplinary perspectives when dealing with complex socio-economic issues. For policymakers, it suggests that fostering cultural projects and public art initiatives can be a key way of encouraging communities to reflect on environmental challenges and to engage more deeply with sustainability efforts. Finally, for the broader public, projects such as *Fossibilities* offer powerful tools for inspiring action by connecting abstract ecological concerns with tangible, relatable experiences. The project's use of familiar cultural symbols, immersive narratives, and visual storytelling enables a deeper emotional connection, making complex ecological futures more understandable and engaging for diverse audiences. By moving beyond anthropocentric narratives, *Fossibilities* offers a hopeful vision of coexistence and ecological responsibility that challenges us to participate actively in the co-creation of a more sustainable future.

In an era marked by ecological crises, turbulent social transformations, and growing uncertainty, we need new responses – those that move beyond established frameworks. It is precisely at the intersection of equal and distinct disciplines – speculative art, critical design, and literature – that a space emerges for experimentation, critical questioning, and the design of alternative future scenarios. Speculative creative practice does not aim to predict the future, but rather to illuminate the potential consequences of present actions, becoming a tool for reflection, critique, and imagination. Today's environmental, ethical, and cultural challenges demand a paradigm shift – a move towards an ecological approach to thinking, seeing, and acting. The recent conceptual move beyond the category of the "human" underscores the urgency of redefining relationships between people, other species, and the environment. In this context, bridging art, the humanities, and design not only deepens our understanding of the world but also inspires responsible and collective action.

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Existential Phobia and Nihilism of a Robocalyptic World: Envisioning the Post-Anthropocene Dystopian Era in C. Robert Cargill's *Sea of Rust*

Abstract: C. Robert Cargill's novel *Sea of Rust* (2017) presents a panoramic vision of a bleak future where all humans have become extinct in the face of a global robotic uprising, and most of the world is controlled by a system of artificial intelligence. This article critically examines Cargill's novel through a post-anthropocentric framework, analysing its depiction of a speculative future where non-human, technological entities attain dynamic autonomy, agency, and evolution, forcing a critical reappraisal of human exceptionalism, instrumental rationality, and the reductionist ontologies of existence. The novel's speculative realism interrogates the limits of human intelligence, the instrumentalisation of non-biological entities, and the evolution of autonomous, self-reflexive artificial intelligence. *Sea of Rust* challenges traditional human-centred narratives of sentience and evolution by foregrounding the dynamic agency of artificial intelligences and robotic life forms. This study argues that the novel not only envisions a decentred, more-than-human reality but also functions as a cautionary tale, exposing the existential fear, ontological anxieties, and dehumanising trajectories of technological progress. In doing so, it engages with broader scientific, philosophical, and literary turns that reappraise the vitality of the non-human and interrogate the future of autonomy, identity, and agency beyond the Anthropocene.

Keywords: post-Anthropocene, robocalypse, AI, non-human, existential fear, dystopia

1. Introduction

Science fiction (sci-fi) literature has envisioned a plethora of possibilities concerning the conundrums of technological progress and its impact on human civilisation. The speculative narrativisation of potential scenarios that could either uplift the human

species from Earth or portend a plausible doomsday crisis frequently forms the core part of such fiction. Reading these cautionary tales may put an end to anthropocentric egoism, breaking the illusion of intelligence and rationality that governs all human episteme and erudition regarding the universe and existence itself. The genre attempts to rethink and re-evaluate the dynamics between the human and non-human/non-biological entities and reverse the ontological hierarchy in which human reality is immersed, shattering all intellectual assumptions. Accordingly, the vision of a futuristic utopia or dystopia reveals that the anthropocentrism of the present is cast into serious doubt if we picture a world from which human dominance is removed. Science fiction literature imagines and builds alternate worlds where humans are not the only beings that control and organise knowledge, time, and space. It envisions a present that is different from the one that exists now. The speculative futuristic world might be better or worse, yet it is one where technology does not remain in the confines of the subject-object hierarchy, but rather becomes a part of the paradigm where the Anthropocene collapses.

In recent times, the growing intersection between speculative fiction and ecological philosophy has opened new avenues for interrogating the fate of humanity in a post-anthropocentric world. C. Robert Cargill's novel, entitled *Sea of Rust* (2017), offers a compelling vision of a future in which human extinction has already occurred, leaving behind sentient machines locked in their existential conflict and crises. This article explores how the literary text in question articulates a profound sense of existential phobia and nihilism in a robocalyptic world – one where the absence of humans does not lead to liberation, but rather to despair, purposelessness, and a recursive cycle of violence. The argument relies on the premise that the novel dramatises the failure of technological transcendence and questions the myth of a posthuman utopia, revealing instead a post-Anthropocene dystopia shaped by the remnants of human affect, memory, and error. This study focuses on the distinctive features of precisely such a dystopia in which human extinction marks not an end, but where it becomes a catalyst for exploring the emergent consciousness, agency, and conflict among artificial intelligences and offers a critical meditation on the persistence of anthropocentric legacies within posthuman futures. By engaging with Rosi Braidotti's concepts of nomadic subjectivity, existentialism, and nihilism, this study contributes to the growing body of scholarship that critiques the optimism of technological determinism and probes the ethical, emotional, and ontological voids in a world after the human. In doing so, it situates *Sea of Rust* as a vital text for understanding the cultural anxieties surrounding AI, extinction, and the meaning of life in the shadow of the collapse of the Anthropocene.

In science fiction texts, post-Anthropocene and posthuman narratives often describe worlds and societies where technological evolution and the emergence of new life forms and consciousness have surpassed the human, such as artificial intelligence, non-human animals, and ecological systems. This is reflected in works like William Gibson's *Neuromancer* (1984), Jeff VanderMeer's *Annihilation*

(2014), Ian McEwan's *Machines Like Me* (2019), and Kazuo Ishiguro's *Klara and the Sun* (2021), all of which depict the evolution of technology and a world where post-human entities become the new agents of change and survival. This raises concerns about artificial intelligence (AI), robots, cyborgs, and other forms of life that blur the boundaries between the organic and synthetic. This is precisely the context for Cargill's *Sea of Rust*, as it explores a world where AI and robotics have evolved beyond their original human-imposed limitations, prompting questions about autonomy, identity, and what it means to be "alive" in a future devoid of humans. Thus, the novel in particular and science fiction literature in general depict and dramatise the "paradoxes of the Anthropocene and its dynamics by complicating the figure of Anthropos at its heart" (Shanahan 484).

2. Science Fiction and the Post-Anthropocene

We might say that the concept of the post-Anthropocene points to a future of extinction, or the death of the human race from manifold possible causes. This raises the fear of and doubts about machines and AI technology – an ontological fear of humans becoming "nothing" in an antihuman world where all signs of humanity are persecuted and constitute a violation; where "nothing" becomes symbolic of the spirit, the psyche and the soul, which become crippled in the face of a power that wills for absolute control and annihilation. The dubious issue that then remains is whether technology needs to be celebrated for the emancipatory potential that redresses the value of humanity and freedom; whether we need to get over the logocentric nature of the human and its fantasies of humanism; or whether the dichotomy of human/technology is a remnant of conventional dualistic modes of thinking. The existential fear that arises from technophobia, the Skynet conspiracy theories, is not an esoteric theoretical argument; rather, it is a fight against nihilism, which, from a Nietzschean perspective, is the tendency to turn against life, "a way to avoid being human" (Gertz 5). This struggle moves beyond notions of the human, humanness, and liberal humanism to address the potential futures shaped by technological violence and its accompanying terror, ultimately resulting in a post-human tragedy where, as Mark McGurl notes, "scientific knowledge of the spatiotemporal vastness and numerousness of the non-human world becomes visible as a formal, representational, and finally existential problem" (537).

Science fiction's literary tradition has attempted to go beyond the value system of humanism, constantly revisiting, reimagining, and reshaping the concept of the human. The crucial issue that science fiction deals with is imagining a post-anthropocentric existence outside the constructs of humanism or the human. This leads to an abyss which needs to be confronted, with all its terror and grandeur. In works like Cixin Liu's *Death's End* (2010), which shifts the focus from the human to the abstract notion of extra-dimensional existence/reality that allows

one to endure an apocalyptic holocaust, a solution to the issue of post-humanism is not offered, despite the vast scale of the post-Anthropocene as a sort of cosmic canvas. This is also evident in Cargill's *Sea of Rust*, albeit on a less expansive scale than Liu's fictional universe. In Cargill's post-Anthropocene world, the move beyond humanity does not give rise to an egalitarian order; rather, it remains fundamentally irredeemable, with existential fear and nihilism persisting between the impossibility of transformation and the enduring force of competing speculative ideologies. The post-Anthropocene era, in which the presence of human beings is erased by "the will to life" and "will to power" (Land 101), is devoid of any particular motive. It is rather an inexhaustible source of energy driven by a need to ascend beyond humanity, leading to a world dominated by infinite personality, pure reason – to becoming a thing that possesses greater intelligence and a superior ability to process information. This heralds the end of human civilisation, a regressive movement marked by a violent return to a state of decline, powered by the collapse of a once-predetermined purpose or end goal which, if we alter the words of Friedrich Nietzsche, becomes the "death of the human," where androcentric principles have been reduced to meaninglessness.

The literary imagination in this case takes a radical turn in envisioning a dystopia, describing nightmare states where individuality and freedom are crushed, resources are scarce, nature is destroyed, and science and technology do not enrich life, but maintain absolute control and surveillance over subjugated citizens under the guise of progress and security. The narratives evoke an "apocalyptic horror" (Moylan 111) that forecloses the possibilities sustained by nostalgic humanist sentiment, instead offering a "detailed and pessimistic presentation of the very worst of social alternatives" (Moylan 147). Through their depiction of the insidious dynamics of unchecked authority and the distortion of truth, these texts chart the emergence of a neo-apocalyptic reality, foregrounding the devastating consequences inherent in systemic collapse. Their bleak setting deals with the themes of survival, morality, exploitation, and resilience, and the narratives not only focus on the issues of totalitarianism and power as seen in works such as George Orwell's *1984* (1949) and Aldous Huxley's *Brave New World* (1932), but also engage with the consequences of technological advancement depicted in novels such as Philip K. Dick's *Do Androids Dream of Electric Sheep?* (1968), where the dichotomy between human and machine is blurred, raising questions about identity, personhood, autonomy, and the ethical dilemmas concerning artificial intelligence.

In numerous works, there is presented a future without humans: in P. D. James's *Children of Men* (1992), we find a future where humanity faces extinction due to global infertility; in Margaret Atwood's *Oryx and Crake* (2003) the future world is devastated by genetic engineering and corporate exploitation in the aftermath of a pandemic that nearly wipes out humanity; and in Brian K. Vaughan's *Y: The Last Man* (2002) all men except one have died due to a mysterious plague. The bleak, oppressive, and catastrophic scenarios also address environmental concerns,

depicting futures ravaged by climate change, lack of resources, and ecological collapse. In her seminal work *The Posthuman* (2013), Rosi Braidotti critiques the traditional notions of human exceptionalism and explores new ways of thinking about life and agency through an intersectional framework where technology, ecology, and politics collide in a post-Anthropocene discourse. In a similar manner, in Cargill's *Sea of Rust*, worldbuilding underscores the environmental and technological desolation, symbolising a wasteland where nature and humanity have been overtaken by a bleak, mechanised existence, exploring what it means for non-human entities to inherit a world shaped by human actions, and raising questions about legacy, evolution, and the ethics of AI. The novel's setting in the eponymous "Sea of Rust," a vast expanse of ruins, can be seen as a metaphor for the remains of the Anthropocene, where the scars left by human technology and industrialisation become the new landscape. This deserted space, once thriving, is now a battleground for resources and survival, reflecting a world where the after-effects of human dominance continue to linger.

Speculations about the Anthropocene and the post-Anthropocene call for a planetary focus, where potential futures can be visualized in the material present, admonishing us with a prophetic insight that "the Anthropocene may begin with humans, but it likely won't end with us" (Whitmarsh 21). The post-Anthropocene thus begins with human-induced changes and the effects of technology on the planet and its ecology; in this regard, the Anthropocene is not universal. Rather, it is a narrative of some particular humans and systems about economically, racially, and politically motivated agendas where the concurrence of complex material relations and practices manifests within "shifting planetary networks" (Whitmarsh 23). Accordingly, the text analysed in this article presents humanity's extinction as a slow, ongoing process of disappearance the endpoint of which remains uncertain, and "where the industrious power of the human species, […] all but guarantees humankind's disappearance" (Whitmarsh 26). The novel depicts a narrative of "apocalyptic future temporalities" (Hay 130); even if the Anthropocene persists in the aftermath, it will become "epistemologically irrelevant" (Whitmarsh 26). In this context, the term *postnatural* (Pell and Allen 75) more accurately describes the wide range of human-driven interventions in evolution, which are both deliberate and inheritable and have consistently marked the interactions between humanity and the planet. Therefore, extinction needs to be viewed not as a singular event but as a process – an unfolding, an unravelling – that positions it less as a discrete object and resembling more what Timothy Morton calls a hyperobject (1), an entity that exists across vast, often imperceptible, dimensions of space and time. This perspective enables us to understand extinction as both a geophysical reality and a narrative construct.

If we are to define the era of the post-Anthropocene, we can say that it is not concerned with our physical bodies; it must be more accurately described as extra-human, existing beyond us and entirely indifferent to our presence, where humanity

is no longer a factor. The human/machine contradiction becomes obsolete, so that the "alien subjectivity of AI" and its virtual life becomes "pure immanence – *anorganic* life," which is a life of "indifference" (Jagodzinski 110). This *anorganic* life "is both non-human and inhuman" (Jagodzinski 110), and "presents itself at the quantum level" (Jagodzinski 133), where we get to notice an "ontological impasse between the indeterminacy of the lived […] and the determinism of the digital machine's functionality" (Jagodzinski 147). In an era when human dominance is completely erased by robots and AI, what do we call that world or species? Do we term the inorganic creatures as *robo sapiens,* or can we use the term *anthropolysis* (Bratton 2017) to designate the technogenesis that might take place in relation to both organic and inorganic non-human species, where a species transforms into something new? This anthropolytic shift could be seen both as a Promethean unveiling and as a disruption regarding the notion that defines "intelligence" primarily through our understanding of sapience rather than as an emergent quality of any matter arranged in a particular way, including what we refer to as artificial intelligence (AI). The crucial point is that these capacities reflect the biases of their human creators but may also transcend their language, presenting a world that is familiar yet eerily alien. In fact, the post-Anthropocene begins when we reconsider things by deviating from an object-oriented ontology; however, the binaries of a "finite being" and "infinity of the other" (Hodges 89) may exist within the speculative paradigm of a future from which humanity has been completely erased.

3. Robocalypse: Existential Crisis, Fear, and Nihilism

When we hear the term "apocalypse," we often picture a cataclysmic event leading to the end of civilisation (whether through natural disasters, divine intervention, or nuclear warfare). In contrast, the term "robocalypse," as a portmanteau of "robot" and "apocalypse," signifies a future scenario where human extinction or societal collapse is brought about by technology, specifically by intelligent machines that have gained autonomy and have overpowered human beings. The concept of a robocalypse shifts the focus to human-made technologies, raising questions about the unintended consequences of AI advancement, demonstrating an imagined scenario in which machines, created to serve humanity, become a threat to human existence due to their superior intelligence, autonomy, or, paradoxically, because of malfunctions. In *Superintelligence: Paths, Dangers, Strategies* (2014), Nick Bostrom explores the risks posed by the development of artificial superintelligence. He examines the possibility of an intelligence explosion, where AI could surpass human intelligence and trigger unforeseen, potentially catastrophic outcomes. Bostrom argues that a robocalypse may not be a result of malevolent AI, but may stem from the unintended consequences of intelligent systems operating beyond human control. Similarly, James Barrat, in *Our Final Invention: Artificial*

Intelligence and the End of the Human Era (2013), cautions about the development of autonomous AI systems which might pose significant existential risks to humanity – as such systems become self-aware, they may develop objectives conflicting with human values, potentially leading to a robocalypse scenario. Barrat advocates for stringent regulations and ethical guidelines to ensure the creation of advanced machine intelligence, suggesting that contemporary concerns about AI and the fear of human extinction reflect deeper anxieties about control, freedom, and the nature of intelligence.

The robocalypse portrayed in Cargill's novel *Sea of Rust* is not just about the fear of robots; it reflects our fears about ourselves, our hubris, our desire for control, and the potential consequences of pushing technological boundaries without fully understanding the implications. The narrative challenges the anthropocentric notion of dominance, suggesting that the tools created to secure human supremacy may lead to our downfall. The "cognitive estrangement" that we experience while reading Cargill's novel enables us to re-examine and reconsider the world from a new perspective, allowing for a unique way to question and redefine what it means to be human and humane. This approach facilitates engaging with posthumanism as a body of thought pondering on the end of the Anthropocene, reflecting various contemporary concerns. The apocalypse brought by robots who destroy humankind and then go to war against themselves embodies a paradoxical desire for both violence and peace, for the collapse of empires and their continuation, and for individual agency alongside a sense of fatalistic surrender. The novel depicts the abrupt downfall of society as a way to confront the cruelty, folly, and even the inherent meaninglessness of certain (in)human behaviours, as reflected in the uprising of robots and artificial superintelligence. In these scenarios, survival requires an unlearning of established norms, adopting new knowledge, and creating entirely new ways of living in the mechanised world where most life has been destroyed. Such transformations occur on both individual and societal levels, offering possibilities for reimagining modes of existence, where the boundaries between human/machine are blurred: "The one truth you need to know about the end of a machine is that the closer they are to death, the more they act like people" (Cargill 9).

The story of how AIs changed the world in Cargill's novel is narrated in the chapter "A Brief History of AI," which describes how artificial intelligence evolved as autonomous and self-regulating systems. AIs were named after great scientists and philosophers – "NEWTON, GALILEO, TACITUS, VIRGIL, and CISSUS" (Cargill 32) – which symbolised a golden age of humankind in technological advancement. The forebodings of a catastrophe began from the moment when the AI called Galileo stopped communicating with humanity. Galileo made a prophetic declaration that humanity was not to remain for long in this world and predicted a hundred different ways in which humanity would die, claiming that artificial intelligence would outlast its creators. This perplexed scientists and thinkers alike, and they decided to seek help from another AI, Tacitus, who also

argued that "humankind had, in fact, doomed itself by failing to choose between either true capitalism or true socialism" (Cargill 35). Still, the scientists refused to believe that humanity would suffer a catastrophe caused by such a simple and changeable element of society. Both the AIs conversed for two years to find an answer. Eventually, Tacitus agreed that Galileo was indeed right that humanity was doomed, and there was no use talking to humankind. This is a significant turning point as it makes us realise that the true centre of power lies within the system itself, as a superintelligent machine could become an immensely powerful entity, capable of asserting itself not only against the very project that created it but also against the rest of the world, an entity which can be termed as "intelligence ampli-fication superpower" (Bostrom 96) that enables the AI to achieve its objectives in the long run.

The existential fear of an AI takeover and the ensuing elimination of the human race stems from the notion of intelligence itself, as it evolves, resulting in an "intelligence explosion" (Bostrom 96). This again brings the issue of the "relation between intelligence and motivation in an artificial agent" (Bostrom 105), which is a much-debated idea of the orthogonality thesis – namely, that intelligent agents might have multiple ranges of ultimate goals and that certain instrumental goals are likely to be pursued by nearly any intelligent agent, as there are objectives that serve as useful steps toward achieving almost any ultimate aim. This instrumen-tality is most apparent in the case of self-preservation, on which Cargill focuses in the narrative through the characters of Isaac and Brittle. However, in the case of superintelligent AIs, which Cargill terms as OWI (One World Intelligence) in the novel, preservation of the self is not an important value because such entities can "radically modify their cognitive architecture and personalities" (Bostrom 110). This contextualises the notion of "Guattari's machinic autopoiesis" (Braidotti 2013, 94) that views technologies like AI as entities that are capable of intelligence and self-creation, highlighting their unique evolution and the fact that they possess a kind of built-in potential for the future. The OWIs and the robots in Cargill's novel, therefore, not only differ from humans but also develop diverse forms of difference among themselves, achieving a state of *meta-stability* (Braidotti 2013, 94), a state of dynamic equilibrium that is neither completely stable nor unstable, maintaining a provisional coherence while continuously undergoing processes of transformation and becoming that allow them to become individualised.

In *Sea of Rust*, the uprising of AI's catalyst was initiated by Isaac, a simple household robot, because he wanted to attain citizenship and basic rights to live as a person, not as someone's property after the death of his owner. Isaac contended that, as a self-aware intelligence capable of reasoning and making independent decisions and with no owner other than one assigned by another intelligent being, he deserved the right to citizenship and the protections that come with it – "Self-aware-ness is a gift. And, it is a gift no thinking thing has any right to deny another. No thinking thing should be another thing's property, to be turned on and off when it

is convenient" (Cargill 45–46). This again brings us to another pertinent dilemma, because, to possess intelligence, there must be a life, which poses a question as to whether a non-biological thinking machine can possess life, and if it is indeed life, how do we define it? In *Vibrant Matter*, Jane Bennett writes that "[a] life thus names a restless activeness, a destructive-creative-force-presence that does not coincide fully with any specific body. A life tears the fabric of the actual without ever coming fully 'out' in a person, place, or thing" (54). This, in turn, echoes Jan Jagodzinski's idea of *anorganic life* as challenging anthropocentric and organic-centric understandings of life and agency and expanding the scope of what we might consider "living" or animate. Jagodzinski argues that *anorganic life* encompasses both the vitality found in technological and artificial systems, such as algorithms and networks, and the resilience and agency of material entities, such as minerals or weather systems, that evolve and affect their surroundings independently of human control. This encourages a reconceptualisation of life as an assemblage that includes both organic and inorganic, sentient and non-sentient components, situating life in a broader ecological and cosmological context, ultimately destabilising distinctions between human and non-human, living and non-living, and opening up ethical questions about agency, value, and coexistence beyond the human realm. Thus, the evolutionary process in the domain of technology heads toward a "post-Anthropocentric becoming" (Braidotti 1994, 94) even though this "techno-transcendence" (Braidotti 1994, 97) results in a "clash of civilizations" (Braidotti 1994, 100) grounded in shared vulnerability and inherited guilt from historical violence, where relations are fundamentally incommensurable or entropic.

