

Hauntology and Ecological Crisis: A Study of Climate Change Theatre in Mike Bartlett's *Earthquakes in London*

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Abstract

This paper shows that Mike Bartlett's play *Earthquakes in London* is designed as a hauntological text which reveals the temporal and ontological dimensions of the ecological crisis, haunted by the specters of capitalist modernity, that is, the specters of apocalyptic futures and lost possibilities. The play's non-linear narrative structure, ranging from 1960 to 2525, employs spectrality as a dramaturgical and theoretical device to reveal how the climate catastrophe collapses the linear temporality of anxious anticipation and nostalgic repetition. The paper examines how contemporary climate change theatre, through the lens of Jacques Derrida's hauntology, articulates the timeframes of the ecological crisis that resist representation. It illustrates how enacted performance may become the tool through which the unbridged contradiction of the Anthropocene can be staged and made visible. Such a staging foregrounds futures that are neither wholly present nor wholly absent. This paper investigates three main research questions: How does Bartlett's temporal stage, with its many epochs and futural catastrophes, work as a hauntological intervention into climate discourse that collapses the demarcation of past, present, and feared futures? How does the domestic sphere represent a microcosm for macro-level concerns and reveal links between bodily issues of individuals and large-scale environmental catastrophes? The study argues that the play engages the audience in a confrontation with hauntological aesthetics, realizing that the future has already been overtaken by the specters of apocalypse rather than any promise of change.

Keywords: Hauntology, Climate change theatre, ecological crisis, Mike Bartlett, *Earthquakes in London*.

Introduction

In the age of Anthropocene, the ecological crisis is more than just the rise in temperatures and erratic weather events; it is a temporal crisis. The present moment is removed from itself. It is haunted by histories that impact us in the current time and futures that will never become habitable worlds. Mike Bartlett's *Earthquakes in London* (2010) is significant in climate change theatre because, rather than merely delivering a scientific warning, it examines the temporal distortions arising from environmental collapse.

Literature Review

Ever since the play's first performance at the National Theatre in 2010, Mike Bartlett's *Earthquakes in London* has been regarded as a key British text in climate change theatre. Bartlett's work is often cited by scholars for its use of "excess", contrary to the didactic "science plays" that emerged in the early 2000s and comprised theatre meant to combat climate change. Most of the current academic literature on the play equals the most concentrated cluster in terms of value. This includes the translation of climate science into effect, intergenerational ethics, and post-dramatic form as a representation of chaos.

An ongoing debate in the literature concerns how Bartlett is able to bring together scientific data and human emotion. Some critics of climate theatre have argued that the scale of global warming is too big for drama. However, *Earthquakes in London* has been identified by scholars as a successful instance of

"ecodramaturgy" that prioritizes feelings over facts. ⁽¹⁾ argues that Bartlett embodies the climate crisis as individual trauma instead of scientific facts. According to Gültér, it is through the Crannock family that the audience can "interact with ecological thinking in unique ways" that scientific discourse cannot (p. 120). In ⁽²⁾ this examines the representation of the figure under discussion. Unlike the heroic truth-tellers of earlier drama, Crannock is a compromised misanthrope who sold out to the airline industry, Bottoms notes. Bottoms claims this characterization complicates the "deficit model" of science communication since possessing the knowledge does not prevent disaster (p. 344).

situates *Earthquakes in London* within a broader wave of "cli-fi" narratives that use the family unit to allegorize global crisis. She suggests that the play stages a confrontation between the "profligate past" ⁽³⁾ (represented by Robert) and the "paralyzed present": (his daughters). Similarly, critical reviews incorporated into academic study, such as ⁽⁴⁾, highlight how Bartlett frames climate inaction as a specific failure of parental love, where the older generation has "traded their descendants' futures for short-term gratification."

Identifies *Earthquakes in London* as a departure from the "postmodern irony" of the 1990s toward a new "sincerity" demanded by environmental urgency ⁽⁵⁾. He argues that the play's "epic" and "panoramic" form is necessary because the climate crisis disrupts linear time and local geography. The play's refusal to stay within a single genre, shifting from realism to dream sequences, is seen by Angelaki ⁽⁶⁾ that the "excess" of the play, its loud music, nudity, and fast cuts, mimics the capitalist consumption driving the crisis, forcing the audience to experience the chaos of late-stage capitalism viscerally ⁽⁷⁾.

While existing studies have thoroughly explored the play's ethical dimensions (intergenerational blame) and formal strategies (postdramatic excess), there remains a significant gap regarding the ontological implications of its timeline. Critically, there is a lack of rigorous engagement with Hauntology, the Derridean concept of the "specter" that is neither present nor absent, and specifically Mark Fisher's interpretation of hauntology as the slow cancellation of the future. Current literature treats the play's time jumps as flashbacks or flash-forwards (narrative tools), rather than as evidence of a temporal collapse caused by ecological trauma. The current investigation will fill this gap by applying a hauntological framework to the text. Instead of interpreting the agitated state of the characters as mere fear, the present study will term it as "temporal claustrophobia", a state where the future is not merely "threatened," but has already been cancelled by the past action.

Theoretical Framework

As introduced by Jacques Derrida, hauntology describes a condition whereby the present is haunted by ghosts from the past and specters of the future. In 1993, he coined the term "hauntology" in *Specters of Marx*, a philosophical neologism that plays on the French pronunciation of 'hantologie' (haunting) and 'ontologie' (ontology). In contrast to traditional ontology, which is concerned with being and presence, hauntology concerns itself with what is neither present nor absent. As Derrida states "the spectre then is that this cannot be present cannot have being in itself but marks relation to what is no longer or not yet" This formulation complicates the metaphysics of presence central to western philosophy, rather proposing a mode of existence marked by deferment, trace, and a return always of what cannot be fully exorcized ⁽⁸⁾.

Derrida's conception of spectrality works in two ways. First, hauntology refers to "that which is still effective as a virtuality," the compulsion of repetition, structures that reproduce fatal patterns from the past. Second, it gestures toward "that which in actuality has not yet happened but which is already effective in the virtual," an anticipatory force, an attractor shaping the present through the specter of what is to come. This bidirectional temporality is particularly salient for understanding ecological crisis, in which the carbon emissions of previous centuries continue to warm the planet while simultaneously projecting catastrophic futures that already constrain present actions ⁽⁹⁾.

The ghost has a de-territorializing quality. It "