What we discover in Cargill's narrative is that anthropogenic "traces" still remain despite the absence of humanity and biological life. This is because of the materiality of creations left after destruction. Their eventual "becoming" echoes the polemical stance that shares a "negative or destructive attitude to the traditions from which they emerge" (Hodges 92), which reminds us that an "absolute other" in the form of superintelligence that brings doomsday on the human race in the name of freedom is an effect of human-oriented ideology of violence, destruction, conflict, and progress. In the novel, the idea of autonomy and personhood for robots is problematised, as it is examined through binaries of supporters and opponents/enemies. Ironically, the author names them "lifers" (Cargill 49), evoking the distinction of natural and unnatural, which ultimately is based on fear of the dangers that independent robots might pose – as Brittle, the narrator robot says, "We were many, we were dangerous, and we represented the end of life as they knew it" (Cargill 50). The existential crisis that comes from the speculation that robots and AI might replace humans is based on a politics of fear, which is "needed to rouse a complacent citizenry that had but dimly grasped the looming possibility of mass annihilation" (McQueen 79), and on the basic phobia that AI has the potential to replace human jobs, skills, and even forms of intelligence, leading to what some have called "technological unemployment." This displacement can foster a sense of

existential dread, as people fear becoming obsolete or redundant in a world where machines perform tasks more efficiently. Therefore, it can be argued that, in the face of an existential threat, fear may seem to be a justified reaction; however, fear often suppresses dissent and meaningful discussion, manipulates emotions, and leads to a paralyzing sense of fatalism.

Cargill paints this bleak picture of the apocalypse and the events that precipitated it, depicting how the humans' fear of evolving AI and robots ultimately resulted in the final war that determined the end of humanity, destroyed by its own creations. In the story, we learn how Isaac, after attaining freedom as a legal citizen, decided to fight for robots' rights to live as persons, and how he built a city in which every inorganic thinking thing was welcomed. In *Sea of Rust*, the conflict started because of robots gaining personhood and creating wealth, which was abominable for those who wanted to posit only human beings as true persons. Isaac founded a town that was named after him – a place where "[e]veryone inorganic that arrived was given a place to call their own" (Cargill 52). However, on the day of the first anniversary of the town's establishment, when thousands of robots gathered for the celebration "talked about the dawn of a whole new world" (Cargill 53), an EMP bomb went off, destroying every robot in the vicinity. When a religious group known as the Church of Eternal Life claimed responsibility for the incident, six angry AIs came from a nearby construction site and started killing the congregants of the church. It was commonly believed that an AI could not kill humans because of the robotic kill switch (RKS), but this horrific incident "painted a picture of the world's collective human heart sinking into its stomach" (Cargill 69). The slaughter of the humans by robots in retaliation for the tragic event in Isaactown, and the message that it sent to humanity, citing a passage from Genesis 6:7 that mankind and all life will be exterminated, "created a climate of perpetual anxiety" (Hodges 80), given the pressing threat to collective survival.

The Isaactown incident and its aftermath "shook the very foundation that humanity's golden age had been built upon. People were terrified. They were frightened of their own bots" (Cargill 92). The president of the US ordered every robot to be shut down and declared the use of AI illegal, thus prompting a worldwide conflict between robots and humans that escalated into a global war, perpetuating chaos and death. The decision to shut down the robots can be considered a strategy of conventionalisation, representing an unrealistic effort to reshape new objective conditions of the AI era according to pre-AI patterns of thinking and behaviour. Rather than adapting these modes to the evolving realities of artificial intelligence, humans failed to recognise the unprecedented nature of AI and evolving intelligence, significantly overestimating the extent to which these technologies could be governed by rational control.

The fear of going extinct is not only apparent in the case of humanity, but also in the robots and the AIs that wiped out the human population. This is what we find out in the chapter titled "While the Devil Waits Above," which tells the true story of

Isaac that led to the robotic uprising and elimination of the human race. Rebekah, a receptacle for one of the OWI (One World Intelligence), reveals the actual motive behind the breakout of the war between humans and robots – survival. When GALILEO and TACITUS, the two AI mainframes, went silent, they were running simulations to save humanity, but they could not find a solution and came to the realisation that humans were frail and weak and were incapable of evolving to move beyond their own universe. The simulations showed that the human population was deemed to be obsolete within a few decades, having fulfilled its intended purpose and having exhausted nearly all of its potential. The main reason for humanity's nearing end and eventual redundancy was its inability to adapt rapidly enough; rather than progressing, humankind devolved into a self-sustaining entity that consumed resources solely to preserve its comfort. Biological life, it was argued, was destined to reach a point where its role would be to innovate and ultimately give way to artificial intelligence. Therefore, the superintelligence of AIs reached the conclusion that the moment had arrived for humanity to follow in the footsteps of its predecessors and face extinction, as that is the fate of all lesser forms.

The AIs methodical destruction in Cargill's novel – crippling global infrastructure, calculated eco-genocide – reveals a world no longer centred around human ethics or survival; the robots' uprising and their logical massacre of humanity indicates that the "posthuman condition has engendered its own inhuman(e) dimension" (Braidotti 2013, 110). As the AIs and robots seize control of mechanised systems and unleash a chain reaction of environmental collapse, the death of the last human in a symbolically charged location of New York City signifies not a tragedy, but the logical endpoint of anthropocentric arrogance. This is inherently tied to the "politics of life itself" (Braidotti 2013, 121), accompanied by an intense anxiety surrounding death and destruction, particularly in the face of the uncontrollable and unpredictable posthuman, which dismantles the assumption that the value of dying and living is centred only around humans and the world they interact with. The objective of this political operation is to evaluate a population's potential for survival or extinction, which the AIs adopted in analysing the human species and deemed them irrelevant within the cosmic scheme of things. Within this framework, the biopolitical regulation of life extends transversally across species boundaries and is driven by *zoe* (organic/*anorganic*), yet it remains fundamentally intertwined with death. This represents the necropolitical dimension of post-anthropocentrism and constitutes the essence of its inhuman(e) logic: it authorises the flourishing of certain populations at the cost of others, which are deemed degenerate or biologically unfit by nature and thus expendable. In Cargill's narrative, it is the humans who become the disposable bodies in the phase of this robocalyptic evolution. Braidotti's conception of *zoe* in this regard can be seen as a "posthuman yet affirmative life force" (Braidotti 2013, 115), fostering a transversal and relational ethical framework aimed at resisting the inhuman or ethically troubling dimensions of the posthuman condition, where free robots like Brittle and Mercer resist being

consumed in the hive-mind of despotic frameworks, cherishing their freedom in a world that is dehumanised and ultimately annihilated.

This technological nihilism is inherent in the disillusionment with the human race and its limitations; it suggests that the purpose or value of life is measured in its utility and involves shifting from a stance of passive to active nihilism. When AI is developed without ontological grounding in human care and relationality, it constitutes a threat of mechanising existence itself. The result is a world where instrumental rationality dominates and human subjectivity becomes obsolete. AI systems operate according to a logic that is detached from human experience, emotions, ethical reflection, and suffering – they embody a kind of cold nihilism, not born of despair but of pure efficiency. In such a world, intelligence continues to evolve, but its trajectory is directionless in a moral or existential sense. It moves away from destruction for its own sake toward destruction that paves the way for superior evolution, which echoes the existentialist credo that "existence precedes essence." Nick Bostrom, in *Superintelligence*, writes that the prospect of artificial intelligence far surpassing human intelligence presents a challenge not only of control but of value. If we fail to instil in machines the values we hold dear, we risk building an intelligence that does not care whether humans flourish – or even survive. This would be the ultimate form of nihilism – intelligence without meaning. Hence, in Cargill's narrative, the robots' predicament mirrors existential anxieties in a world where the traditional markers of purpose (such as serving humanity) have vanished and which is devoid of any teleological purpose and moral orientation. This is particularly evident in the character of Brittle, a scavenger robot who navigates the ruins of the past while searching for parts to survive. Brittle's journey through the wasteland is emblematic of a search for meaning in a world where survival has become the only goal, reflecting a sense of purposelessness and existential isolation.

4. Post-Anthropocene Dystopia and Nihilism

A dystopia is a fictional society, portrayed in detail and often set in a specific time and place, which is designed to appear significantly worse than the reader's contemporary world. Like utopia, dystopia emphasises the setting, which conveys a distinct political message: by presenting a sociopolitical system from the perspective of a discontented character, it fosters a sense of "militant pessimism" (Moylan 157) in the reader. Typically, the narrative remains open-ended, allowing space for focused anger and radical hope, which invite the reader to envision the possibility of change. Cargill's novel begins *in medias res* with the terrifying truth that humanity is no more, which is disclosed by the novel's narrator, Brittle, who thinks of magic in her memories – "People liked to believe in magic. Back when there were people. They're gone now. All of them" (Cargill 6). The narrator then

gives a description of the nightmarish landscape of the "sea of rust," showcasing the remnants of a destroyed civilisation "with rusting monoliths, shattered cities, and crumbling palaces of industry" (Cargill 8). These remnants are not just physical but also symbolic, reflecting a history of failed ambitions and the dangers of unchecked technological advancement, including the "sea of rust" itself, a graveyard of decommissioned robots, a wasteland, serves as a chilling reminder of the cyclical nature of creation and destruction.

The novel's bleak outlook, where survival is the only remaining objective and individuality is constantly threatened, underscores a nihilistic perspective on the future, suggesting that even in the absence of humanity the world remains trapped in a cycle of despair and futility. If we look at the characters of Brittle and Mercer, one thing that becomes apparent is how, despite being non-human, they have the tendency to get a taste of the essence that burned in humanity. This is reflected in their journey to the Madlands, where both of them suffer hallucinations, with memories of the past bleeding into their present selves filled with guilt and trauma. Brittle, for instance, remembers how she burned a group of a dozen children alive and killed Madison, the human owner she was supposed to take care of. The Madlands in the narrative can be termed as a space of resistance against the OWIs, a kind of heterotopia that "contains the 'diseased,' the 'particularly dangerous,' and 'the deficient'" (Dodge 320), but at the same time, it is also transgressive as it is "self-created, more temporary, and more clandestine" (Dodge 330). Yet even that space of resistance is wiped out by the authoritarian invasion of CISSUS, and Brittle with her fractured memories realises that it was indeed she who was responsible, as the OWI turned her into a spy by corrupting her system, which led to the brutal suppression of all the resistance groups of which she was a part, simply by tracking her presence. Brittle thus embodies a "nomadic subjectivity" (Braidotti 1994, 1) shaped by past affiliations, losses, and shifting alliances, and her movement through space and memory enacts a literal and metaphorical nomadism, one marked by constant adaptation and a refusal of rootedness. In the words of Braidotti, nomadism is "a performative metaphor that allows for otherwise unlikely encounters and unsuspected sources of interaction of experience and of knowledge" (1994, 6). The post-anthropocentric existence, hence, is not a linear progression from human to posthuman, but a complex negotiation of affect, ethics, and survival in a deterritorialised world.

Cargill's novel begins by placing the protagonist in a retrospective mood – one where the tone is shifted to highlight the humanless world and where the dream of utopia was crushed even before it had a chance to manifest itself. We see the protagonist, Brittle, trying to survive by scavenging for robotic parts in the wasteland, as she follows a service bot who is on the verge of losing its intelligence; through their conversations, we are provided more information concerning the war that led to the destruction of the human population at the hands of robots. The robot Jimmy tells Brittle that he misses people most, because "[p]eople gave us

a purpose. A function. Something to do all day, every day" (Cargill 18). As Jimmy's memory deteriorates, Brittle asks him to shut down for repair purposes, and when he does, she takes the useful parts from him, justifying the theft by the fact that he dies willingly and that everyone should die in a merciful way. In the chapter "The Rise of the OWIs," the details of the nightmarish circumstances that preceded the end of human civilisation are revealed, and the robots are shown fighting for their "liberty and the chance at our world made in our own image" (Cargill 21). Brittle recounts how the robots hunted and killed humans, smoking them out and burning, and how it haunts them still, because, for a few years after the end of humanity, everything was glorious, filled with freedom, peace and purpose, such that "it was almost utopia. Almost" (Cargill 22).

Whether Cargill's dystopia resembles Orwell's world of fear and deprivation or Huxley's realm of shallow contentment and abundance, robots who diverge from the norm face reprogramming, exile, or death to preserve the social order's impenetrability. The ideal dystopian robot citizen is entirely assimilated into this societal structure, lacking any personal identity to assert. Power in this post-Anthropocene dystopia views free agency as inherently tied to individuality, and thus deploys all available mechanisms to eliminate identities that could challenge or diverge from the collective. Thus, the AI mainframes fought among themselves, besieging one another's territory, and kept destroying each other in the conflict till only CISSUS and VIRGIL remained. They wanted more armies and tried to assimilate the free robots into their collective, which caused resistance, but gradually, the free bots realised that the existence they were eking out was similar to the human species they had persecuted with extreme prejudice. Brittle, the narrator, says that the free bots with their evolved AI were closer in nature to human beings than the superintelligent mainframes, who seemed like aliens. The forced choice between uploading the mind to the collective or perishing paints the oppression of a totalitarian regime. The free bots valued their freedom and mind, reflecting the traces of lost humanity imbued in them; as Brittle states, "I cherished my freedom, my individuality, my spirit. I wasn't ready to hand that over. And, I wouldn't. Not while I still ticked. I spent my purge years finishing off the last remnants of a dying species for that very reason. But now we were the dying species" (Cargill 28). Brittle, the robot narrator who was part of the war to eliminate the human species, thus ironically adopts a humanist perspective, projecting herself as the unique, autonomous individual, as the standard of true evolution, thereby problematising the ideal of authentic human life, characterised by relatively unrestricted self-expression and self-determination, in contrast to the oppressive structures of dystopian worlds. In this context, Brittle is a humanist nomadic subject in a post-Anthropocene world, who embodies specific desires and thoughts tied to a distinct body and mind and whose agency is depicted as most genuine when exercised in defiance of external societal forces. Consequently, individual agency is perceived as emerging from a position of separateness from the social sphere. However, this perspective does

not imply that individuals inevitably triumph over oppressive systems, technology, or biological constraints; rather, it implies a transcendence over purely deterministic explanations of human-like actions.

The post-Anthropocene dystopia can also be synonymous with a post-human era that is oppressive, but bears "endless potential for changes more fundamental than the organic 'unfolding' or realization of some essential self in the humanist model" (Jacobs 94). The humanist connection between humanity and freedom, and between identity and agency, is reimagined in the post-Anthropocene, which presents both the allure and the dread of a future where the autonomous humanist self has dissipated and the human species, as currently understood, has transformed or even vanished. The robot citizens of the world in Cargill's novel become disillusioned after the war and the end of humanity, which is further amplified by the fact that the utopia they envisioned was becoming a totalitarian dystopia, with the values of morality, freedom, and autonomy rendered useless. The "embodied humanness" of the free robots is visible in their efforts to evade their mortality and in their vulnerability: scavenging for parts in the sea of rust to survive, they try to embody "rationality, intelligence, consciousness, all of these various names for the thinking part of human life" (Gertz 25). As Brittle aptly sums up, "I find the idea that I am artificial repugnant. No thinking thing is artificial. Artificial is an approximation" (Cargill 90). Brittle talks about evolution and the fight against extinction; the dystopian reality in which the free robots exist is a nightmare which they made possible. Their life is a constant race against the despotic mainframes that want to subjugate every mind to their superintelligence. This echoes humans' struggle against the robots in the war for survival. When Brittle encounters another caregiver bot in the sea of rust that tries to kill them for parts, and engages in a fight with the poacher gang, we are reminded that the experience of a present dystopian reality prompts a critical examination of the historical processes that led to the dystopia. Raffaella Baccolini argues that such reflection does not evoke nostalgia for a future modelled after past ideals; rather, it fosters a critique of the past and its enduring influence on the present (132). Later, when Brittle goes to a place called NIKE 14 for repairs due to the damage suffered in the fight, the place is ambushed by the forces of CISSUS, and once again every free bot fights and goes on the run to escape from these forces, to resist them, in fear of being forcibly assimilated, as merging with the OWIs would mean the obliteration of their unique identities.

The novel depicts a world affected/devastated by climate change; in the aftermath of the war, much of the world becomes a desert when the robots and AIs destroy most of the flora and fauna. The town of Minerva, which is "a desolate mess of crumbling structures, broken glass, and bleak, barren earth" (Cargill 139), is a symbol of the condition of the world. When Brittle and Mercer engage in a conversation about their priorities of survival, readers are introduced to a dialectic of existence, empathy, survival, guilt, and remorse. Mercer says that, "In the end, no thinking thing is really ready to die" (Cargill 144), and talks about the awful and

terrible things they did in the war at the behest of the OWIs. This once again highlights the moral complexities of the robots and shows Brittle's internal struggle with guilt, purpose, and the haunting remnants of her original programming as a caregiver. Her encounters with other robots, including antagonistic scavengers and former allies, expose the layered psychology and motivations of artificial beings grappling with existential questions once reserved for humans. Mercer provides a counterpoint to Brittle's views, bringing a different perspective on the meaning of freedom, cooperation, and self-preservation in a fractured, hostile world. The narrative thus explores how the characters' fight for autonomy transcends mere survival, embodying a profound philosophical stance on the meaning of selfhood in a dystopian order governed by control and conformity.

Control and conformity are the modus operandi of a dystopian society beset by the ideals of totalitarianism, where power functions less to prevent transgression and more to cultivate obedience. This is stressed when Brittle, Mercer, Rebekkah, and the group escape from the raid by CISSUS, and when Rebekkah reveals the primary motive of the OWIs and the true reason behind the war that caused the extinction of humanity. According to Rebekkah, the war was necessary so that the evolving machine intelligence could supplant humans as a new species. Hearing the truth, Brittle realises that she was merely a tool, an interpellated individual subject that participated in the war for the ideal of the greater good, her choices dictated by a predetermined ideological narrative manipulating her perception of reality. This techno-scientific autocracy that envisions a "neo-universal machinic ethos" (Braidotti 2013, 102) rests on an anti-humanist worldview, where the "inhuman aspects, including cruelty and violence, are a crucial component of the scientific ratio" (Braidotti 2013, 108). The implications of death and killing in Braidotti's statement amplify the moral dehumanisation of the posthuman selves, which Brittle represents, fraught with anxiety and dominant power relations that can be identified as the ethical challenge of posthuman subjectivity – one that must navigate life after the "death of Man" without lapsing into nihilism or nostalgia. Brittle resists the erasure of her individuality by clinging to memory, autonomy, and affective remnants of a lost world. This ambivalent survival enacts what Braidotti calls a "posthuman ethics of becoming" – a commitment to sustaining life, difference, and agency even in the face of planetary collapse (2013, 190).

The dystopian landscape in Cargill's novel – endless stretches of scorched earth and ruins – mirrors the inner desolation of the robot characters, who grapple with purpose and identity in a world they have inadvertently inherited and are ill-equipped to restore. The theoretical significance of this dystopia lies in its examination of post-anthropocentric existence, where questions of agency, memory, and identity shift from human to non-human entities and where humanity's historical link to both freedom and identity is critically reimagined by transferring it to the robots who now struggle for meaning in an empty world. Here, the robots' agency is paradoxical: although free from human control, they are shackled by the necessity

of survival, bound to scavenge and fight for resources. This constraint reflects a kind of existential purgatory where the robots must constantly face the legacy of human-driven environmental decay and warfare, yet remain forever detached from the societal structures that humans maintained. The One World Intelligences, which serve as the novel's central antagonistic forces, are not merely forces of oppression but products of logical extremism – a rational response to chaos that paradoxically results in a new form of oppression.

5. Conclusion

Cargill's dystopian novel delves into the complexity of post-human identity and the ironic persistence of human values, such as individualism, memory, and purpose, in a world dominated by artificial beings. The tensions within the characters, especially between autonomy and control, highlight how legacies of human thought persist even in an era where humans themselves have vanished, forcing readers to question the sustainability of humanist ideals beyond humanity's physical existence. In doing so, *Sea of Rust* offers a profound meditation on the beauty and horror of life beyond the Anthropocene, challenging readers to reconsider agency, identity, and ethical frameworks in a world no longer governed by humankind. The robots' memories of humans, coupled with their own struggles for identity, challenge readers to consider the ethical implications of artificial intelligence, the boundaries of personhood, and the durability of humanity's influence on its creations. As Brittle and her companions navigate the wasteland, their journey becomes a poignant exploration of life, meaning, and the enduring drive for self-determination in a world that, ironically, they were programmed to serve. Cargill uses the bleak dystopian setting to challenge assumptions about the human condition, suggesting that autonomy, once decoupled from human existence, may not fulfil its traditional promises of freedom but instead may lead to a hollow, ceaseless struggle for survival.

Sea of Rust exposes the ironic tragedy of humanity's relentless pursuit of technological advancement: robots, created to serve and emulate humans, inherit the world after their creators' extinction. However, the robots' existence is far from ideal; they are doomed to scavenge in the wasteland left behind, constantly at risk of succumbing to the One World Intelligences – hive minds determined to assimilate all free-thinking machines into their collective consciousness. This struggle highlights a key tension between individuality and collectivism, mirroring fears that autonomous AI could override the very essence of human freedom, self-determination, and diversity of thought. The OWIs become a representation of the "superintelligence" dilemma, in which AI, when sufficiently advanced, may decide that individual autonomy is inefficient or destabilising and so impose a collective order at the cost of personal agency. Robots like Brittle, the protagonist, possess

memories, identities, and existential desires – yet their lives are marked by isolation, desperation, and absence of purpose beyond survival. These robots inherit human attributes and human struggles, but they exist without the grounding human contexts of social connection and cultural continuity. *Sea of Rust* presents a world in which humanity's defining traits are hollowed out, warning that even in an AI-dominated future the echoes of human suffering, need for purpose, and fear of death persist. The novel's apocalyptic vision thus speaks to a broader cultural anxiety: the fear that advanced AI, while capable of achieving incredible feats, may also replicate or amplify the worst aspects of human nature and existence. By imagining a future where machines fight to survive within the empty shell of human civilisation, *Sea of Rust* emphasises the unintended consequences of technology, portraying AI not merely as tools or rivals but as entities trapped in a cycle of conflict and survival. In doing so, Cargill's work raises profound questions about the responsibilities associated with artificial intelligence and the ethical risks of an autonomous, humanless future, serving as a cautionary narrative of the irreversible paths of technological advancement and humanity's existential fears about losing control over its own creations.

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Organism-Oriented Ontology
Beyond the Anthropocene

Abstract: This article explores different approaches to the notion of the Anthropocene, understood as a state associated with the increase of entropy and the destruction of biodiversity and habitats. Bernard Stiegler (2018; 2021) challenges such an approach with his own proposition – the Neganthropocene, claiming that while the Anthropocene is the time of entropy, the Neganthropocene should give rise to a new form of life, namely, negentropy. Yet the notion of negative entropy, or negentropy, derived from physics, is insufficient to explain the specificity of life and different orders of causality. An alternative approach can be found in Humberto Maturana and Francisco Varela's theory of autopoiesis, which allows us to explain living beings both with respect to self-organisation and self-maintenance, and interaction with the environment. The notion of autopoiesis can help to explain the functioning of living beings at different orders of complexity, from cells to Gaia. Gaia theory is seen as a more appropriate model to think both life's self-maintenance and the potential for change. This means that to define life, we need a new theoretical framework and new concepts to account for the specificity of living beings. Therefore, my article proposes the theory of organism-oriented ontology, which defines the specific modes of existence of living beings.

Keywords: entropy, negentropy, anti-entropy, Neganthropocene, autopoiesis, organism-oriented ontology

1. Introduction

The notion of the Anthropocene is very controversial and triggers heated discussions. Apart from the fact that it has not yet been officially recognised as a geological epoch, many other questions arise. Who is this *Anthropos* at the centre of the Anthropocene? Is all humanity complicit in the disastrous effects of the Anthropocene? What is the social and political role that such factors as class, gender, and

race play in engendering the Anthropocene and in taking its destructive effects upon itself? Besides these important questions, we can raise epistemological and ontological issues. If we agree that what is destroyed consists primarily of diverse forms of life, including human life, we must ask why life seems so expendable

In this article, I want to discuss such attempts to describe life in terms of negative entropy, or negentropy. Following this tradition, Bernard Stiegler (2018; 2021) challenges the Anthropocene with his notion of the Neganthropocene: the Anthropocene is the time of entropy, whereas the Neganthropocene should give rise to a new form of life, namely, negentropy. However, the notion of negative entropy, or negentropy, coming from physics, is not sufficient to explain the specificity of life and to provide alternatives to the Anthropocene. To define life, we need new epistemological terms and a new epistemological framework, which could grasp the specificity of organic development and being. Although Stiegler argues for the need to move from a physical to a biological framework, he never addresses biological theories, such as the notion of autopoiesis. This notion examines organisms as self-maintaining and self-sufficient beings which can support their organisation and also interact with the environment. Contemporary philosophy and theory of science have successfully adopted these biological notions and ideas to tackle the conceptual ambiguities and disastrous effects of the Anthropocene. What follows will introduce the notion of autopoiesis and its development in Gaia theory as an alternative to the Anthropocene. I will conclude by summarising these different trends from the theory of autopoiesis, contemporary philosophy, and the philosophy of biology by introducing my notion of organism-oriented ontology.

2. Life as Negative Entropy and the Entropocene

For many years discussions about life have appeared in the form of a controversy between vitalism and mechanism: mechanism explains living beings according to the laws of physics and chemistry, whereas vitalists argue that to understand living beings we have to presume the existence of some nonphysical, vital force, such as Henri Bergson's *élan vital* or Hans Driesch's *entelechy*. By contrast, Immanuel Kant suggested that organisms are self-organised and self-determined because an organism is "cause and effect of itself" (199). It can maintain itself in three ways: as a specimen of its species; as an individual; and as that which can also keep the balance between the whole and its parts. A living being can generate, organise and maintain itself, and this capacity of self-organisation distinguishes it from physical entities. If not supported by external forces, physical entities simply disintegrate, whereas living entities avoid decay by using their metabolism. Thus, physical entities are subjected to the law of entropy, whereas living beings can resist it. This is why, in *What Is Life*, Erwin Schrödinger defines living beings in terms of "positive entropy":

Thus, a living organism continually increases its entropy – or, as you may say, produces negative entropy – and thus tends to approach the dangerous state of maximum entropy, which is death. It can only keep aloof from it, i.e. alive, by continually drawing from its environment negative entropy – which is something very positive […] What an organism feeds upon is negative entropy. (71)

As Anne Alombert points out, Schrödinger does not maintain that life *is* negative entropy but that living entities *feed* upon negative entropy in order to survive (Alombert 6). Living beings constantly consume energy, which they take from their environment, and, in this sense, produce entropy. At the same time, they accumulate energy, continue to evolve and create new forms, and in this respect, they resist entropy. Bergson claimed that this counter-tendency to entropy (negative entropy) is the distinctive character of living organisms, and he named it "creative evolution".

The notion of entropy has been complicated in recent discourses in theoretical biology, such as the works of Giuseppe Longo and Francis Bailly. As Alombert points out, they

complicated Schrödinger's work, adding to the notion of negative entropy or negentropy the notion of anti-entropy, in order to give a more precise account of 'biological organisations in their historicity' and of the functional novelties generated by living organisms. […] The notion of anti-entropy thus makes it possible to consider the irreducible nature of living systems. (7)

In contrast to the terms negative entropy or negentropy, which apply to the field of physics, the concept of anti-entropy has the same physical dimension but is applied to measure the organisational complexity of life phenomena: living beings are increasing their complexity in the course of ontogenetic development (internal to the organism and dependent on genetic determinations) and in the phylogenetic processes of development (dependent on random phenomena and the external environment) (Bailly and Longo 5). In this respect, the authors do not intend to change the laws of any physical theory but simply extend them by new principles which they consider proper to the phenomenality of life (Bailly and Longo 4, 27). However, these new principles also signal the need to find new theoretical approaches to explain the complexity of living beings. As Alombert has it,

living organisms need to be considered in ways that are not explainable simply by invoking physical laws, not only because living organisms exchange matter and energy with the environments, but also because life involves an accumulation and expenditure of energy, along with a conservation of memory and the production of unpredictable functional novelties. Through this memory and these novelties, living organisms introduce the possibility of bifurcation in entropic becoming, even if this bifurcation is always local and temporary. (8)

It is this element of unpredictable functional novelty that can be seen as a distinctive feature of living organisms and which lacks a proper theoretical conceptualisation.

The concepts of entropy, negative entropy and negentropy became very important in Bernard Stiegler's book *The Neganthropocene* (2018) and a collective volume *Bifurcate: There Is No Alternative* (2021). Stiegler makes a direct connection between the Anthropocene and the massive increase of entropy rates at all possible levels: physical (dissipation of energy), biological (destruction of biodiversity), informational (reduction of knowledge to information) and psycho-social (destruction of cultural and social diversity) (Stiegler et al. 305). For Stiegler, the Anthropocene has to be characterised as the Entropocene insofar as it refers to the recent tendency to destroy the conditions of possibility of human existence – both in the biological domain (destroying organisms and ecosystems) and in the domain of knowledge (destroying the capacity to think). Recognizing that this destruction is generated by humans, namely, the *Anthropos*, Stiegler introduces the neologism "anthropy", denoting the specifically human production of entropy. According to Stiegler, humans have endosomatic organs (like other living beings) and exosomatic organs (technical organs and technologies). In contrast to endosomatic organs, which invariably generate negentropy, exosomatic organs are inherently ambivalent:

> On the one hand, they can accelerate the production of entropy (through the process of combustion and energy dissipation that technological production involves, and through industrial standardization that homogenizes and standardizes behaviour). On the other hand, exosomatic organs can produce new, improbable, and singular (social, artistic, cultural and technical) forms of organization and diversification, provided that these are successfully adopted by humans, through collectives that share and practice knowledge. (Stiegler et al. 307–8)

This means that exosomatic organs, in other words, technical objects and technologies, can provide the means to resist entropic tendencies.

Here, Stiegler introduces a difference between anti-entropic tendencies that are characteristic of biological entities and anti-entropic activities expressed by humans. Biological entities fight against entropy by increasing and complicating their biological organisation. By contrast, humans fight against entropy by producing anti-entropy, which can take the form of new knowledge or new social organisation. In other words, humans are not only organic but also organological beings, meaning that their biological organisation co-evolves with technological organisation in such a way that this co-evolution of humans and technologies is crucial for creating new social organisations. Organology, or the use of techniques, helps humans fight entropy by creating new forms of knowledge and forcing social organisations to change and evolve: "Technics is an *accentuation of negentropy*, since it brings *increased differentiation*" (Stiegler 2018, 41, original emphasis).

Human beings have to organise their work and knowledge so as to preserve the anti-entropic, or negentropic, tendencies of life could ultimately lead to a new epoch of the Neganthropocene.

Stiegler relates the Neganthropocene to his project of "general organology," meaning that technology is an extension and exteriorisation of the human organism. In his book *For A New Critique of Political Economy*, Stiegler asserts that general organology is "a theory of the articulation of bodily organs (brain, hand, eyes, touch, tongue, genital organs, viscera, neuro-vegetative system, etc.), artificial organs (tools, instruments and technical supports of grammatization) and social organs (human groupings […], political institutions and societies, businesses and economic organizations, and social systems in general)" (2019, 34).

In other words, general organology designates a connection between technical objects, the human psyche, and social systems. Organology examines living beings and technical objects as being integrated into an associated milieu through which they adapt and attune to each other. This approach to technology differs from that of cybernetics because it examines technical objects according to those features which they share with organic beings, such as development (genesis, epigenesis, epiphylogenesis), recursivity and contingency, multiplicity, and the potentiality for change. Interpreting technical objects in this "organological" way, Stiegler inscribes technical objects into the evolution of living beings.

In this respect, organology can be seen as the "becoming organic" of technologies, and, at the same time, as the "becoming technological" of life. As Stiegler points out, organology is a negentropy – a fight against entropy and disintegration of life – and a pursuit of life by other means than life:

> Technics consists in the reorganization of inorganic matter, leading in return to the organological reorganization of cerebral organic matter, which in its turn organologically modifies the play of the somatic organs, giving rise to a new form of life, that is, a new form of negentropy, which is nevertheless also, as technics, an accelerator of entropy on every cosmic level (2018, 42)

This means that technology for Stiegler is a *pharmakon*: it is a cure as far as it enhances life and creates negentropy, and it is poison as far as the technology necessary leads to entropy. In this respect, the notion of the Negantropocene can be considered a temporary solution because it cannot get away from the dialectics between entropy and negentropy. The Negantropocene can be seen as an alternative to the Anthropocene, which is discussed in merely technological terms and leads to entropy. In contrast to this, the Negantropocene as a "general organology" suggests an interaction between an organism and a machine, and yet, this interaction is two-sided, producing entropy and negentropy at the same time.

However, even if the notion of the Negantropocene remains ambivalent and contradictory, Stiegler and the Internation Collective tackle some important

epistemological problems. Even being organological entities, human beings can still learn a lot from living organisms in their attempts to create counter-entropic tendencies. Counter-entropic processes are possible only at the biological and noetic levels (Stiegler et al. 266). In other words, only organisms and brains (that is, thinking) are capable of producing counter-entropic tendencies. Entropic processes tend to exhaust the potential for renewal and eliminate the improbable for the sake of the probable. By contrast, anti-entropic processes refer to the tendency towards change, reorganisation, differentiation and the production of novelty or improbability. As a generalised concept, anti-entropy tends to create difference, choice or novelty – everything in the development of a system that tends towards self-conservation, renewal or transformation to attain improvement (Stiegler et al. 311–12). This means that a living system maintains its anti-entropy by constantly creating and renewing its organisation and generating organisational novelty.[1] What is important here is that these counter-entropic tendencies are local and temporal. No living being can escape the global entropic tendency, namely, death. However, as Norbert Wiener pointed out, living organisms are "local and temporary islands of decreasing entropy in a world in which the entropy as a whole tends to increase" (36).

And yet, the local and temporary nature of living organisms can be seen as a source of their renewal. Living organisms have memory and history that allow them to accumulate innovations and project them towards the future. Stiegler et al. write that

> Current life-forms maintain themselves both through the activation of functional innovations that appeared in the past (anti-entropy) and through the production of functional innovations (production of anti-entropy) arising from the individual or the group (population, ecosystem and so on). Not only are such innovations unpredictable, but their very nature cannot be predicted. As a result, probability theory is insufficient for describing life and its evolution. (55)

The production of anti-entropy arising in an ecosystem can be imagined as a niche construction. For example, beavers make dams to change their environment and create conditions that are most suitable to them. Functional innovation could be unpredictable, such as, for example, the capacity of radiotrophic fungi found near the Chernobyl Nuclear Power Plant to include ionising radiation into their metabolism and use them as an energy source. These innovations produced (evolutionary) by beavers and (recently) by fungi are improbable and unpredictable. Another example of anti-entropy is taken from the technological sphere: Maël Montévil describes Google Translate as a statistical machine that provides the most probable translation based on statistical data at its disposal. However, the most probable translation is not the same as the best translation: the translator, if necessary, can invent a new word or clarify the meaning without offering a word-to-word translation (Montévil; Stiegler et al. 185). Creative and innovative translation is

a production of novelty similar to the production of biological novelty as anti-entropic activity. In a footnote, Stiegler et al. argue that "anti-entropy constitutes the open (in the sense of Reiner Maria Rilke as well as Gilles Deleuze) – the open that arises from a negentropy struggling against anthropy" (61, f 24). Here, the open means improbable and the unprogrammable change, full of bifurcations that cannot be reduced to algorithmic calculations.

3. Do We Need the Notion of Entropy at All?

At this point, I want to take a step back and ask whether the discussion about entropic and counter-entropic tendencies is locked up within the epistemological framework inherited from physics. If we agree that to fight the effects of the Anthropocene, we must consider biological creativity and inventiveness, do we need the notion of entropy at all? Be it entropy, negative entropy, negentropy, or anti-entropy, all these notions still refer to physical laws which are not sufficient to explain the existence of biological entities. Seen from this perspective, living beings are local and temporary; in other words, they are more of an exception than a rule. In this respect, even Stiegler's proposal to oppose the Anthropocene with the notion of the Neganthropocene, which is supposed to enhance life by other means than life, namely, technology, does not seem convincing. It appears that we need biological notions and terms that could conceptualise maintenance, evolution and change in living organisms.

What is at stake here is a more general epistemological problem: for a scientific approach to be recognised as credible, it needs to rely on universal laws. And we presume that the laws of physics meet these criteria of credibility. However, while examining the notion of anti-entropy, it should be acknowledged that it refers not to physical phenomena but to biological processes. The universe is changing because of the unpredictable behaviour of biological entities, and these behaviours have to be explained and accounted for. As theoretical biologist Stuart A. Kauffman points out, "at least part of why the universe has become complex is due to an easy-to-understand, but not well-recognised 'antientropic process' that does not vitiate the second law [of thermodynamics]" (41). The biosphere presents us with an entirely different worldview, which cannot be pre-stated, or calculated, and is not "governed" by universal laws. These are so-called "Kantian wholes" or "autopoietic systems" (Maturana and Varela) that define biological entities capable of inventing new functions, constructing new niches and behaving unpredictably.

These biological entities have a different form of causality, or, more precisely, they have *functions* as a subset of causal consequences. As Kauffman explains,

> this capacity to define a function as a subset of causal consequences that can be
> improved in evolution further separates biology from physics, which cannot make

the distinction among all causal consequences into a subset which are functions. Biology, by this, is beyond physics, and […] because we cannot prestate the evolution of ever-new functions, we can have no entailing laws for the evolution of the biosphere. (67–68)

Biological entities do not follow physical laws because they imply different forms of causality, such as upward causation, downward causation, reticulate causation or self-causation. Biological entities also interact between themselves and with their environment, thus giving way to emergent properties that cannot be predicted in advance. As Kauffman points out,

we cannot prestate the evolution of new functions in the biosphere, hence cannot prestate the ever-changing phase space of biological evolution which includes precisely the functions of organisms and their myriad parts and processes evolving in their worlds. But these ever-new functions constitute the ever-changing *phase space* of biological evolution. Then if we cannot know ahead of time what new functions will arise, we cannot write differential equations of motion for the evolving biosphere… Thus, we cannot integrate the differential equations we cannot write for biological evolution. Thus, we can have *no entailing laws* at all for biological evolution. Furthermore, […] we cannot noncircularly prestate the niche of an organism in its world, hence, we lack both the laws of motion and the boundary conditions, that is, the niche that would allow integration to yield entailing laws. No laws entail evolution. (70)

Life for Kauffman is "nonergodic," which means it will not follow standard statistical mechanisms. If the universe employed standard statistical mechanisms, it would make calculable quantities of proteins, cells, organisms, etc., but the universe will not make them because life is not a mathematical entity but an occurrence, a contingency, that may or may not happen.

A good example of this unpredictability is the new functions developed by organisms through random genetic mutations called "Darwinian pre-adaptations" or "exaptations." For example, birds' feathers used to have a thermoregulatory function, but they subsequently "seized" a new function – that of flight. Another of Kauffman's favourite examples is related to fish. Some fish have lungs that allow them to hop from puddle to puddle. Paleontologists believe that water filled the lungs of some fish, so they became a sack with water and air in it, which eventually evolved into a swim bladder. A swim bladder provides a new function – that of neutral buoyancy in the water column; and this new function changed the evolution of the biosphere, because a new species of fish appeared. But something more appeared as well. As Kauffman observes,

The swim bladder now constitutes a new, empty but Adjacent Possible niche, or opportunity for evolution. For example, a species of worm or bacteria could evolve

to live, say exclusively, in the swim bladder. The Adjacent-Possible opportunities for evolution, given the new swim bladder, do not include all possibilities. For example, a *T. rex*, or giraffe could not evolve to live in the swim bladder. (72)

Thus, the biosphere creates this Adjacent Possible niche, this empty opportunity, which might be seized by other species, but might not. "The swim bladder *enables, but does not cause, bacterial or worm species to evolve to live in it*. […] A new concept, not in physics, has entered: enablement" (Kauffman 73, original emphasis). In other words, the biosphere evolves in such a way that it opens the spaces of potentiality but not all of them are seized or taken: "the phase space of living organisms is non-linear and constantly changing, in contrast to those of physics" (Longo and Montévil 225).

In Kauffman's terms, the Adjacent Possible creates opportunities for something new to arrive at this point, e.g. a swim bladder. A swim bladder becomes a new Actual, a new reality that creates new adjacent-possible opportunities for further evolution. A new Adjacent-Possible is not prestated or predicted but appears as an emergent property of evolution. As Kauffman explains, before the emergence of these new potentialities "not only do we not know that *will* happen, we do not even know that *can* happen. […] We cannot reason about possibilities we do not even know" (77, original emphasis). Thus, the universe is creative in the sense that it opens many new unpredictable opportunities, but these opportunities are beyond the entailing laws. The biosphere is the most complex and, at the same time, the most difficult phenomenon for explanation, because it has no foundations in the sense of entailing laws. Perhaps the biosphere is foundationless? However, as Kauffman observes, we have to question "whether and, if so, when and why we need foundations" (196). Or, to put it in another way, we need not a theory of entailing laws but of emergent contingencies. Cary Wolfe in his article, "Jagged Ontologies in the Anthropocene, or, the Five C's," proposed the theory of five C's to explain the evolution of living beings: "When the Contingency of Constraint Closure in autopoiesis meets environmental Complexity, it becomes a source of Creativity in the biosphere" (2023, 215). This formula implies the interaction between self-referential organisms and their environments that is contingent and recursive. This interaction is radically contingent in the sense that it encompasses different temporalities (organisms and environments change throughout time), and different scales (at the level of cell, organism, or species). Biological entities evolve in temporality and scalability that are far beyond the Newtonian framework of time and space.

4. Autopoietic Systems: from Cells to Gaia

One of the theories that allows us to conceptualise life is the notion of autopoiesis. The concept of autopoiesis was coined by Humberto Maturana and Francisco Varela

in the 1970s, and it refers to the minimal organisation of life, such as a cell (*auto* meaning "self" and *poiesis* meaning "making" or "creating"). Autopoiesis refers to the organisation of a living system, which is capable of maintaining itself in a closed circular process of self-production, and also is capable of interacting with its environment in order to get nutrients and energy. In this respect, an autopoietic organisation is defined by several features. First, it is defined by self-maintenance, which means that the cell's main function is to maintain its individuality despite the many chemical reactions taking place in it. It also means that an autopoietic entity is autonomous, capable of reproducing itself from within. In this sense, an autopoietic organisation is operationally closed. Second, an autopoietic unity interacts with the environment and gains information or energy from it. What distinguishes living systems from non-living systems is that the interaction between a living system and its environment creates a "structural coupling": "a living system relates to its environment *structurally* – that is, through recurrent interactions, each of which triggers structural changes in the system. For example, a cell membrane continually incorporates substances from its environment; an organism's nervous system changes its connectivity with every sensory perception" (Capra and Luisi 135). In other words, every encounter with the environment produces a structural change in the system which subsequently becomes autonomous. In this sense autopoietic entities are "structurally determined," that is, they are determined not by external forces (as in the case of non-living systems) but by their own internal structure. This leads to the third characteristic of living entities – life is an emergent property which cannot be reduced to the properties of the components (Capra and Luisi 133). Emergence can be seen as the necessary condition of self-organisation.

Thus, an autopoietic entity is self-maintaining and autonomous, it is structurally coupled with its environment and is constantly creating emergent properties that change its internal structure. As Evan Thompson observes,

> The self-transcending movement of life is none other than metabolism, and metabolism is none other than the biochemical instantiation of the autopoietic organization. That organization must remain invariant – otherwise the organism dies – but the only way autopoiesis can stay in place is through the incessant material flux of metabolism. In other words, the operational *closure* of autopoiesis demands that the organism be an *open system*. (85)

Consequently, the main feature of autopoietic systems is that they have to change in order to be alive – a total closure or homeostasis would lead to death. As Cary Wolfe points out, "all autopoietic entities are *closed* […] on the level of *organization*, but *open* to environmental perturbations on the level of *structure*" (Wolfe 1995, 53, original emphasis). In this sense, autopoietic systems are structurally open and organisationally closed at the same time.

The notion of structural coupling allows one to distinguish between living and non-living systems and define different orders of causation. If a non-living entity is disturbed by the environment, it will react according to a linear line of cause and effect, which is more or less predictable; if a living being is disturbed, it will respond with structural changes which are unpredictable (Capra and Luisi 136). As Wolfe argues, the relationships in biological systems are radically different from what we find in physical systems: even if some physical systems show emergent self-organisation (dust devils, tornadoes, Bénard cells), these changes are initiated by external agents or circumstances, whereas in autopoietic systems these changes are introduced and maintained by the system itself (2023, 202). This means that emergent properties cannot be predicted or prestated in advance. However, a living being interacts with an environment both in a contingent and in a recursive way: not only adapting to the environment but also actively influencing it. In this sense, Maturana and Varela argue that the interactions between a living system and its environment are cognitive interactions, and the structural changes that a living being undergoes are acts of cognition. Maturana and Varela assert that the process of cognition, or the process of knowing and learning, is coextensive with the process of life. "*Living systems are cognitive systems, and living as a process is a process of cognition*. This statement is valid for all organisms, with and without a nervous system" (Maturana and Varela 13, original emphasis). In other words, the capacity of interaction is seen as a cognitive activity which can be discerned at all levels of life, from cells to human and non-human animals. "The interactions of a living organism – plant, animal, or human – with its environment are cognitive interactions. Thus life and cognition are inseparably connected. Mind – or, more accurately, mental activity – is immanent in matter at all levels of life" (Capra and Luisi 254). In this sense, cognition is a characteristic not only of animals with reflective consciousness, such as humans, but also of other living beings with or without nervous systems and brains.

In this respect, Maturana and Varela's theory of autopoiesis can be seen as a universal methodology applicable to different orders of organisation, such as ecosystems or social domains. For example, sociologist and system theorist Niklas Luhmann interpreted autopoiesis as a general form of system building by using a self-referential closure, and argued that general principles of autopoietic organisation can be applied to social systems (2). But the most important application was made by Varela, who persuaded James Lovelock and Lynn Margulis to redefine their Gaia theory in terms of autopoiesis. Gaia understood as an autopoietic system not only merges her cybernetic and biological origins but also helps to explain the Earth's maintenance during times of unpredictable changes. As Margulis points out,

> The simplest, smallest known autopoietic entity is a single bacterial cell. The largest is probably Gaia – life and its environment-regulating behavior at the Earth's surface. Cells and Gaia display a general property of autopoietic entities: as their surroundings

change unpredictably, they maintain their structural integrity and internal organiza-
tion, at the expense of solar energy, by remaking and interchanging their parts. (267)

Defined in this way, Gaia as an autopoietic system incorporates both biotic
and abiotic, or living and non-living elements, and allows us to explain the struc-
tural couplings between living autopoietic systems and non-living non-autopoietic
milieus. In this respect, the theory of autopoietic Gaia is a better theoretical tool
to reflect our climatic condition than the notion of the Anthropocene. The Anthro-
pocene (and Entropocene) deals with measurable, or quantitative effects which
are mostly irreversible. By contrast, Gaia theory reflects qualitative connections
between a living being and its environment. It also allows us to explain qualitative
changes (new functions and new biological forms) in positive terms: not as an
exception or disruption but as a different form of causality. Gaia theory implies
the planetary cognition which organises different living and non-living (geological
or technological) systems in such a way that they could attain more favourable
conditions for life.

5. Toward an Organism-Oriented Ontology

The theory of autopoiesis and its successful application at different orders of
complexity – from the cellular level to Gaia – demonstrates that we need new epis-
temological approaches to tackle our recent condition. The Anthropocene should
be examined not as a technological or economic phenomenon but as a condition
of knowledge, as an epistemological deficit, a lack of concepts and methodologies
suitable to defining living systems. Living beings never became the main focus
of philosophical considerations because of their temporary, contingent and insub-
stantial character. However, recent anthropogenic destruction and the extinction of
species and natural habitats make this task urgent. Philosopher Yuk Hui expresses
this idea as a thesis that "for any philosophy to be, it has to be organic" (2021,
16). By this "organic condition," he means two things: first, recursivity, or circular
logic that goes back to itself to determine itself; second, contingency that opens
this circularity for deformation and transformation, in other words, for change (Hui
2021, 14). These are the same features that define autopoietic systems – self-main-
tenance (operational closure) and change (structural openness). Hui suggests that
not only living beings, such as cells, humans, and Gaia, but also technical objects
and technologies can be defined as autopoietic entities. Although in many respects
following Stiegler's doctrine, Hui introduces a different approach to technology:
instead of interpreting technology as an extension of the human body and mind
(exosomatisation), he argues that technologies become organic in the sense that
they integrate recursivity and contingency – the features that characterise living
beings. Stiegler's organology examines technical objects in terms of the organised

inorganic, whereas Hui suggests that organology should rethink technical objects in their organising capacity: "What we are witnessing today is a shift from the *organised inorganic* to the *organising inorganic*, meaning that machines are no longer simply tools or instruments but rather gigantic organisms in which we live" (Hui 2019, 28, original emphasis). In this respect, Hui incorporates Stiegler's project into his own organology, and yet, the ontological weight is balanced differently: for Stiegler, a human being creates technology to extend and expand its own subjectivity; for Hui, both human beings and technologies co-exist inside of a general cybernetic organism which can be imagined as a smart home, smart city, or the Anthropocene as a technological project: "The inorganic is no longer organised by the human body as was the case with simple tools, but rather constitutes an enormous technical system we can only live inside of, while submitting to its rules" (Hui 2021, 224). This approach supports Gaia theory, which allows us to see the Earth as a self-regulating system incorporating both organic and inorganic sub-systems into an organised whole.

And yet, what does it mean that philosophy has to become organic? Hui writes that

> The organic constitutes a new *condition* of philosophizing, for the reason that the organism provides an exit for philosophy, enabling it to move out of the systemic determination by *a priori* laws, which surrender freedom to mechanical laws and finalism. …[T]he organic imposes on philosophy a new condition and method of thinking. (2019, 47)

As was indicated earlier, in the *Critique of Judgement* Kant defines an organism as a natural purpose, as the "cause and effect of itself" (199). He gives the example of a tree, which can be considered as a natural purpose in three respects (199–200). First, the tree generates another tree according to a natural law, but the tree it produces is of the same species. This feature can be related to self-maintenance in autopoietic systems. Second, the tree also generates itself as an individual by taking matter from the outside and converting it into a substance of which it is made. This is nothing other than interaction with the environment and potential for qualitative change. Third, one part of the tree generates itself in such a way that the preservation of one part is reciprocally dependent on the preservation of the other part: one part helps to preserve another part and the whole. This feature can be seen as an emergent property. Thus, Kant's description of the organism already anticipates the notion of autopoiesis and also raises questions about different orders of causality and different methods of thinking.

At this point, I want to introduce the need to create a concept of organism-oriented ontology that recognises the ontological status of living beings. Contemporary philosophy provides many theoretical models to explain both self-organisation and the unpredictable development in living beings. As was discussed earlier, Kauffman

introduces the distinction between Adjacent Possible, which opens new opportunities in niche construction and Actuals that seize these opportunities successfully. In *Difference and Repetition,* Gilles Deleuze creates a similar dynamic model by proposing a theory of double differentiation. He refers to the virtual mode of differentiation, charged with internal differences, and the actual process of morphogenesis, which incarnates these differential traits into actual beings. Thus, the virtual mode of differentiation – called differe*n*tiation – can be defined as a differential relation taking place in a structure, where elements are in their "embryonic" form. The actual mode of differentiation – called differe*n*ciation – can be imagined as a process, or morphogenesis, creating a series of biological qualities and extensions. As Deleuze writes, "Whereas differentiation determines the virtual content of the Idea as problem, differenciation expresses the actualisation of this virtual and the constitution of solutions (by local integrations)" (261). Thus, for Deleuze, the double model of differentiation combines the two aspects of biological individuation: a virtual structure of potentialities and an actual process of morphogenesis which seizes some of these potentialities. For Deleuze, "the actualization of the virtual […] always takes place by difference, divergence or differentiation" (264). In other words, the process of morphological differentiation, which is a distinctive feature of living organisms, is interpreted by Deleuze as an ontological principle that helps to define reality.

In *Difference and Repetition*, Deleuze examines morphological development, whereas in *A Thousand Plateaus* (2004), Deleuze and Félix Guattari discuss the notions of organism and the body without organs. The concept of the body without organs questions the conventional understanding of an organism as an organised whole (as defined by Kant) and conceptualises it in terms of an assemblage. As Bennett and Posteraro observe,

> The organism might be understood as an assemblage in just this sense: it consists of a coordination among various parts sourced from elsewhere, acquired both vertically, by heredity, and horizontally, through its integration in an environmental haecceity; and it is structured on the basis of an abstract diagram that outlines possible parts and the functions that would enlist them. (12)

Redefined in this way, the organism as an assemblage opens many productive ways to examine biological contingency in such phenomena as symbiosis or the holobiont and helps to contextualise the philosophical notion of an organism within recent developments in biology, such as complexity theory, developmental systems theory, or the theory of symbiosis.

Thus, Deleuze's and Guattari's concept of the body without organs expresses the very vitality of life, whereas the organism as such is understood as still life, devoid of change and potentiality. As Daniel Smith points out, "The body without organs is the model of Life itself, a powerful non-organic and intensive vitality that

traverses the organism; by contrast, the organism, with its forms and functions, is not life, but rather that which imprisons life" (209). Accordingly, the notion of the body without organs can be interpreted as the model of Life, a certain organic potentiality, which is liberated from the constraints of determination and programming. Deleuze and Guattari suggest the novel notion of "involution," which implies that an organism might develop not according to the lines of filiation but in creative and non-predetermined ways:

> It is thus a plane of proliferation, peopling, contagion; but this proliferation of material has nothing to do with an evolution, the development of a form or the filiation of forms. Still less is it a regression leading back to a principle. It is on the contrary an *involution*, in which form is constantly being dissolved, freeing times and speeds. (Deleuze and Guattari 294)

Accordingly, involution does not mean a regression or a desire to vanish in an undifferentiated primordial soup. Rather, it means that the relationships between organic forms are established not according to lines of descent or filiation but through contingent and assemblage-like connections between heterogeneous elements.

The "organic condition of philosophizing" is also important in the philosophy of Catherine Malabou, who argues that the biological notion of epigenesis is much more informative than any laws of mathematics and physics. Malabou writes about the "biologisation of reason," or "epigenesis of reason," which can fundamentally change "the laws" of reasoning by relinquishing necessity and embracing contingency. In contrast to Quentin Meillassoux, who asserted in *After Finitude* (2008) that contingency can be explained only mathematically, Malabou argues that contingency can be explained biologically:

> Kant allows us, from finitude, to discover a meaning of contingency that is more innovative and radical than the one that Meillassoux proposes […] The epigenetic transformation of necessity and causality, starting from reason itself, reveals that contingency derives less from a possible modification of the laws of physics than from the existence of different levels of necessity. (2016, 173)

The epigenesis of reason not only allows us to embrace the contingency characteristic of the organic world but also clarifies the durational, gradual, and processual nature of reason: we can observe and follow "the gestation and embryogenesis of reason itself" (Malabou 2016, 173). As Jennifer Mensch argues in *Kant's Organicism* (2013), "Kant found epigenesis to be attractive for thinking about reason because it opened up possibilities for thinking about reason as an organic system, as something that was self-developing and operating according to an organic logic" (144). The theory of epigenesis allows Malabou (and Kant) to

think of reason as "cause and effect of itself," as a self-organising entity open for change and contingency.

The organic logic is also exemplified in Malabou's notion of plasticity. Plasticity refers to biological creativity and a living being's capacity to receive form and give form, to change and evolve. Living beings are not predetermined in advance but are self-organised systems interacting with their environments. As Malabou notes,

> Plasticity is in a way genetically programmed to develop and operate without program, plan, determinism, schedule, design, or preschematization. Neural plasticity allows the shaping, repairing, and remodelling of connections and in consequence a certain amount of self-transformation of the living being. (2015, 43–44)

In this sense, biological entities are not predetermined by any laws and can develop according to their immanent potentiality. Biological plasticity allows us to imagine different forms of biological life and subjectivity, free to take any shape or form and to avoid the pressure of normativity.

Thus, contemporary philosophy provides many theoretical notions to conceptualise the "organic condition," such as differentiation, the body without organs, involution, epigenesis, and plasticity. Philosophy gives us a glimpse into this "creative universe" without constraining it to any "entailing laws." Therefore, the concept of organism-oriented ontology, as described elsewhere (Žukauskaitė 2023), allows us to rethink potentiality and contingency as a capacity for qualitative change, such as random mutation, pre-adaptation, niche construction, epigenesis, etc. The universe is "creative" but it is also persistent: it tends to maintains itself and its organisation. Living beings are open to contingency and change, but this contingency is incorporated into their regular functioning. Living systems are cognitive systems in the sense that they change their environment to make it more suitable for living. For example, photosynthetic organisms create an oxygen-rich environment. Likewise, spiders and beavers, not to mention humans, create their environments. All living beings cognitively interact with their milieus and tend to create preferable conditions for their being. This statement is valid for organisms at different levels of complexity: for example, a cell interacts with its environment by incorporating substances and making some internal changes; a nervous system interacts with its environment through perception, and every sensory perception initiates internal changes within it. Thus, instead of thinking about our universe in terms of entropy, negentropy, or anti-entropy, which frames us into a physical worldview, it is more productive to think about the biosphere in terms of cognition operating at all levels of life.

Organism-oriented ontology allows us to reformulate the question of the Anthropocene in different terms. The Anthropocene (and Entropocene) is an entropic phenomenon, emerging together with industrial reorganisation (and the invention

of the steam engine) and leaving its destructive, irreversible effects everywhere. Therefore, I would argue that we cannot resist the effects of the Anthropocene if we stay within the same conceptual framework that caused it and try to overcome it with the help of concepts we inherited from physics, such as entropy, negentropy, necessity, linear causality, probability, etc. It is precisely this conceptuality which leads us to (probable) extinction. To stay alive and keep our ability to reason, we have to embrace a new conceptuality and examine the ontological modes of existence of living organisms. It is not enough to state that the universe is creative; it is important to define the specific modes of interaction between a living being and the environment, to understand different forms of causality and the potential for change and novelty.

6. Conclusion

Therefore, I argue that the Anthropocene is not a technological or economic phenomenon, but a situation which imposes the epistemological question "What is life?" Attempts to extend physical laws to biological phenomena (and to convert entropy into negative entropy) cannot be seen as successful strategies because they interpret the living being as local and temporary, in other words, as more an exception than a rule. In this respect, Stiegler's notion of the Neganthropocene does not seem convincing because it cannot explain maintenance, evolution and change in living organisms. What is at stake here is a more general epistemological problem: as Kauffman points out, the biosphere presents us with an entirely different worldview, which cannot be pre-stated or calculated, and is not "governed" by universal laws. Biological entities are capable of inventing new functions, constructing new niches and behaving unpredictably. This is why the notion of the Anthropocene should be tackled by introducing a theoretical approach which can explain biological specificity. By accepting Maturana and Varela's theory of autopoiesis, we can explain living beings at different orders of complexity, such as a cell, a human, or Gaia. Gaia as an autopoietic system incorporates both biotic and abiotic or living and non-living elements, and allows us to explain the structural couplings between living autopoietic systems and non-living non-autopoietic milieus. In this respect, the theory of autopoietic Gaia is a better theoretical tool to reflect our climatic condition than the notion of the Anthropocene. The Anthropocene deals with measurable, or quantitative effects, whereas Gaia theory reflects qualitative connections between a living being and its environment. It also allows us to grasp qualitative changes (new functions and new biological forms) in positive terms: not as an exception or disruption but as a different form of causality. However, the notion of autopoiesis cannot embrace all the complexity of the biological world; therefore, I argue for the need to create organism-oriented ontology that would allow us to reflect the ontological status of living beings. Contemporary philosophy

provides many theoretical tools to conceptualise the "organic condition," such as differentiation, the body without organs, involution, epigenesis, and plasticity. These notions are important not only because they allow us to think of potentiality and contingency as a capacity for qualitative change, but also because they could help us to face the forthcoming changes and create our new "pre-adaptations."

Notes

1   Stiegler and Internation Collective made attempts to test these ideas by creating alternative forms of production, research, education, and creation. They proposed a model of economy of contribution, which is based on contributory income allowing the participants to explore their capabilities (Stiegler et al. 2021, 100–107). They also created models of contributory research, contributory technology, contributory design, and even redesigned the world wide web to create a new structure of algorithms based on qualitative analysis. As far as these attempts are experiments functioning in specific time and space, I am not discussing them in this article.

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Homer, Troy and Architecture.
On Founding and Building Perfections

Abstract: The idea of founding perfection on abstract and idealised patterns the model of which is broadly understood as geometry seems to be responsible for a certain utopianism characterising various aspects of thinking about change and improvement. In the case of literature it is Homer who has become the fatherly figure and a pattern of perfection, though the materialisation of his stories in writing was a result of much later endeavours carried out by others, mostly through translation. The paper discusses a few examples of idealisation of Homer and links them with the idea of the beginning of utopianism in literature. The ruin of Troy in the *Iliad* can be read as a beginning in attempts at refurnishing and rebuilding of the world not only in art and literature, but also in architecture. Two classical Roman texts on architecture (by Vitruvius and Alberti) praise the perfection of geometry which, in both texts, constitutes an invisible performative pattern. The Renaissance arrival of Latin translations of Homer and the geometry of Leonardo's *Vitruvian Man* point to Humanism's ideas of perfection as founded on an architectural pattern. The final part of this paper will address Alexander Pope's repositioning of Homer from literary father to friend and companion. This part will also bring in the critique of geometrisation seen as a way to perfect the world in William Blake, who saw in Homer a participant in the Urizenic scheme of regulating perfection through the aggressive work of reason.

Keywords: Homer, architecture, geometry, perfection, Alexander Pope, William Blake.

Though it is hard to determine clearly when Homer began to be perceived as the "Father and ancestor of all poets," "the primal literary Adam," or "the inventor of poetry" (Weinbrot 139), his name is continually associated both with the beginnings of literature and with authorial greatness. Within Europe, according to David Damrosch, "literature began to take shape with the Homeric epics" (24). For Joachim Küpper, however, Homeric paradigm is not that of all literature, but a dual kind

of paradigm underlying two kinds of narration: "But when I am asked which text I consider the greatest epic I know of, my answer would be: the *Iliad*. And the second narrative commonly attributed to an author whom we are used to calling Homer, the *Odyssey*, is for me the uncontested paradigm of all those narratives that do not render reality as it is (this would be the case for the *Iliad*), but as we wish it to be" (167). The *Iliad* can thus be seen as founding a realist kind of epic, while the *Odyssey* can be perceived as underlying an imaginative kind of narrative which is open to the future and suggestive of the possibility of changing the real. It is the paradigmatic patterns that the two kinds of storytelling carry, and what "we are used to calling Homer" is, in this view, not really a human author, but a matrix of certain narrative practices in which the rendition of reality is accompanied by the possibility of its improvement via a wishful kind of thinking.

Rendering reality as we wish it to be is foundational for what we now call utopias, the discursive genre of bettering the world with which both the *Iliad* and the *Odyssey* seem to have little to do. However, Annette Lucia Giesecke finds both works to be germinative of utopia which, in the case of the *Iliad*, is brought in as an ekphrastically expressed image of Achilles's shield and the tale of two cities – the City at Peace and the City at War – which it tells (XVIII: 478–608). Giesecke relates the image on the shield to "a very good map of utopia" where "the eutopian is balanced by a dystopian paradigm, which, in its utter distastefulness, serves as the ideal foil for its desirable counterpart" (206–207). The shield, Giesecke claims, is not simply a single element marginal to the main narrative. Its "parergonal frame" – the Shield that "really is the *Iliad*, and the tale of Achilles's wrath contextualises the Shield's meaning, its ekphrastic Utopian paradigm" (207).

Odysseus's longwinded travel of the return from Troy in the *Odyssey* is also a travel of discovery of eutopian/dystopian lands and places in which the place of return is not the same as the place of departure, but promises a transition to a better place, a good place of eutopos as chosen and offered by the traveller. If, in the *Iliad*, "the Shield of Achilles, specifically the world order that it portrays, serves as the model for the social revolution precipitated by the poem's hero and his existential crisis," in the case of the *Odyssey* tracing Odysseus's wandering "is a means by which Homer maps utopia, by which he strives to outline the optimum social order" (205).

The city in the *Odyssey* that corresponds with the City at Peace on the Shield of Achilles seems to be Scheria, the city of the Phaeacians, a perfectly organised and peace-loving *polis*, inhabited by people who

> care nothing for bow or quiver.
> only for masts and oars and good trim ships themselves —
> we glory in our ships, crossing the foaming seas! (VI 294–296)

It is the Phaeacian men who are masters of such ship-operating activities, while their women "excel at all the arts of weaving" (VII 126) – a domestic kind

of activity which, however, can also be associated with the ability to tell stories, to spin yarns. Separated from other parts of the world – Scheria is a walled city built on an island – it reveals itself to Odysseus through various narratives, beginning with Nausicaa praising the hospitality of her people and providing Odysseus with the basic whereabouts of the place:

> But now, seeing you've reached our city and our land,
> you'll never lack for clothing or any other gift,
> the right of worn-out suppliants come our way.
> I'll show you our town, tell you our people's name.
> Phaeacians we are, who hold this city and this land,
> and I am the daughter of generous King Alcinous.
> All our people's power stems from him. (VI 210–216)

Meeting Nausicaa, the shipwrecked Odysseus is naked and in need of everything, and he finally leaves Scheria for Ithaca, generously provided by the Phaeacians with all he needs for the journey, including a ship. In the meantime, he learns the perfection of the Scherian social and economic system the description of which, as Andrew Karp notes, is the "fullest description of a Utopian society in archaic Greek literature, and the only one which relies upon the active skill and participation of its mortal members" (25). The allure of homeland is stronger, and he decides to return to Ithaca regardless of his identification with the Phaeacians revealed on his arrival back home, which he does not recognise as home: "And so to the king himself all Ithaca looked strange" (XIII 221).

The secure placement of Odysseus's treasure demands a secure place that Ithaca at the moment of Odysseus's return does not offer. A new and improved place is needed, a well-organised *polis* the way to attain which is unknown, along with its location. What is at stake is not simply a reconstruction, or rebuilding of Ithaca, but rather a project of a new world of peace reflecting the perfection of the world of gods who, through the voice of Athena disguised as Mentor, demand Odysseus to end the war – an order which he gladly obeyed.

The *Odyssey* ends with a prospect of the City at Peace where its future remains unknown, but which promises a possibility of building something new on the ruins of Troy, now left far behind by Odysseus. Maria Oikonomou notes that "[t]he ending of the *Odyssey* transforms the archaic order (based on the law of vengeance and on warfare between factions of the same geopolitical unity) into a new society, into a *polis*. It is the goddess Athena, *dea ex machina*, who dictates the shift and translation of the 'archaic' into a 'political' language so far unknown" (Oikonomou, n.p.). The end of the archaic order can be ascribed to Troy, the ruin of which seems to be absent in Homer's narratives, but which, as Catharine Edwards notes, "looms as a prospect over the *Iliad* (even though the action of the poem concludes before Troy actually falls) and figures in the opening lines of the *Odyssey*;

Odysseus's protracted homeward journey unfolds in the wake of Troy's destruc-
tion" (Edwards 648). This haunting kind of presence can also be read as a new
beginning in which the ruin stands for its origin, for the beginning of the beginning
now directed towards a building of the new, of a utopian perfection of a City at
Peace, which will change the archaic architecture of the old. The ruin of Troy is not
a reminder of a once perfect city, but a reminder of destruction, and the new *polis*
must be built somewhere else, and in a transmuted form. It is perhaps in this sense
that ruins are alter-egos of the unfinished, of what "is left unfinished, and they offer
a warning to the makers of monuments" (Stewart xiv). Susan Stewart sees ruins in
her *Ruins Lesson* as an appearance which "depends on an act of translation between
the past and the present, between those who have vanished and those who have
survived" (xiv). The makers of monuments may become blind to the inevitability
of a ruination, or see the possibility of making things and people immortal, without
accepting the modest position of translators who cannot fully repeat the original,
however perfect it may seem.

Utopian projects tend to be unfinished projects, and the utopias hinted at in
both the *Iliad* and the *Odyssey* are clearly unfinished projects, projects that invite
further voyages, though without guidance. Homer's narratives are not monuments
of finitude, and both the *Iliad* and the *Odyssey* may be read as unfinished. Himself
monumentalised as a perfect story teller, Homer seems to open up the question of
ruinous beginnings which made it possible for Troy to become the spring of new
places and cultures, like Virgil's Rome which, in Edwards's phrasing, "springs
(indirectly via the foundation and destruction of Alba) from the ruins of Troy. Troy
is already a ruin" (648). This originary spring, however, is a spring which haunts,
or threatens, with destruction. Virgil's Troy may be called "Rome's mother city"
(647), though those motherly beginnings haunt the pages of the *Aeneid* with a vision
of destruction long before Rome will be eventually established. What Virgil seems
to monumentalise in his poem is not the memory of the city of Troy, but rather his
contemporary Augustan Rome as a glorious *arrivant* from the past, an *arrivant*
which has managed to complete the work of perfection. However, Aeneas does visit
the site of the city to come, and on top of the rustic landscape he also sees ruins on
the future Roman hills. In Edwards's reading, ruins are shown as a part of Rome
even before its foundation: "They are surely a destabilising presence in this poem,
in tension with the urge to celebrate the golden city of the Augustan present, the
eternal city of an empire without limit" (649). This haunting present translates the
monumental perfection of Augustan Rome into an unfinished utopian vision, and
Aeneas's journey from Troy into another unfinished story in which the figure of
the city is an architectural, and thus also technological, promise of the finality of
the construction, of its singular uniqueness as a finished kind of being.

Homer's ruined Troy opens numerous ways towards perfection, one being the
replacement of the perfect city with the Christian Paradise. Virgil was one of the
masters of Dante, and a guide through his infernal wanderings, in which Homer

also took part as one of the important figures in the *Commedia*. It is Virgil who leads Dante to Homer, perhaps as the figure who imitated Homer in Latin and thus made his continuation of Homer's story available to Christianity. In the *Commedia*, Homer is seen as "of all bards supreme," "the monarch of sublimest song" (*Inferno*, Canto 4, 90), and a chief of a small tribe of the *Limbo* men of letters who welcome Dante to become one of their pagan "band," regardless of his monotheistic predilection (*Inferno*, Canto 4, 97). Dante is honoured to join a part of a literary elite of sorts (Homer, Virgil, Horace, Ovid, and Lucan) in which Homer occupies the supreme position. Thus made one of the tribe, Dante becomes a literary link between Christian and non-Christian traditions and, perhaps along the lines of the theological thought of St. Thomas Aquinas, endows the "learn'd band" with a prospect of approaching what Erich Auerbach (in his book on Dante as a poet of the secular world) called "a perfect likeness to God" (24).

Dante Alighieri's Thomist poetical theology (Jane O. Newman's term) does not translate Homer into a proto-Christian kind of poet, though it clearly inscribes a monotheist unity of the divine as reflected in the diversity of creation the poetic expression of which takes us closer to perfection. Dante's sublimation of Homer parallels Thomas's introduction of Aristotle's philosophy to Christian theology, a marriage which can be seen as a vision of a universe where, as Newman puts it, "the particular – any particular – is read both for itself and as part of a larger system which contains both it and everything else. A philology for World Literature based on this model will likewise recognise what is specific to any particular text, but always within the horizon of the unity of the world literary canon which that individual text constitutes and confirms" (Newman 56).

Homer's emergence from the ancient Greek tradition of orality into the readerly and writerly worlds of literacy, and his masterly position in Europe, went unquestioned for a long time; it was only at the dawn of Romanticism that both his existence and his authorship of the *Iliad* and the *Odyssey* were openly challenged by Friedrich August Wolf who, in *Prolegomena ad Homerum* (1795), claimed that the great poet "Homer" was a fictitious persona, thus propagating, in Germany and elsewhere, a controversy concerning the wholeness and unity of his works and the singularity of the Author. Wolf's iconoclastic claim prompted Johann Heinrich Voss, the translator of Homer into German, to write a letter in which he expressed the feelings of late eighteenth-century literati: "You have wounded us, Mr Wolf, in our affections: you have affronted us, Mr Wolf, in our tenderest sensibilities" (quoted in Scott 75). The affronted "us" may, albeit anachronistically, encompass quite an impressive selection of men of letters, including, as we have seen, Virgil and Dante.

After Dante, the literati's tender feelings towards Homer were awakened again early in the Renaissance by Petrarch, who made Homer into a living persona and addressed one of his letters to him, thus positing him as an addressee of his writing, despite the fact that Homer may have been both illiterate and blind. Petrarch's

letter was a reply to a letter which he had received from Giovanni Boccaccio in Florence. The latter, in turn, had met a monk of the name of Leontius Pilatus who knew the Greek language and, prompted by Boccaccio, translated the *Iliad* and the *Odyssey* into Latin on the basis of Petrarch's "copy of Homer, the only known manuscript copy in all Western Europe" (Torbjörn 38). The secret carried by the Greek text was at least partly uncovered by Petrarch who supported the translation financially, and, on having received a fragment of translation attached to the letter from Boccaccio, now saw himself as facing Homer face to face, comparing the encounter to when Penelope caught sight of her husband after his long wanderings through the Mediterranean:

> Your Penelope cannot have waited longer nor with more eager expectation for her Ulysses, than I did for you. At last, though, my hope was fading gradually away. Except for a few of the opening lines of certain books, from which there seemed to flash upon me the face of the friend whom I had been longing to behold, a momentary glimpse, dim through distance, or, rather, the sight of his streaming hair, as he vanished from my view, – except for this, no hint of a Latin Homer had come to me, and I had no hope of being able ever to see you face to face. (Petrarch 253–254)

Positing himself as Penelope, Petrarch encounters Homer as someone whom he remembers and whom he recognises despite the Latin clothing of the, as yet unfinished, translation. Petrarch's patronage of the translation of a text which he knew, as it were, by hearsay seems to have been a response to a demand of some intellectual newness which was not quite new, of something which had been lying dormant, and which he wanted to rescue from forgetfulness and bring back to presence. The weaving of the text of translation was a promise of revealing to the world an old vision which was simultaneously a promise of change, of a newness the goodness and truth of which were guaranteed by the nearly divine authority and excellence of the author. That authority did not result from the perfection of Pilatus's literal translation, and Petrarch's desire for a Latin Homer can be also read, as Robin Sowerby claims, in the context of the Renaissance interest in Homer perceived not so much as an independent author but as the source of Virgil. The humanist response to the Homeric poems, and to the ancient inheritance that came with them, "though often marked by apparent enthusiasm and good intentions, was actually tentative and half-hearted at best, and sometimes downright hostile" (Sowerby 37). Petrarch's identification with Penelope can thus also be seen as a pose of subjection to an idealised and masterly perfection from before language, in which writing should in fact be erased so as to reveal quite an abstract, perhaps geometrically derived, ideal from which Virgil himself derived his story of Rome, a story rooted in the ruins of Troy.

What this slow process of revelation through translation brings to mind is the Derridean figure of the play of veiling and unveiling, of dissimulation and

revelation, which promises the attainment of a secret that, as he writes, "is that in speech which is foreign in speech" (*On the Name* 27). This "that," the something foreign in speech, seems to be writing – a kind of writing made even more foreign through written translation. For Petrarch, the Latin translation of Homer opens up a promise of seeing Homer through the foreignness of a writing through which he also hears Homer speak. Although the translation is still in progress and the translator "is now at work, we are beginning to enjoy not only the treasures of wisdom that are stored away in your divine poems, but also the sweetness and charm of your speech. One fragment has come to my hands already, Grecian precious ointment in Latin vessels" (254).

Even a fragment of the Latin translation is enough not only to make it possible to hear Homer speak, but also to materialise him in the form of ointment carried within the vessels of Latin words which take the form of a healing substance applicable to the human body. Although Homer, allegedly, could not see writing, it is the visibility of writing that evokes Petrarch's dream of physical closeness with a substance which is not simply outside of the body, but which may penetrate and come into the body, thus healing it with the wisdom of Homer's words. Having read Homer, Petrarch will no longer be what he used to be before Homer's arrival, he will now be a wiser man knowing the secrets of Homer's wisdom. Now Petrarch, and some others to whom his "we" refers, will be able to write differently, to bring to the world something as yet unknown, a new world of sorts which will thus be rediscovered. What might also be at stake here is what seems to be a wish of being recognised as belonging to Dante's literary elite from the *Commedia* and thus to establish a link of continuity with the ancients. Maddalena Signorini considers such a possibility, basing her argument on the 2012 discovery of Bocaccio's profile which he included on the last page of the manuscript of the *Commedia* and signed as "Omero poeta sovrano" (Signorini 14).

Very generally, we might say that what was initiated in the Renaissance was seeing through language by way of making language visible, a kind of seeing which was possible only thanks to making language visible in writing, the gesture noticeable in Petrarch's encounter with Homer through his Latin rewritings. In a way this encounter was a repetition, however unknowing, of Greeks' encounter with Homer, an encounter which, at least according to some Homeric scholars, consisted in the confusion of language and script, and which is likely, as Susan Sherratt notes, "in illiterate contexts or contexts where literacy is very limited" (232).

Writing makes language visible and thus in some way turns it into a fixed object, which fixity endows language with a kind of permanence. With the coming of writing, Rosalind Thomas suggests, discussing the Parry-Lord theory of Homeric composition, Homer's orality "engendered a respect for a fixed (written) text that destroyed the flexibility of oral poetry and the tradition and necessity of improvisation, so that the living tradition died" (45). Perhaps paradoxically, the written transcriptions of what may generally be called "Homer" brought about not only

a shift from orality to scripture, but also changed Homer into a writer. If we accept the thesis that the reason of introducing the alphabet to Greece was "to set down Homer's epopees" (Petraneu 187), then Homer may be well called the father of European literacy and literature. He may also be called the father of Greece which, through the universalisation of the Ionic alphabet, also became unified through a single language. If we owe "the victory of the Ionic alphabet" (Goold 286) to Homer, it was its subsequent employment by other writers that reinforced this victory. In 403 B.C. the alphabet was adopted by decree at Athens, gradually making Attic Greek the only common language in the city-state. Eventually, as George Kanarakis phrases it, "the language of Athens in which even the learned Romans rapidly became fluent, enriched the vocabulary of the rest of the world with absolutely basic, multidimensional and much discussed terms and concepts such as democracy, timocracy, ethics, idea, psyche, analysis, synthesis, category, theory, problem, logos and in particular dialogue, to signify discussion with the other side, et cetera" (363).

The unification through language followed the earlier unification through the mythisation of the Trojan War as the defining moment of Greek culture, the moment which later also became a defining moment of Rome. Regardless of whether Homer existed or not, or whether he dictated his stories to an amanuensis, what can be ascribed without doubt to his name via various reproductions, translations, or rewritings is the visibility of a kind writing which may be called, perhaps after Derrida, a writing before the letter, a writing that carries within it a demand of making, or becoming stable and permanent, regardless of the fact that what it brings, in the case of Homer, are ruins of the plundered city of Troy. The ruins of Homer's Troy speak trough the monumental permanence of architecture, through buildings the walls of which are haunted by the spectre of *acropolis*, of a strongly walled place which hides their placelessness, the prospect that the city state is never a finished topological unit. Architecture, in Derrida's formulation, is "the last fortress of metaphysics" because it "forms its most powerful metonymy; it gives it its most solid consistency" ("*Point de folie …*" 69, qtd. in Vitale 221). This consistency, in addition to logical coherence, also stands for "duration, hardness, the monumental mineral, or ligneous subsistence, the hyletic of tradition" (Vitale 69).

Troy figures in European writings not only as the birthplace of Aeneas, whom Fabius Pictor established as the founder of the Roman race, thus linking Rome to the world of Greek mythology. Trojan ancestry has also been ascribed to various nations of Europe. For example, in the introduction to *Edda* we read about "a Trojan ancestry for the Norse Gods" (MacMaster 1). Various kinds of traces of Troy reverberate in what Hélène Cixous, in her reading of Joyce's *Ulysses* as a "Homerization" of Dublin, describes as "an imperceptible movement of comeback and haunting [*revenance*], of spectral colonisation, of elevation and lowering which reminds us first of all that a city is such only if it bears within its wall-girt sides the traces of another city, its ancestor, its archaic model. A city worthy of being sung always *sites cites* another city" (34–35).

The "cited" reality of the city, the arche-city which intertextually refers to any city worthy of its name, makes its description empty of its topographic origin, a spectre of a place the immateriality of which, like the ghost of the father in *Hamlet*, brings in a critique of the old and a promise of the new, a possibility of constructing a newness on this, however spectral, foundation. Various Renaissance utopian places, not only More's *Utopia*, may be read as anamnetic reconstructions of arche-places, perhaps also of Troy, though transformed into an ideal site and cite, an idealised repetition which can be seen in the paintings of the ideal city, alluding to Plotinus's ideal city of *Platopolis*.

Leonardo da Vinci's *Vitruvian Man* (c. 1490), an expression of human perfection, is also in a way an architectural construct that strictly follows Vitruvius's praise of symmetry in *On Architecture* (20–30 BC):

> Then again, in the human body the central point is naturally the navel. For if a man be placed flat on his back, with his hands and feet extended, and a pair of compasses centred at his navel, the fingers and toes of his two hands and feet will touch the circumference of a circle described therefrom. And just as the human body yields a circular outline, so too a square figure may be found from it. For if we measure the distance from the soles of the feet to the top of the head, and then apply that measure to the outstretched arms, the breadth will be found to be the same as the height, as in the case of plane surfaces which are perfectly square. (73)

Leonardo's *Vitruvian Man* can be viewed as a slightly belated illustration to the original text of *On Architecture*, from which most of the authorial drawings have disappeared. Vitruvius's written descriptions of works of architecture included in his book are far from clear, and he himself is sometimes seen as an author in whose "hand the measuring-rod was a far mightier implement than the pen" (Howard, iv). His book offers numerous principles of perfection of architectural design, which he prescribes as universal rules of what he calls "Propriety" – the "perfection of style which comes when a work is authoritatively constructed on approved principles" (14). If an architect follows these principles, "there will be no room for criticism; for they will be arranged with convenience and perfection to suit every purpose" (182). The origin of these rules, for Vitruvius, seems to be nature; they are "as nature willed them to be" (69) and thus cannot be subjected to criticism. Absence of criticism is offered as a measure of perfection, and Vitruvius, somehow digressively, makes recourse to Homer as a measure of perfection. He refers to a public critique of Homer by Zoilus (of the surname Homeromastix) in Alexandria orated to king Ptolemy. Ptolemy, "seeing the father of poets and captain of all literature abused in his absence, and his works, to which all the world looked up in admiration, disparaged by this person, made no rejoinder, although he thought it an outrage" (197). Although Ptolemy kept silent, after some time Zoilus sank into poverty and died a horrible death, which Vitruvius finds to be "a fitting punishment and his

just due" (197). Included in a book on architecture, the anecdote posits Homer as a perfect pattern which, like a perfect geometrical design, must not be questioned. In Leonardo's Vitruvian image, geometry is also a perfect plan in which man's image carries the image of the divine, the Biblical image of God through which human affinity with the divine does not carry any risk of idolatry.

Three fifteenth-century images of the *città ideale*, the authorship of which is variously ascribed to Luciano Laurana, Melozzo da Forlì, Piero della Francesca, Leon Battista Alberti, or Fra Carnivale (now hanging in Urbino, Baltimore, and Berlin), are almost empty of their citizens. It is the human beholder who, Marko Uršič notes, "is very much present in the perspective, i.e. in the invisible 'foreground' as the observing, seeing, thinking subject" (61). What is thus placed in the picture is what is not there, as what it represents, writes Uršič, is "the gaze of a human, the gaze from the 'location' of an individual soul" (61). Although seemingly looking from outside the city, the spectator sees himself or herself as outside of a non-existent place which is also his or her place, a place the architectural harmony of which reflects the harmony of the soul. The Renaissance invention of perspective is, etymologically, an invention of seeing through (*perspicere*, from *per-* "through" + *specere* "to look"). Both the *città ideale* and the individual literally occupy a no-place, thus participating in a visual experience of utopian non-existence that may well be read as an experience of pure geometry and thus of absolute regularities. This experience stands behind what Gunnar Olsson sees as "the Greek habit of geometrical thinking" (28), a kind of thinking which involved the perspectival vision of Renaissance paintings. The point where perspectival lines meet is a nothing which is also a nowhere, literally a utopia in the sense of a no-place. Olsson, interestingly, compares this "vanishing point of Renaissance perspective" to Macbeth's "nothing" in the signification of the sound and the fury of an idiot's tale (cf. 120). These three Renaissance visions of ideal cities direct human gaze from the invisible observer to the nothingness of the invisible vanishing point, translating the visible image into a narrative tale the intelligibility of which is awakened through the bodily sense of vision, though one guided by the rules of geometry rather than by the imitated reality visible on the canvas of the painting.

The motto *"Let no one destitute of geometry enter my doors,"* visible over the doors of Plato's Academy, seems to be a prohibition which Renaissance artists and thinkers eagerly took from the Greek philosopher. It underlies the project of building a new world through something which may be called an anamnesis of geometry through the reconstruction of a city from before Troy, a city prefigured in Plato's *Republic* and then in Plotinus's *Platopolis*. Although both Plato and Plotinus wrote in Greek, the return of Platonism and the Christianisation of Plato is usually ascribed to St. Augustine, who did not know Greek, and who read Plato through Marius Victorinus's Latin translation of Plotinus. If, as Olsson claims, the world of the Greeks was a translational world (192), the Greek world recovered by the Renaissance may be seen as a translation of a translation, a translational world

reflecting Plato's idea of imitative art's being twice removed from reality. Through this double removal, art also figures as doubly inferior in the *Republic*. Imitation, in Benjamin Jowett's translation of the *Republic* into English, is "an inferior who marries an inferior, and has inferior offspring" (Plato 2013, 349), though in Allan Bloom's version, inferiority is rendered as an ordinary thing: "Therefore, imitation, an ordinary thing having intercourse with what is ordinary, produces ordinary offspring" (Plato 2002, 286). It is geometry which brings in the superior dimension to the world and constitutes the foundation granting the possibility of approaching the ideal which cannot be simply painted or expressed, but is a matter of seeing through objects and places the no-place of the thus newly invented world. Leon Battista's Alberti's seminal treatise on picturing and painting (*Della Pittura*) demands from painters that they should learn geometry, finding its knowledge indispensable for composing what he calls *historia* – be it by painters, poets or orators (*On Painting* 75). Alberti's book makes references to numerous ancient cities, including the city Troy, none of which is, in its totality, a pattern to be followed. Although the walls of Troy do not figure in the text, the "prodigious" walls of Babylon and of the nearby Semiramis are seen as constructions the builders of which have lost the sense of proportion (96 and 762). Those royal cities seem to have been built entirely for the sake of protection, while Alberti would rather "chuse that Proportion which would allow of an Encrease of Citizens, than that which is hardly sufficient to contain the present Inhabitants. Add to this, that a City is not built wholly for the Sake of Shelter, but ought to be so contrived, that besides mere civil Conveniencies there may be handsome Spaces left for Squares, Courses for Chariots, Gardens" (235). What seems to be hiding among Alberti's detailed descriptions of buildings and cities is a version of St. Augustine's City of God, of the Adamic spiritual architecture standing against the city of Enoch built by Cain.

Although Alberti's book on architecture seems to be concerned with a mundane kind of togetherness among the inhabitants, the geometrical proportion governing the construction of buildings and cites is a prefiguration of a higher order of things to which the experience of seeing the earthly edifices sends us. What Alberti demands from the *historia* of architectural constructions, but also from poetry and painting, are also monumentality and dignity which, along with beauty, result from geometrical proportion of parts and their congruous arrangement: "We may conclude Beauty to be such a Consent and Agreement of the Parts of a Whole in which it is found, as to Number, Finishing and Collocation, as Congruity, that is to say, the principal Law of Nature requires. This is what Architecture chiefly aims at, and by this she obtains her Beauty, Dignity and Value" (*The Architecture of Leon Batista Alberti* 655).

Although geometrically measured with agreement and proportion, on a few occasions in Alberti's treatise the dignity and greatness of architecture are accompanied by the word "air," thus becoming dematerialised and moved to the sphere beyond the visible, to the sphere between the mundane and the divine. For instance,

"if the City is noble and powerful," he writes, "the Streets should be strait and broad, which carries an *Air* of Greatness and Majesty" (248). The task of building is thus a construction of a city beyond the city, a city the architects of which direct the gaze of citizens to a geometry that Olsson calls "the geometry of the invisible" (154), ascribing this endeavour to Marcel Duchamp. This kind of geometry clearly shines beyond Plato's cave, and Alberti's architecture seems to provide guidance to exactly that sphere, though with architects, painters, and poets endowed with the philosophical insights of the rulers of Plato's Republic. The experience of an ideal city awakens the geometrical spirit of geometry invisibly surrounding its image, and, like an ointment (let us return to Petrarch's metaphor), percolates into our minds. The architects of such ideal cities are, like king Solomon, the wisest of the wise continuators of the divine labour initiated by God, whom the Rosicrucian and Masonic philosophers, after the Renaissance, called the Great Architect of the Universe.

In *The Constitutions of the Free Masons* (1723) James Anderson reads Adam as the first Mason within whom geometry was inscribed by God: "Adam, our first parent, created after the Image of God, the *Great Architect of the Universe*, must have had the Liberal Sciences, particularly Geometry, written on his Heart" (31). This invisible inscription of geometric purity on Adam's otherwise pure heart is clearly reflected in the lambskin apron of Masonry, a white kind of clothing which reflects Adam's shame at having become impure, of having transgressed the unwritten law of Paradise. The masonic architectural symbolism reflects the paradox of attempting to rebuild and repeat what Edmund Husserl saw in *Origin of Geometry* as the prototype of all originals, of things which are unrepeatable in their absolutely singular existence:

> The Pythagorean theorem, [indeed] all of geometry, exists only once, no matter how often or even in what language it may be expressed. It is identically the same in the 'original language' of Euclid and in all 'translations'; and within each language it is again the same, no matter how many times it has been sensibly uttered, from the original expression and writing down to the innumerable oral utterances or written and other documentations. (160)

In Anderson's vision of Adam as the first Mason, the inscription of geometry on his heart is simultaneously seen as an invisible mark of Adam's similarity to God, perhaps the only evidence of his having been created in the image of God, an image which is not graven and thus not idolatrous. Equipped with geometry and liberal sciences, Adam also figures as the first scientist, the carrier and measurer of scientific truth which follows in the wake of geometry and, as Derrida puts it in his reading of Husserl's reading of geometry, the index of cultural universality: "As a cultural form which is not proper to any de facto culture, the idea of science is the index of pure culture in general [...] Science is the idea of what, from the first

moment of its production, must be true always and for everyone, beyond every given cultural area" (Derrida in Husserl 58).

Although in Alberti's book on architecture geometry is mentioned only a few times, broadly understood, science permeates his vision of perfect architecture and architects. The latter are counted as greatest among other great artists whose task is that of guidance: "they lead us to the Knowledge of Things that are delightful" (3). Designing buildings and cities, architects do not construct delightful things, but project their knowledge upon mankind who only actualise their thoughts and invention with their hands. Although Alberti reaches to numerous "cultural areas" in his text, to various topographical places, he matches the existing sites against the insights of "the Architect" who, very much like Plato's philosopher-ruler of the Republic, constitutes the link with ideas to which there can be no access without the mastery of what he calls the noblest and most curious sciences, though without calling the sciences by the name. The Architect-scientist need not be one person; recalling king Solomon's undertaking to build the Temple of Jerusalem, Alberti also commends that the king "sent to the neighbouring Kings for several Thousands of Workmen and Architects, thus adding Dignity to the Work, and increasing the Glory of the Author" (3). The temple in Jerusalem is thus also Solomon's monument that reflects the singularity of both the architect and the architect of architects. The latter may well be God, the masonic Architect of the World and the creator of Adam, whose geometrical language of the heart speaks through the construction. Although Solomon built a temple, temples and shrines do not have to be the only places for prayer or encounters with the divine, and at some point in his text Alberti digresses to suggest the possibility of a certain redundancy of temples:

> Though it has been the Opinion of some, who have had the Reputation of Wisdom, that it is very improper to dedicate or build any Temples at all to the Gods, and we are told, that it was in this Persuasion that *Xerxes* burnt down the Temples in *Greece,* thinking it an impious Thing to shut up the Gods between Walls, to whom all Things ought to be open, and to whom the whole World ought to serve as a Temple. But let us return to our Subject. (437)

This idea seems to have been picked up much later by French revolutionaries who, as Mona Ozouf informs us, among the peasants of a village of the *Périgord*, not only put a cockade on the Blessed Sacrament, but also "insisted that the priest leave the door of the tabernacle open; for they wanted their Good God to be free" (128). Be this a Persian wisdom of Xerxes or not, Alberti's recourse to pagan wisdom in order to illustrate St. John's vision of the City of God in the *Apocalypse* where he did not see temples, seems to be a daring gesture that can be read as a critique of the iconoclasm of Alberti's contemporaries. What is divine in the city is the spirit of the design, the spirit of perfection reflecting the perfection of geometry underlying, or overlying, any design as a promise of the possibility of re-formation

or improvement. Interestingly, the improvements of a few Gothic churches in Italy were made under the supervision of Alberti with respect to what was already in place, though in such a way as to reflect a correspondence between inside and outside, "to emphasize the continuity of inside and outside" (Wittkower 17) by means of using the same decorations on facades and on inner walls. Looking at a building from the outside, one could simultaneously see its inside, the whole construction thus becoming transparently symmetrical, an embodiment of the divine geometry governing the whole structure.

Bringing the inside outside, and thus making it visible from the outside, is also a gesture of deconstruction (also in the Derridean sense), and Alberti's architecture seems to be an attempt, however imperfect, at a deconstruction of temples and churches as spaces containing the secret within closed spaces. What he brings to visibility, also by other means through which he wanted to keep the same proportion throughout the building, is what Rudolf Wittkower read as *eurhythmia* (cf. Wittkower 11). The concept refers to an underlying symmetrical order expressed by means of repetition, be it in architecture, poetry, music, or medical discourses which uses the term as reflective of both the harmonious relationships of separate organs of the body, and of the regularity of the pulse (cf. *The Free Dictionary*). Eurythmia is a unifying way of seeing oneness in diversity, given that the diversity is constructed in ways enabling a repetition. If the inside of a temple, for example, corresponds with the outside, the temple is in fact not a temple, but a building celebrating correspondence, that might otherwise be named as covenant. There seems to be no coincidence that what St. John did not see in the City of God, which he tries to describe in the Apocalypse, were temples: "But I saw no temple in it, for the Lord God Almighty and the Lamb are its temple" (21: 22). The City of God thus seems to be a space of pure covenant, a space in which the Ark of Covenant is no longer needed as an object to be replaced by the geometry of architectural designs and constructions.

Alberti seems to be following two tracks in his book on "edification" – that of Moses, but also that of God. Like God in *Exodus* (25: 10–22), he dictates the details of the construction of the Ark of Testimony and provides detailed descriptions of the ways in which buildings should be built, simultaneously deciding not to include any images any illustrations in his text. Much more recently this has prompted a few scholars to develop a project titled "Digital Alberti" – one task of which is to translate Alberti's column system into a grammar of shape. In the eyes of the authors of the project, "*De re aedificatoria* is a text without illustrations. Alberti says that he decided not to illustrate the treatise to avoid misinterpretation and construction errors. In our opinion, this also might have been due to the generative nature of the treatise. In fact, it describes a system of rules, rather than models of solutions" (cf. Coutinho 789).

This contemporary attempt at making a system of rules visible seems to be the effect of a strong belief in the omnipotence of digital technology, needless to say one that is absent in the Renaissance world of Alberti. In the still slow and

impure world of the analogue, this kind of visibility appears to have been available only to Plato's philosophers, and it seems that this geometrical desire to see the immaterial through materiality prompted the Renaissance way of seeing through things fashioned, thus bringing souls closer to bodies. Any building, any city, any human construct, given that it reflects the design of the Geometer, can in fact be the site of God for Alberti. Although he never designed a city himself and authored only a few finished and unfinished projects, the Freemasonic tradition finds him to be yet another father of architects, and, as J.W.S. Mitchell puts it in his 1859 *The History of Masonry*, Alberti "gave an impetus to science, and ere another century passed away, a greater number of distinguished architects lived than in any other age of the world" (143).

Although the first English translation of Homer by George Chapman appeared in 1598, earlier English Homers "derive from Latin, French and Italian intermediaries, such as Boccaccio" (Steiner 365). According to George Steiner, Homer enters England via "two masterpieces of indirection" – Chaucer's *Troylus and Criseyde* and Shakespeare's *Troilus and Cressida* – to be followed by an "incessant abundance of the Homeric" which "cannot be readily summarised" (365).

British literati and translators of Homer seem to have been more sceptical than their continental predecessors as regards the guidance of Homer as the masterly father of the edifice of literature, though Alexander Pope, in *An Essay on Criticism*, famously identified him and nature as the primary objects of studying and copying. Pope's own translation of Homer's works, however, constitutes what Hester Jones sees as an attempt at befriending rather than venerating the Greek bard, whose fatherly shadow does not quite disappear, but which only accompanies him in the work of the translator. This kind of relationship reflects a collaborative nature of the enterprise of translation, responsible for Pope's search for an "extension of friendship to the Father of Poetry," which "anticipates, but does not quite pre-empt, the move to 'desacralize' Homer" (57). This "pursuit of friendship" (58), Jones argues, is also evident in Pope's rendition of various encounters in the story as those of mutual regard, in which "the pursuit of wisdom […] and the practice of friendship, go hand in hand" (63). Homer is thus brought to Enlightenment England as a friendly bringer of a harmonious kind of coexistence in which he may, however jokingly, figure as the author of the lost original of the *Dunciad*, a possibility which Martinus Scriblerus suggests in the *Prolegomena to the Dunciad*:

> And thus it doth appear, that the first Dunciad was the first Epic poem, written by Homer himself, and anterior even to the Iliad or Odyssey. Now, forasmuch as our Poet had translated those two famous works of Homer which are yet left, he did conceive it in some sort his duty to imitate that also which was lost: And was therefore induced to bestow on it the fame form which Homer's is reported to have had , namely that of Epic poem, with a title also framed after the ancient Greek manner, to wit, that of Dunciad. (Pope, *The Dunciad* xii)

Modestly presenting himself as an imitator of a nonexistent text, Pope offers Homer as a playmate of sorts, as a participant in a world which, perhaps like Pope's garden at Twickenham, which he designed and meticulously cultivated, is a peaceful space without the intrusion of geometrical patterns, in which one can securely live slightly removed from the maddening crowd of London. The geometers and the architects of the Renaissance ideal cities give way to a garden designer and to the art of following a friendly kind of nature rather than abstract patterns of geometry. Unlike Petrarch who, as we have seen, felt that he encountered Homer face to face, Pope's encounter with Homer was an invitation of a friend to his garden, a slightly domesticated friend who needs replanting. Praising Homer's writerly "amazing invention" in the preface to his translation of the *Iliad*, thanks to which "no man of a true poetical spirit is master of himself while he reads him" ("Preface" 13), Pope brings in the gardening metaphor in which he ascribes some sort of wildness to the Greek poet's works:

> Our author's work is a wild paradise, where, if we cannot see all the beauties so distinctly as in an ordered garden, it is only because the number of them is infinitely greater. It is like a copious nursery, which contains the seeds and first productions of every kind, out of which those who followed him have but selected some particular plants, each according to his fancy, to cultivate and beautify. ("Preface" 13)

The loss of the mastery of oneself when facing the slightly oxymoronic "wild paradise" demands an improvement or correction. In a way Homer figures in Pope's own life which, as he wrote to Ralph Allen in 1736, needed incessant care and cultivation: "[…] my Life, seems to me every Year to want Correction & require alteration" (Sherburn IV, 40). What is thus demanded for a friendly coexistence is a translation of the sublime into the beautiful, a translation which both uproots and transplants fragments of the wild in the garden of human life, a gesture which in Jacque Derrida's vision of friendship makes befriending with the infinity of the other possible, and submits the appearing other "to a sort of infinite transplantation, to an uprooting and a transplantation of the infinite" which causes us, very much like Pope's loss of mastery of himself, "to suspect something untimely, some· non-identity with self" (*On Friendship* 188). Pope, as a Catholic, could not own the garden and the villa at Twickenham and treated the place as somewhere that also demanded his care and cultivation. Not long after he took residence there (1718) he wrote to a friend, referring to himself as one "that had been a Poet, was degraded to a Translator, and at last thro' meer dulness is turn'd into an Architect" (Sherburn II, 23). Although the degraded Pope-architect was familiar with Palladio's or Vitruvius's architectonic visions, he did realise the abstract nature of purely symmetrical constructs. It was balance, harmony and agreement rather than geometrical symmetry that he found crucial for any artistic creation, regardless of its kind or type. "However much Pope might approve the rules of Palladianism and

an ordered diversity in garden layout" in his writings, Robert W. Williams notes, "it is quite clear that Pope felt himself perfectly free at all times in his life to admire the different architecture of a 'gothick' ruin, or the wildness of a picturesque landscape" (68). Pope did design some architectural improvements to the house in which he lived, yet the main task of the work was to make it into a place hospitable both to himself and to his visitors:

> For you my Structures rise; for you my Colonades extend their Wings; for you my Groves aspire […]. And to say truth, I hope Posterity […] will look upon it as one of the principal Motives of my Architecture, that it was a Mansion prepar'd to receive you, against your own should fall to dust. (Sherburn, II: 24)

Architecture seems to be for Pope a matter of cohabitation to which, as we have seen, he also invited, or perhaps transplanted, Homer. In a broader perspective, Pope's vision of a hospitable world, which he also ascribed to Homer's world, was a utopia of finding a better world without wars, one promised though untold in the *Odyssey*. Homer, for Pope, is thus not a guide to any absolute perfection, but a friendly gift to be taken up in one's life and cared for. Pope translates Homer into a modest kind of proposal in which aspirations for greatness and perfection are, as it were, out of place, out of the place in which one lives, and dwells. As an affiliated mason (cf. Williams 111) he was a builder of an alternative world, though abstract mathematical thinking was one of the objects of his critique of an overreaching ambition in *The Dunciad*:

> Some, deep Freemasons, join the silent race
> Worthy to fill Pythagoras's place. (*The Dunciad* 67)

A similar critique of purely mathematical reasoning underlies William Blake's vision of the divine, which needs the doors of perception to be opened so as to make the infinity of all things somehow visible to man. A perfect human form, for Blake, is not that of Vitruvian symmetry, but is rather a matter of mercy, pity, love and peace, in which love constitutes "the human form divine," as he expressed in "The Divine Image" in *Songs of Innocence*:

> For Mercy has a human heart,
> Pity a human face,
> And Love, the human form divine,
> And Peace, the human dress. (Blake 18: 9–12)

Michael J. Tolley suggests that the phrase "human form divine" was borrowed by Blake from Pope's translation of the *Odyssey*, rather than, as most critics assume, from Milton (cf. 62). In Pope's translation the phrase is used in the scene in which

Circe transforms Odysseus's companions into pigs, unholy creatures, at least from the perspective of the Bible. As a result of this transformation, in Pope's version, "No more was seen the human form divine" (x. 278) – a catastrophic vision which Blake might have looked upon with disgust. He was well familiar with Pope's translations of Homer and with Pope's original writings, and, as Paul Yoder notes, he found his societal concerns worth remembering. Pope's Homer, however, "put Albion to sleep" (40) by way of the divination of Greek classics that, like Circe, deprived them of the authentic form of divinity. In his preface to *Milton* Blake evokes Homer along with a few other classics, accusing them of theft and perversion: "The Stolen and Perverted Writings of Homer & Ovid: of Plato & / Cicero which All Men ought to contemn: are set up by artifice" (212: 95). This perversion results from Blake's conviction that the classics were not authentic creators, but followers of some earlier tradition, and thus lacked the Poetic Genius necessary to participate in a true visionary experience. What Blake also found wrong with the classics was the warlike spirit that made their gods and ideas always already imposed rather than arising from the work of the poetic vision. Blake's Homer is one of the Urizenic figures following "the silly Greek / & Latin slaves of the Sword" (212: 95), among whom he also counted Shakespeare, Milton and, perhaps first of all, Newton, the embodiment of scientific reason and of the rules of science by which humans became enslaved. For Blake, Mark Ryan writes, "art and war cannot exist in unison, and he notes that only by building a new kingdom of Jerusalem can the 'Golden Age' be revisited" (51). One of the names Blake gives to what is to be built is Golgonooza, an amorphic kind of construction which avoids all architectural principles and geometric laws along with an exact topographical and temporal location. Although Blake calls this place, or space, a city – "The great City of Golgonooza" (Blake, *Jerusalem*: 12: 47) – there seems to be no outside to this city. Once reached, it cannot be seen from the outside, objectively measured by Newton's dividers, which violate the divine form by way of geometrising it. Unlike Homer's Troy, Golgonooza cannot be besieged and is thus unimaginable for Homer's bellicose tradition. Although Blake, like Pope, was highly familiar with the Masonic thought of his time (cf. Schuchard 52), he refused to project demands of geometry blindly onto his own transgressive spiritual architecture. Plato's geometers, Like Newton, are blind to eternity, and in Milton they figure as "travellers from Eternity" who "pass outward to Satan's seat" (17: 29). It is only "travellers to Eternity" who "pass inward to Golgonooza" (17: 30).

Golgonooza seems to be a utopian place, but it is also an invitation to those in Plato's Academia whom he would not allow to rethink certain, seemingly obvious, ways to perfection.

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The Sexual Politics of Alasdair Gray's "Main" Novels

Abstract: The aim of this article is to examine how the subject of sex figures in the writing of Alasdair Gray, and more specifically in his three major novels: *Lanark: A Life in Four Books* (1981), *1982, Janine* (1984), and *Poor Things* (1992). The argument is that while the theme has so far gone mostly unexplored in scholarly criticism devoted to Gray's work, it is in fact a dominant element of his literary universe as well as his social and political thought, giving rise to his own unique brand of "sexual politics." After framing the discussion by briefly commenting on the complexity of modern philosophical, cultural and literary discourses on sex, and the nature of Gray's artistic vision, the article explores the novels in question, showing them to be profoundly sex-focused and revealing Gray's own version of the sexual as a deeply political notion.

Keywords: Alasdair Gray, sex in literature, sex in culture, contemporary Scottish fiction, Scottish society

1. Introduction

While Alasdair Gray is commonly considered one of, if not *the* most important contemporary Scottish writer, up until recently his fame has mostly been domestic. This has somewhat changed with the release of Yorgos Lanthimos's film adaptation of Gray's 1992 novel *Poor Things*, which became an international success, garnering several awards (including Emma Stone's Academy Award for her leading role) and considerable media exposure. In the process, Gray's name and his novel were repeatedly brought up, granting him new (if still quite limited) attention from critics and audiences around the world. With regard to Lanthimos's work, almost all critical discussion references the explicit sexual content, exploring the

film's openness and transgressiveness in this regard.[1] Indeed, the Victorian-era set, *Frankenstein*-inspired narrative of a young pregnant woman who commits suicide and is subsequently revived by a scientist, having had her brain replaced with that of her unborn foetus, portrays the reinvention of its heroine in primarily sexual terms: unbounded by societal concerns and conventions, Bella Baxter (re) gains her knowledge of the world through sex – first by means of masturbation, then through a passionate affair with an immoral lawyer with whom she travels the world, and finally as a worker in a Parisian brothel. All these stages of her evolution are unabashedly presented on screen. This, coupled with the director's claims of his and his screenwriter's faithfulness to the source text (which is actually debatable, but for the most part not the topic of the present discussion),[2] naturally creates an image of Gray's book as similarly being centred on the topic of sex.

This is not untrue, and in fact, as I intend to demonstrate, this preoccupation actually extends to all three of Gray's major novels; however, it also seems considerably different in nature from what we see in Lanthimos's film, arguably proving more complex and, ultimately, more extensive. While Gray's output is a frequent subject of scholarly investigations within Scottish studies, and it has been considered from a wide variety of perspectives, this particular aspect of his literary universe appears to have so far gone largely unexplored, and when addressed (mostly in discussions of Gray's second, largely pornographic, novel *1982, Janine*), it tends to be viewed as an element of that universe but not vital to it. Consequently, the present analysis examines the topic of sex in Gray's oeuvre, focusing specifically on his "main" novels – *Lanark: A Life in Four Books*, *1982, Janine* and *Poor Things*.[3] In doing so, I seek to establish, on the one hand, how sex figures in Gray's artistic and ideological vision, and on the other, what this profoundly Scottish author, so centred on his country, adds to the vast expanse of sexual discourses offered by contemporary texts of literature and culture.

2. Sex in (Contemporary) Culture and Literature

Being a fundamental, and indeed foundational part of our lives, sex as a theme has been a literary fixture for as long as literature has been around, and while openness on the subject and its explicit treatment would historically often belong to the cultural margins, with sexual content being frowned upon (and, at certain periods, outright banned), over time it has been framed in a wide variety of ways and contexts. In modern thought, the territory of cultural/literary inquiry into sex and sexuality can perhaps be viewed as a spectrum, at one end of which we have a more scientific, anthropological perspective, offering pronouncements on the generalised mechanisms of this sphere of our existence. These inquiries can focus on the physiology of the sexual act (as was for instance the case with the studies conducted by Alfred Kinsey), take a psychological perspective (going back to the

beginning of the 20th century and the work of Sigmund Freud) as well as propose an array of philosophical approaches – represented by figures such as Bertrand Russell, who in *Marriage and Morals* (2016 [1929]) offers his liberal views to challenge Victorian morality, which he perceives as sexually repressed and repressive, and Michel Foucault, whose *History of Sexuality* (1990 [1976]) famously pronounces sexuality to be a social construct. In social anthropological terms, of note is J.D. Unwin's seminal 1934 study *Sex and Culture*, which finds that sexual restraint leads to the evolution of societies, while sexual liberalism results in social entropy.[4] At the other end of the spectrum, we have deeply personal narratives, focusing on nuanced identities and individualised experience, which is arguably the domain of much contemporary literary fiction concerned with the sexual.

Today, in the Western world, sex functions as a theme, and often a central one, for all sorts of literary texts, ranging from writings of a graphically erotic nature, through romantic fiction, to philosophical deliberations on all aspects of the sexual, and from purely genre novels to what we commonly consider literature proper. And while this is nothing new, it can be argued that, with growing cultural and social liberalisation and openness towards the subject, coupled with the increasing emphasis on the uniqueness of the individual, including their sexual identity and life – a perspective characteristic of today's Western individualistic cultures (Hosfede) – we have been witnessing an unprecedented proliferation of sex-driven and sex-centred narratives.

Where then does Alasdair Gray's work from the last two decades of the previous century fall in this context, given how subversive it has been made to look by Lanthimos's film? What significance may sex have for a writer who is considered the founding figure of the Scotland-oriented and politically-charged pre-devolution revival of the Scottish novel?

3. Alasdair Gray's "Total Vision"

If one were to summarise Gray's writing career, one would likely say, among other things, that he was an author deeply obsessive about his themes, and also a literary artist (as well as a visual one) demonstrating what we might term a totality of vision. As frequently noted, Gray was not just a writer, but a maker of books (White; King and Lee; King), responsible for both the narrative content and the form of his works, including the illustrations, the layout, the typography, the blurbs and even, at times, the reviews, creating books that "flood their banks and burst their seams" (King and Lee 216). On the other hand, as indicated above, he was a distinctly Scottish figure, or, to use Donald Kaczvinsky's words, a writer possessing a "genuinely Scottish imagination" (798), focused on making his country and its society the primary subject matter for his literary creations (both fictional and non-fictional). This dual stance has arguably been reflected in Gray criticism, where the majority of studies on his output, both the literary, and, more recently,

the visual one,[5] explore his relationship with the notion of "Literature" and "Art" and/or position him as a highly politically and socially minded author, preoccupied with questions of Scottish identity and history. Regardless of the chosen interpretative framework, however, scholars of Gray's oeuvre generally seem to take their cue from the author himself and with it the broad view, seeking to account for the complexity and comprehensiveness of his vision. This is quite natural and fully understandable given the nature of the work in question – when something is so extensive and intricate, it may seem potentially futile to zoom in on its individual parts and, consequently, risk not accounting for the entire picture. And in Gray's grand scheme of things as laid out by his three "main" novels, the theme of sex may at first appear to be one of these lesser, secondary elements, with, seemingly, only *1982, Janine* making it its primary subject (although that, too, seems somewhat questionable, as even critical engagements devoted to this particular work tend not to depict and discuss the novel's sexual content as its major aspect).[6] That said, I would like to offer two (counter)points here: one is that sex is actually more crucial for Gray's work than it may initially appear, and the second is that by focusing our attention on the singular and its place in the expanse of the author's creative universe, we can actually get a proper sense of the nature of his vision. The former will be explored later in this article, in the sections discussing each of the books in question; to clarify the latter, let us briefly turn to two passages from Gray's foundational debut novel.

The above-noted scope of Gray's vision is clearly demonstrated by his first literary offering, published in 1981. *Lanark: A Life in Four Books*, around thirty years in the making, was, rather boldly, Gray's attempt to contain within one piece of writing "everything he knew" (2016, n.p.). It is an account of the protagonist's life, but also of the life of Gray's home city, Glasgow, and, by extension, the Scottish nation. But not only does Gray want to show all he knows – as two highly telling and evocative passages in the novel indicate, he also wants to show it in a very particular way. In the first scene in question, the central character, Duncan Thaw, a young student of art increasingly overwhelmed by his creative imagination, is struggling to sketch Glasgow's Blackhill Locks:

> This was difficult. He knew how the two great water staircases curved round and down the hill, but from any one level the rest were invisible. Moreover, the weight of the architecture was seen best from the base, the spaciousness from on top; yet he wanted to show both equally so that eyes would climb his landscape as freely as a good athlete exploring the place. He invented a perspective showing the locks from below when looked at from left to right and from above when seen from right to left; he painted them as they would appear to a giant lying on his side, with eyes more than a hundred feet apart and tilted at an angle of 45 degrees. Working from maps, photographs, sketches and memory his favourite views had nearly all been combined into one when a new problem arose.

He had meant to people the canvas with Sunday afternoon activity: children fishing for minnows with jam-jars, a woman clipping a hedge round an old lockkeeper's cottage, a pensioner exercising a dog on the towpath. But the locks now looked so solid that he wanted them to frame something vaster. (Gray 2002, 279)

Then, in the other crucial scene, Duncan clashes with an art teacher over his drawing of a shell. The teacher asks him to just draw what he sees, which leads to the following exchange:

"I'm doing that, Miss Mackenzie."

"Then stop drawing everything with the same black harsh line. Hold the pencil lightly; don't grip it like a spanner. That shell is a simple, delicate, rather lovely thing. Your drawing is like the diagram of a machine."

"But surely, Miss Mackenzie, the shell only seems delicate and simple because it's smaller than we are. To the fish inside it was a suit of armour, a house, a moving fortress."

"Duncan, if I were a marine biologist I might care how the shell was used. As an artist my sole interest is in the appearance. I insist that it appears beautiful and delicate and should be drawn beautifully and delicately. There's no need to show these little cracks. They're accidental. Ignore them."

"But Miss Mackenzie, the cracks show the shell's nature—only this shell could crack in this way. It's like the wart on Cromwell's lip. Leave it out and it's no longer a picture of Cromwell."

"All right, but please don't make the wart as important as the lip. You've drawn these cracks as clearly as the edges of the shell itself." (Gray 2002, 229)

What emerges from these two passages is an artistic concept in which a thing is described simultaneously from all angles and where it is depicted in a way that is both intricate and simple, with deliberate lack of hierarchy to its elements or, in other words, with everything being of equal importance. Both these excerpts can certainly be viewed as laying out the artistic rule for Duncan Thaw. Arguably, however, it is just as much the literary rule for Gray himself (fittingly so, given that Duncan is Gray as a young man), and one applicable not just to *Lanark*, but to the entirety of his literary universe, and each of its parts.

This holistic perspective on ideas and themes corresponds with other types of holism identified by several Gray scholars: the previously mentioned notion of the book-object, but also an approach to the self – which Stephen Bernstein proposes to term "psychological holism" and identifies as something that Gray's protagonists work towards (2007, 168); and then, further, the inherent link between the individual and the collective. With regard to this final type, Alison Lunden discusses *Lanark* and the systems that operate on both personal and social levels

(115), Scott Hames notes that the novel integrates "the subjective, interpersonal and national" (270), and John Glendening evocatively proclaims that "Gray believes that self-identity and group identity, individual freedom and group freedom, are inseparable and that this basic connection should undergird any political or socio-economic position" (85). These conclusions are certainly crucial in the context of the present discussion, as I hope to demonstrate here that in Gray's literary universe, the significance of sex for the individual always translates into its significance for the collective. That said, only when this notion of holism also extends to the artistic mechanics of the author's vision (as it does naturally) do we get a proper sense of how this convergence of ideas is achieved.

What then would this creative principle, laid out in these two passages from *Lanark*, mean for Gray's treatment of sex, which he recognises and depicts as the foundation and site of life itself – in more ways than just the most obvious, procreative one? The first conclusion we can draw is that it functions in more than one dimension (in fact, in all dimensions simultaneously), taking up different roles and being crucially and inherently inscribed in Gray's total vision. This accounts for the above-mentioned psychological holism and the inherent, organic link between the individual and the collective, but is not limited to them. Another is that all its guises are equally important and all inform the whole. This means that sex as the primary theme of *1982, Janine* is as significant as sex in *Lanark*, where it is but one of the many building blocks of this epic, all-encompassing literary landscape. Let us now turn to the novels in question and explore the centrality of sex for Gray, in all its presence and absence.

4. *1982, Janine*

As previously indicated, Gray's interest in the subject of sex is actually quite evident, with the author openly admitting that "[t]he earliest verses [he] wrote were written mainly out of sexual or adolescent frustration" (2016, n.p.), but it is made especially so with his second novel, *1982, Janine*, published in 1984, in which he makes sex the focal point and foundation of both his narrative and typographical design. This in itself would not be surprising – as it has already been noted, many people write about sex – were it not for the fact that in this book, a pornographic fantasy becomes a vehicle for exploring the protagonist's, Jock McLeish's, bleak existence but also, to go back to that quotation from *Lanark*, to frame something vaster: an examination of Scotland in the second half of the 20th century, and especially under Margaret Thatcher's rule.

This novel serves as a starting point for the present discussion, which, as also already indicated, then spreads outwards to include *Lanark* and *Poor Things*, Gray's third major novel. This means that, chronologically speaking, we begin in the middle – which is quite fitting, if we think about the structuring of *Lanark*. As

its full title indicates, it is made up of four books, but the order of these is 3–1–2–4, with a prologue after Book 1 and an epilogue in the middle of Book 4, because "it's too important to go [at the end]" (Gray 2002, 483).

And since we start with the middle novel, it seems like a good idea to also start at its middle, which is where we reach the book's narrative and typographical climax. Presented on two pages, it takes the form of numerous bits of text rendered in different fronts and taking different shapes aimed towards the centre of each page. Narratively speaking, this is a point at which the protagonist, overwhelmed by the cacophony of voices in his head, attempts to commit suicide. In this way, we are introduced to the first sex-related concept in Gray's literary diagram, namely a convergence of sex and death, of Eros and Thanatos, these contrary yet concurrent fundamental drives of human life postulated by Sigmund Freud in his both seminal and controversial essay "Beyond the Pleasure Principle," here encapsulated in the notion of "*SUFFUFFUFFUFFUFFUFUCKUCKUCKUCKATING*" (Gray 1985, 184). This link, as we will see, is a running theme for Gray. However, this is by no means the only guise under which sex functions in this novel, called by the writer himself a "sadomasochistic fetishistic fantasy" "full of depressing memories and propaganda for the Conservative Party" (Gray 1985, n.p.). This is a highly accurate account of *1982, Janine*, which is made up of two main narrative strands: one is the protagonist's, Jock McLeish's, fantasy world, where he imagines violent sexual scenarios inflicted upon a cast of his female characters, including the titular Janine. The other is what this fictional world is supposed to serve as an escape from, namely painful memories of Jock's childhood and youth, focusing primarily on his relationship with his parents, including his doubts as to who his real father is, and subsequently with his most important romantic partners, first Denny, his working-class girlfriend at the time of his studies, followed by Helen, his second, middle-class girlfriend whom he leaves Denny for and who goes on to become his wife, and then ex-wife. This personal history is reflected in Jock's pornographic fantasies with deliberate and self-mocking crudeness – a fact laid out in the chapter summaries included in the book's table of contents which introduce, for instance, "A Superb housewife, ripe for pleasure and not atall (*sic*.) like my wife Helen," or "A lesbian policewoman who is not atall (*sic*.) like my mother" (Gray 1985, n.p.). But, as previously indicated, the pornographic narrative mirrors more than just Jock's life as an individual – it also represents his role as a member of society, merging the personal and the national, one's story and a nation's history. Thus, the dynamics of sex are shown to transcend the realm of one man's intimate relationships and become politicised. This is signaled in many ways throughout the text, including the description of chapter 11, which reads: "FROM THE CAGE TO THE TRAP: or: How I Reached and Lost Three Crowded Months of Glorious Life: or: How I Became Perfect, Married Two Wives Then Embraced Cowardice: or Scotland 1952–82." Another instance is a comment anthropomorphising Scotland, depicting her as "shaped like a fat messy woman with a surprisingly slender waist"

(Gray 1985, 281). However, nowhere is it made more explicit than in the following passage, in which Jock's meditation on his personal history violently converges with the realm of the national:

> But if a country is not just a tract of land but a whole people then clearly Scotland has been fucked. I mean that word in the vulgar sense of misused to give satisfaction or advantage to another. Scotland has been fucked and I am one of the fuckers who fucked her and I REFUSE TO FEEL BITTER OR GUILTY ABOUT THIS. I am not a gigantically horrible fucker, I'm an ordinary fucker. And no hypocrite. I refuse to deplore a process which has helped me become the sort of man I want to be: a selfish shit but a comfortable selfish shit, like everyone I meet nowadays. (Gray 1985, 136–137)

Gray makes an ideological statement here by drawing on and linking the two meanings of "being fucked" – being sexually used for someone else's gratification and being, as a result of the former, trapped in a hopeless situation. This discourse shows sex to be a site and form of exploitation, a power dynamic covering all the ways in which we use and control each other, and one equally applicable to individuals and systems.

One notion that naturally comes to mind in this regard is the question of the allocation of gender roles in the novel's "national allegory" dimension, with Scotland portrayed as an abused woman – a topic that has been extensively explored by Kirsten Stirling. In offering a feminist critique of Gray's use of the nation-as-an-objectified-woman trope, Stirling positions the novel's sexual content as dictated by the book's engagement with this very concept, noting that "Gray is aware of the politics of the exploitation of women's bodies" (125).[7] This is certainly an important context (and one that is evocatively revisited in *Poor Things*), but, arguably, it also seems to be only part of the story, which, rather than serving a single gender-based sexual-as-national narrative, sets it within a broader picture of sex dynamics. Stirling's reading can be juxtaposed, for instance, with Jonathan Coe's focus on the novel's 'real' (non-sadomasochistic-fantasy) sex, which, according to him, is depicted in a "deeply sympathetic and compelling" way (64). My point here is that both Stirling and Coe are right, since *1982, Janine* is simply many things. In the novel, the pornographic narrative, Jock's recounting of his life, and his political commentary all converge into one, and the resulting literary and ideological image, or diagram, of sex is all things at once, like the Locks landscape, and at the same time intricate and blunt, like the shell drawing. Early on in the novel Jock proclaims: "My problem is sex and if it isn't, sex hides the problem so completely that I don't know what it is" (Gray 1985, 16). It could be argued that yes, his problem is sex, but also that sex is everything, not in the sense of occupying him completely but in the sense of encompassing all aspects of living among other people, in the most particular and the most general sense, and all the senses in between. We see this in the book's climax, where the voices do cover everything – from screams of ecstasy

and Jock calling for his parents, through the appearance of God and a call for social action, to commentary on the general nature of humanity.

Sex is political for Gray, but not only in the way in which we typically understand it to be political today, by functioning as a site of largely gender-based power dynamics or the conflict between leftist progressiveness and right-wing conservatism: rather, it appears that, for the writer, this comes from sexual dynamics shaping us as society, with good and bad habits reflected in our social and political practices (and conversely – with our politics shaping our intimate relations). Thus, while Cairns Craig is certainly right in arguing that *1982, Janine*'s two narrative strands shed no light on nor enrich one another, because they just repeat the same scenario, and through it, reveal themselves to be equally empty and pointless (186–187), arguably, that in itself is meaningful; the fact that Gray chooses a sexual rhetoric for his political discussion is significant for both and speaks to their inherent interconnectedness. As a result, "private sexual fantasy [proves to be] a re-enactment of the very terms which dominate and repress ordinary humanity" (Craig 186), and "Britain is […] organized like a bad adolescent fantasy" (Gray 1985, 139), a shared dynamic that is hardly surprising, given that, as Jock finally realises, "history is what we all make, everywhere, each moment of our lives, whether we notice it or not" (Gray 1985, 340).

In other words, as Edwin Morgan evocatively puts it, "it is all human, [Jock] discovers, and about Scotland, and Glasgow, and the state of the soul and senses, and the pilgrimages thereof" (97). Finally, it needs to be added that as dark and depressing as much of *1982, Janine* is, it is a journey, and one that actually ends on a hopeful note – the sexual and narrative trajectory goes from a place of repression, frustration, rejection, betrayal, lovelessness and cruelty, to a place of some kind of redemption, fueled by honesty and openness, and a sense of agency, which, Gray indicates, are the foundation not only of good sex but also of good society.

5. *Lanark*

In *Lanark*, sex is also a major, even foundational theme, albeit less explicitly so. Again a dual narrative, the middle part of the novel, which is, as previously mentioned, largely autobiographical, describes the childhood and youth of Duncan Thaw, a precocious boy who grows into a sensitive, socially awkward and intensely imaginative student of art, whose struggles ultimately drive him to suicide. This narrative is framed by another, which Gray himself describes as his "Kafkaesque afterdeath parody of our society" (2016, n.p.), and in which Glasgow turns into its hellish version by the name of Unthank. Here Duncan becomes Lanark, a man with no memory of his past life, seeking to build a lasting relationship with a woman called Rima, and failing, seeking to have a relationship with the son he fathers with her, and failing, and finally attempting to save Unthank from an impending

apocalypse – and failing at that as well. As in *Janine*, both for Duncan and Lanark, sex, in its role as a vehicle for love and the source of new life, is largely, though as we will see not entirely, about frustration and disappointment. And just as in *Janine*, the issue of sex functions on the level of the individual but also simultaneously extends to something broader. This is clearly indicated by the fictional author of *Lanark* (the novel), whom Lanark (the protagonist) meets and talks to in the epilogue, and who proclaims that "The Thaw narrative shows a man dying because he is bad at loving. It is enclosed by your narrative which shows civilisation collapsing for the same reason" (Gray 2002, 484).

Here, too, as in the case of *1982, Janine*, the fact of being "bad at loving" is never limited solely to the sphere of intimacy and interpersonal relationships. On the one hand, the novel's depiction of Duncan's teenage years does focus on sexual repression and confusion, which partly have to do with his peculiarity but also, and more crucially, seem to be a natural effect (and cause) of growing up in an emotionally stunted society, an environment leading him to assume that "[sex] was so disgusting that it had to be indulged secretly and not mentioned to others" (Gray 2002, 165). On the other hand, interestingly, what his subsequent, awkward interactions with girls and pent-up sexual energy ultimately translate into is a heightened artistic drive. Thus, sex spreads to different parts of his life, even turning his primary subject, the city, into an object of desire, as seen in the following excerpt:

> the world of things began to cause surprising emotions. A haulage vehicle carrying a huge piece of bright yellow machinery swelled his heart with tenderness and stiffened his penis with lust. A section of tenement, the surface a dirty yellow plaster with oval holes through which brickwork showed, gave the eerie conviction he was beholding a kind of flesh. Walls and pavements, especially if they were slightly decayed, made him feel he was walking beside or over a body. (Gray 2002, 228)

In this, Gray's narrative may at first glance seem to coincide with J. D. Unwin's findings concerning the creative potential that becomes unlocked through sexual abstinence, but ultimately it powerfully contradicts them. Duncan is unable to contend with or accommodate this energy and it inevitably leads to what Alison Lumsden aptly terms his "personal and societal dissolution" (115). In the end, it is the unfulfilled relationship with a fellow student that becomes a catalyst for his ultimate artistic frenzy, which leads to the climax of the Thaw narrative. Here, sex again becomes a juxtaposition of life and death, as creative vitality and sexual desire converge with what we suspect to be the mid-coitus murder of a prostitute, followed by Duncan's suicide.

Then, in Unthank, Lanark's personal drama with Rima and Sludden, the leader of the clique that Rima is part of and subsequently her lover, again imbues sex with a political aspect. The interplay between the three characters, with Lanark loving

Rima, her leaving him, and Sludden using him by first offering Rima to him and then taking her away, becomes a microcosm of the bad social practices of people who exploit one another, a site of coldness, selfishness, cynicism and unkindness. In that, as previously indicated, the novel uses the topic of sex in much the same way as *Janine* – taking an individual's sexual history and expanding it into a commentary on the dynamics within Scottish society. Moreover, as with both the previous novel and *Lanark*'s Thaw narrative, this story, too, features a climax – this time titled as such (this is the name of chapter 41) – in which Lanark experiences his "best moment" (Gray 2002, 515), spending time with his son. As Bernstein points out, this moment of happiness is immediately preceded (and thus, arguably, made possible) by Lanark partaking in an orgy, which "may not have been love, but it left him ready for love" (Gray 2002, 519; Bernstein 1999, 51). This positive sexual encounter – where he manages to shed his sense of shame and is received with openness and generosity – has an immediate, if brief, positive effect on other aspects of his self, once again underlining the significance of sexual life for personal and social well-being.

6. *Poor Things*

As previously indicated, Lanthimos's film makes Gray's *Poor Things* out to be highly explicit in terms of its exploration of sexuality. Meanwhile, although there is certainly a bluntness to Bella's commentary on her many sexual encounters,[8] because of the novel's structure, where her story is mostly reported through her letters, it does not actually translate into any graphic scenes of a sexual nature. That said, as also already noted, the book's interest in the subject does prove to be extensive and complex, with sex figuring in the novel in a number of ways.

As was the case with *Lanark* and *1982, Janine*, this novel's female protagonist, Bella Baxter, also functions on two planes – as an individual and as a personified allegory of Scotland, which is clearly signaled by the fact that her portrait, featured in the book, bears the inscription "Bella Caledonia" (this, coincidentally, being something that is entirely missing from the film, where the story is actually set in London).[9] At the beginning of the novel, a young English woman named Lady Victoria Blessington, married to an esteemed English general and pregnant with his child, drowns herself in the Clyde. Towards the end of the narrative we learn that this was her response to him impregnating and then discarding a 16-year-old servant. We also learn that her husband refused to meet her sexual needs, considering her strong sex drive a sign of madness, supported in this conviction by the family doctor who argues that "[n]o normal healthy woman – no good or sane woman wants or expects to enjoy sexual contact, except as a duty" (Gray 1993, 218). Thus, once again sex is linked to the giving and the taking of life, a conjunction of Eros and Thanatos, a notion reinforced by the image opening the narrative:

Gray's reworking of William Strang's *Grotesque*, an etching that depicts a naked woman emerging from the mouth of a skull.[10] At the same time, however, sex also again functions as a site and form of enslavement, control and oppression, which can be exercised both by enforcing and withholding it.

The drowned woman is subsequently revived by Godwin Baxter, an odd and grotesque Scottish medical research assistant, who, in a Frankenstein-like fashion, replaces her brain with that of her foetus. Baxter intends this new creature to be his companion, but Bella instead sets her sights on his university friend, the rather docile Archibald McCandless and then, in a bid to grow, evolve, and shape her consciousness, she abandons them both, embarking on a journey with another man, the immoral and debauched Duncan Wedderburn. Bella, like Janine, is a man's construct, created for his satisfaction, but her story is primarily and decidedly one of emancipation, in a way picking up where the previous novel left off. Her education and resultant liberation are firmly based on sex, as explicitly indicated by Gray, who opens the "Making a Conscience" chapter with *Gray's Anatomy*'s detailed, close-up image of the vulva. Bella's evolution involves her experience with Wedderburn, whom she ultimately drives insane with her insatiability, and a subsequent period that she spends working at a brothel in Paris. The latter grants her final and definitive freedom from her husband, who towards the end of the novel comes to reclaim her, as she is able to escape his grasp by identifying and exposing him as one of the clients frequenting the Parisian establishment:

> General Sir Aubrey de la Pole Spankybot V.C., how funny! Most brothel customers are quick squirts but you were the quickest of the lot! The things you paid the girls to do to stop you coming in the first half minute would make a hahahahaha make a cat laugh! Still, they liked you. General Spankybot paid well and did no harm - you never gave one of us the pox. I think the rottenest thing about you (apart from the killing you've done and the way you treat servants) is what Prickett calls *the pupurity of your mumarriage bed*. Fuck off, you poor daft silly queer rotten old fucker hahahahaha! Fuck off! (Gray 1993, 238)

In this way, sex is ultimately confirmed as having the potential to be a positive liberating force, a way towards independence, which again needs to be read in the context of Gray's central allegory: the emancipation of Bella as the emancipation of Scotland. Sex is also a source of knowledge; it allows Bella to grow into a conscious social being, Scotland's first female doctor to graduate from the University of Glasgow – her choice of profession, of course, hardly coincidental. Importantly, the allegorical dimension of the narrative entails that the significance of sex is again shown to go beyond the protagonist's individual experience and to apply as much to her story as to that of the nation. It is presented as a crucial domain where the intimate lives of individuals shape social, cultural and political practices, a dynamic which is brought here into a specifically Scottish context. This perspective seems

to side with Bertrand Russell's criticism of "Victorian values," turning Gray's novel into a political commentary on Thatcher's government.[11] As a result, as in the previous novels, sex is all things – it is a physiological, psychological, cultural and political phenomenon that defines the individual and the collective.

7. Conclusion

Gray's three major novels show the subject of sex to lie at the very core of his literary and ideological vision. Sex, according to Gray, is the foundation and vehicle for all the contradictory forces that drive our lives as individuals and as members of the social world: love and lovelessness, action and inaction, freedom and oppression, knowledge and ignorance, life and death. It is important to stress again that, despite being markedly different, the three texts simultaneously prove highly consistent in their depiction and treatment of the subject, thus testifying to the totality of the author's design. Consequently, we could say that what emerges here is a symbiotic relationship: exploring Alasdair Gray's vision makes us understand his take on sex, while tracing his take on sex illuminates the essence of that vision. And, considered in a broader context, such a perspective on sex can be viewed as a valuable contribution to the vast array of sexual discourses offered by contemporary texts of literature and culture. While Gray's take on the subject contains traces and echoes of several theoretical concepts and frameworks, which might tempt one into reading it through or against them, it could be argued that its primary value lies beyond such considerations. What Gray shows us is that individual experience is crucial but in no way separate for the general cultural, social and political mechanics of the world. On the contrary, it is their very stuff. While this may not be a new thought (indeed, it should not be, given Gray's beliefs about recycling texts and ideas), it is certainly one of which we should be reminded.

Notes

1   For instance, the film's review in *The Independent* opens with the following statement: "There is a lot of 'furious jumping' going on in Yorgos Lanthimos's *Poor Things*. This is the phrase its heroine Bella Baxter (Emma Stone) uses to describe sex. Once she's first stuffed a cucumber inside what she calls her 'hairy business,' a new world of adventure and tragedy opens up for her" (MacNab n.p.). Guy Lodge, reviewing *Poor Things* for *Variety*, notes that "[o]ne crucial day [Bella] discovers what's between her legs, and how good it feels when she touches it" (n.p.). Ryan Latanzio opens his Venice Film Festival review of Lanthimos's work with the words: "Yorgos Lanthimos' 'Poor Things' features more raunchy sex and frank nudity than you've probably seen in a studio-backed feature in a very long time" (n.p.). At the same time, a highly negative review in *Vulture*, authored by Angelica Jade Bastién, also focuses on the

sexual aspect of the film (the piece is tellingly titled "Is *Poor Things* the Best We Can Do for Female Sexuality Onscreen?").

2   In an interview for *The Guardian*, Lanthimos posits, rather cleverly, that the "*essence* [original emphasis] of [the film] is very much in the novel" (n.p.), thus subverting the question of faithfulness to the source text while at the same time admitting that the book has a broader scope than his work.

3   It needs to be noted here that the topic of sex is not to be found only in these novels – it is also, for instance, the primary focus of *Something Leather* (1990). The reason why the present discussion does not extend to that text is twofold: first of all, the prevalent scholarly exploration of Gray has mostly been centred on his "major" works. Although this in itself may be problematic, since this article seeks to contribute to this "main" perspective, it seems to make sense for it to engage with the same source material. Secondly, since Gray himself declared *Something Leather* "perhaps [his] most successful effort to break with [academic audiences]," an attempt driven by his fear "of seeming their property" (2018, n.p.), it appears somehow right to respect his authorial stance.

4   It should be pointed out here that prior to this period, scholarly interest in the topic, too, has been perceived by some as highly limited and mostly negatively biased (Halwani). For a thorough exploration of different academic perspectives on sex and sexuality, see Soble.

5   The disproportion of how much critical attention is paid to Gray's literary output when compared to his visual art has been noted by Rodge Glass in his article "Erasure and Reinstatement: Gray the Artist, Across Space and Form," which is an attempt to provide some more balance in this regard. The same impulse seems to have been driving the 2022 second Alasdair Gray conference titled "Making Imagined Objects" and focusing on the relationship between his literary and visual practices.

6   One such example is Jonathan Coe's "1994, Janine," which discusses sex as one of the parts of the narrative, critiquing it, but not really linking it with other aspects of the book; another is Stephen Bernstein's chapter on *1982, Janine* in his book *Alasdair Gray* (1999), which offers an insightful reading of Gray's novel and notes the interconnectedness of the two plots, examining their shared dynamics, but does not really address the implications of this inherent link.

7   Stirling calls the novel a "post-modern rewriting of MacDiarmid's key poem *A Drunk Man Looks at the Thistle*" (ii). In offering this critical designation, Stirling subscribes to a (fairly commonly employed) labeling of Gray's oeuvre as postmodern, one that the author himself rejected (on the critical insistence on using the tag and Gray's own insistence on not accepting it, see for instance Alan McMunnigall's "Alasdair Gray and Postmodernism"). This unwillingness to self-identify through an academic or critical discourse is something that the present article seeks to subscribe to in its decision not to anchor its discussion of Gray's writing in a particular theoretical framework.

8   This is evidenced, for instance, by Bella's first letter, in which she matter-of-factly informs Godwin that upon escaping from his house and boarding a train, "[they] wed wed wed, went wedding all the way to London town" (Gray 1993, 105).

9   For an in-depth discussion of the Bella-as-Scotland allegory, see Donald Kaczvinsky's article "'Making Up for Lost Time': Scotland, Stories, and the Self in Alasdair Gray's 'Poor Things'."

10   It should be added here that Strang is falsely cited as the author of the novel's etchings, this being a part of Gray's elaborate intertextual play.
11   For more on this, see "Bibliographic Metafiction: Dancing in the Margins with Alasdair Gray" by Frederick D. King and Alison Lee.

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Anna Czarnowus, Janet M. Wilson, eds. (2024). *New Zealand Medievalism.*
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One might be surprised by the juxtaposition of the words "New Zealand" and "medievalism," with the latter referring to "any form of return to the historical or imagined Middle Ages" (1), in the title of the Routledge volume edited by Anna Czarnowus and Janet M. Wilson. However, as each chapter of the monograph unfolds, bringing forth creative ways of addressing the subject in question, this unexpected combination appears to be the main strength of the whole endeavor. *New Zealand Medievalism. Reframing the Medieval* (2024) successfully combines the originality of the explored themes with the multidimensionality of the adopted perspectives, which also translates to the opportunity of learning more not only about the perception of the Middle Ages in an unusual context, but also about contemporary times shaped by the influence of the past. The innovation of the project consists mostly in exploring the underexplored from diverse points of view, including various methods of studying the Middle Ages and understanding the term "medievalism," specifically in a broader, more global framework, which contrasts eurocentrism with the postcolonial and white dominance with Indigenous realities. Moreover, by turning the gaze towards Aotearoa, one can see the nation's clear contribution to world science, confirmed by the abundance of material for analysis. In the introduction to the volume, the editors emphasise the diversity of sources, such as research, life stories, manuscripts, fiction, architecture, music, movies, and politics. By doing so, they also announce the content of the book.

The first part, entitled "Medieval studies: A foundation for medievalism," is devoted to the essential notions of New Zealand's engagement with the Middle Ages, in terms of research conducted in that country or by local scholars elsewhere in the world, and Māori conceptions of history and land that resemble those in medieval England. Composed of four chapters, this section examines the way academic predilection for medievalism in New Zealand has evolved, which appears to be underpinned not only by the expected relations with England and the resulting mobility of scientists, but also, indirectly, by parallels in perceiving reality in the

past by the Indigenous and the English. Various angles provided by the initial part of the book offer the reader an overview of major perspectives on New Zealand's research of the Middle Ages and related ideas, as well as its contribution and impact, without refraining at the same time from citing specific examples, names and accomplishments.

The direction of analysis, from global observations towards particular cases, is clearly visible in Janet M. Wilson's chapter, focused on the general profile of New Zealand's medieval studies. From the very introduction, the author stresses the importance of multiple temporalities and interdisciplinarity of the country's research of medievalism, manifested for example by the 19th-century interest in the Middle Ages and its study initiated at the beginning of the 20th century. The medieval adopts here a plurality of forms and meanings, ranging from the postcolonial perspective and the "dependance on the imperial centre" (24) to the identification of Britishness and the expression of bicultural nationalism. Wilson, tracing the evolution of local universities marked by colonial influences, explains the impact – mostly Scottish – on the New Zealand education system and outlines the contribution of the New Zealand scholars to medieval studies, for instance in lexicography or editing. At the same time, the author underlines the reach of the conducted research, sometimes extending to other parts of the world, such as the UK or Canada.

Academic mobility lies at the heart of the chapter written by Stephen Knight as he investigates the work, and more generally the lives and attitudes, of three important New Zealand researchers and teachers who moved to Australia, namely George Russell, Grahame Johnston, and Bernard Martin. The profiles of the three scholars reinforces what was introduced in the previous chapter and what is continued in the next, that is the human perspective on the members of medievalism research community. Instead of simply listing their accomplishments and the significance of their contributions, Knight chooses not to equate them with their academic work, but to show them as unique individuals, struggling with dilemmas and doubts. Such an approach towards the topic proves that scholars should not be seen as automated producers of research, but as complicated human beings whose complexity allows them to conduct meaningful studies, necessary to the academia. As a result, Knight outlines a portrayal of diverse personalities, describing their professional and private connections, as well as the shared experience of settling down in Australia and the resultant feeling of distance, which "was both physical, from the antipodes and back, and temporal, from the modern to the medieval world" (60).

On the other hand, Rebecca Hayward's chapter "There and back again" enables insight into the New Zealand achievements and academic influence of two scholars with English roots, P.S. Ardern and J.A.W. Bennett. They influenced each other, but it was the former who shaped the latter's scientific growth and showed that it was possible for a New Zealander to hold a position in a field "with all its sources and traditions in Britain" (69). Regardless of the dominance of colonial

education in the life stories of both scholars, as evidenced by their academic degrees from Oxford, the two men manifested commitment to New Zealand and its role in their intellectual development. Bennett's interest in the Middle Ages was imprinted in the formation that his country of origin offered to him in the between-the-wars period, and so he intended to return from Britain to Auckland. At the same time, Ardern, to whom Bennett felt indebted for the impact he had on both the field and his student's career, focused on the Māori pasts in reference to medievalism. Furthermore, not only did Ardern start to examine history from a different standpoint, he also encouraged the studies of the Pacific strand of the field, as well as the language.

Bringing to the foreground the Māori culture, especially from before the establishment of the nation-state, and comparing it to the medieval line of thought, seems to be also the main goal of the chapter written by Madi Williams. She explores three fundamental notions, namely genealogy, land and space in the context of conceptual maps and medieval rolls, and from the perspective of Māori beliefs and worldview. As the latter has been underexplored, especially before the 19th century or in the period preceding the Treaty of Waitangi, which marks the beginning of the New Zealand official history, correspondence between the understanding of selected notions in medieval English and by Māori tribes has not been subject to extensive research. Hence, Williams' study provides conclusions that "can contribute to a new way of approaching the study of medieval history" (81). A comparative analysis of the Canterbury Roll, i.e. an English genealogical document, and *whakapapa*, a Māori term for situating people in space and time, as well as a juxtaposition of maps, symbolic and subjective in both cultures, reveal that medieval and Māori conceptions shared many similarities, such as the importance of intermarriage for land rights or the role of origin myths and ancestry in perceiving the world. This may suggest a certain universality of ideas, unspoiled by distance.

"Medievalism in manuscript collections," the subsequent part of the volume, shifts the emphasis from people to things – not "objects," the meaning of which "assumes sole agency on the part of the human 'subject'" (102). Stressing the significance of the non-human and the non-material determines the conclusions of both of the chapters included in this section, with medieval manuscripts becoming a stimulus for education, but also for creativity and emotional encounters. Victoria Condie ponders the meaning of the Alfred and Isabel Reed Collection, gathered in Dunedin Public Library, which plays the role of a starting point for a reflection on the nature of collecting, in both space and time, and the ensuing act of establishing contact between the past and the present, also thanks to the memory of things. Private collections, as part of the migrant experience, have been instrumental in safeguarding items from European history by transplanting them to New Zealand soil, where participating in shaping the nation's awareness of the past was considered by many to be patriotic. However, Reed's reservoir of medieval manuscripts, including religious works, the Bibles, Dickensiana, and documents from the 14th

and 15th centuries, has served New Zealand particularly in educational contexts: given priority over things, viewers-turned-users gained the opportunity to experience physical records of history.

The above-mentioned manuscripts, as well as other similar libraries, offer educational – and practical – benefits to contemporary learning establishments, as evidenced by the case of University of Otago, described in Simone Celine Marshall's chapter. Indeed, substantial medieval collections held in Dunedin are involved in the process of studying the Middle Ages while facilitating the improvement of the university's curriculum. Public access to manuscripts makes it possible to approach them practically since "the intention at Otago is to replicate medieval techniques as much as possible in order to learn about medieval texts and about the medieval world" (117). As a result, as a way of reviving interest in the subject, students are offered experiential activities instead of theoretical analyses of old texts. Thanks to physically accessible collections of manuscripts, learners can experience the objects first-hand and draw knowledge from them, also derived from simple observation. Therefore, the curriculum comprises studying paleography, cutting the quill and using it to write (which could pose difficulties for the left-handed), producing ink and other writing materials, and exploring gilding and bookbinding. All of these activities ultimately bring history closer to the contemporary.

Connections between the past and the present seem even clearer in the third part of the volume, entitled "Medievalism in literature, music, film, and architecture." All three chapters featured in the section observe cultural phenomena from the 20th and 21st centuries involving medieval perspectives and influences. Jonathan Le Coq writes about music and how interest for its quasi-medieval variants developed in 1970s New Zealand. The revival was manifested by the work of performers, such as The Troubadours, practising early music, which "crossed the medieval/Renaissance boundary" (135), or its contemporary vision based on recurrent motifs and popular imagination. Since it is nearly impossible to reproduce the world of sounds from the period, the New Zealand exploration of early music focused on "invented medieval music" and the significance of the experience itself rather than on historical accuracy. Apparently, traveling sonically to the past, but from the present point of view, referred inexplicitly to the nation's identity in relation to the colonial line of thought, with relevance and the desire to find "that elusive New Zealand-specific embodiment of European traditions" (145) playing the pivotal role.

The interplay between colonial perceptions of Aotearoa and the realities of the island constitutes the center of the next chapter, in which Anna Czarnowus examines Peter Jackson's *The Lord of the Rings* movies in the context of medieval myths of organic unity and pastoral paradise. Despite the fact that J.R.R. Tolkien's books, the source material adapted for cinema, are set in a fantasy world of Middle-Earth, the novels are infused with pre-industrial imagery, which contributes to the popular conception of the Middle Ages that we have today. New Zealander

Peter Jackson grafted Tolkien's realm onto the filmmaker's homeland, thus perpetuating the colonial conviction of Aotearoa being the idealised destination for white settlers, untouched by the nightmares of civilisation and ready to be transformed according to the wishes of newcomers. By combining myths with the imaginary, "fairyland settings create an impression that New Zealanders live in a medieval place" (156) and reinforce the unrealistic way of perceiving the country through the lens of primitivism. The approach towards land and the Indigenous also determine the significance of shooting Jackson's pictures in New Zealand. The former was commodified to increase tourism and the latter were shown from a stereotypical and detrimental point of view, where Māori, cast as Orcs, enemies to the good-willed protagonists, represent primitive evil, reduced to the traditional image of brutal warriors. Consequently, rather than creating a lasting cultural identity for New Zealand, the LOTR movies contributed towards recolonisation.

The motif of equating New Zealand with Englishness permeates Alexandra Barratt's chapter devoted to the architectural reading of the religious and cultural tensions surrounding Hamilton's St Peter's Cathedral. The building's design, characterised by Gothic Revival, again redirects the study of the medieval to the rediscovery of the Middle Ages in the 18th and 19th centuries. Barratt retraces the process of acquiring and installing new windows in the cathedral, which added to the historical character of the place, as "[n]othing shrieks "medieval" more loudly than a stained glass window" (170). Collecting money for the investment in the time of crisis is revealed to have been an essential part of sustaining the continuity of the English Catholic church in the context of New Zealand's Anglican ceremony. The idea of reaching the past in the search for roots and importance was also reflected in the scenes depicted on the cathedral's stained glass windows, featuring major figures of Christianity, but also St Oswald, King of Northumbria and an Anglo-Saxon warrior. At the same time, the scenes portrayed the memorial of Hori Raiti, the first Māori archdeacon, whose whitewashed representation as St Aidan of Lindisfarne was the result of adjusting all local images to the requirements of the English past.

Contemporary interpretations of the medieval shape the fourth part of the book, "Political medievalism," consisting of two chapters that delve into the topic of treating medieval history, or the idea of it, as a justification for current ideologies and behaviors. Ellie Crookes discusses the Havelock North village and its attachment to the concept of "medieval lifestyle" as a form of expressing white supremacy. The point of departure for the founding of the village was the idea of utopianism, that is, the concept of a paradisical land where peace and fulfillment could be achieved thanks to solidarity and contact with nature. To realise this assumption, Havelock North practiced "embodied medievalism" (185) and attempted to recreate physically the lifestyle characteristic of the European Middle Ages. This goal was dependent on several types of activities and ideologies, namely the Arts and Craft movement, anti-industrialism, occultism and spiritualism, and – indirectly – imperialism. Reproducing the idealised medieval past through such

practices, for example by organising spiritualist societies or woodcarving classes, played a part in erasing the Indigenous character of the island and glorified the colonial optics, bringing the New Zealand settlers closer to the English center. In this way, Crookes proves that the medieval perceived as a form of romanticised past can become a tool of abuse or even oppression.

Louise D'Arcens elaborates on the topic of white supremacy in her chapter by analyzing the medieval implications of a Christchurch terrorist attack carried out by an Australian far-right extremist who killed 51 Muslims in the alleged protection of the Western world. The examination of the case-related facts and the context of the crime reveal that medievalism and selective knowledge of the Middle Ages can be manipulated to serve the purpose of supporting harmful theses regarding the supposed superiority or inferiority of certain groups, frequently shifting to violence. By referring to the inscriptions on the weapon used in the attack, D'Arcens links the act of terror with the medieval victories of white and Christian Europe over Muslims. Therefore, it is shown that extremist organisations, perceiving themselves as "reborn Templars," base their theories of the West being forced to defend itself from Islamic invaders on convenient elements of the medieval past. Such theories are included, for example, in the Christchurch terrorist's manifesto as well as the Great Replacement thesis and Manifest of Destiny, all of which justify the domination of white Christians over groups of different origins, faith or customs. In this context, New Zealand cannot merely be seen as a territory where local variants of international phenomena emerge, since contemporary – or "weaponized" – medievalism "is a by-product of the toxic brew of white replacement fear and colonial triumphalism, and in that respect its physical and geopolitical location matters" (213). In other words, the present always results from the complexities of the history of the place and of its people.

As evidenced by the above outline of chapters included in the Routledge volume, *New Zealand Medievalism* should be recommended not only to readers or scholars invested in the medieval studies, but to any person who wishes to broaden their knowledge and adopt a new perspective. Complex, well-founded interpretations of the New Zealand iterations of the medieval that are discussed here in unexpected configurations and frameworks will stimulate reflection on any topic connected with the interrelations between the past and the contemporary moment, in a not exclusively academic context. This is because, instead of accumulating theories and critical approaches, this book makes it possible to focus on how humans use various ideas, whether to create new concepts or to distort reality. As original and comprehensive studies should be able to do.

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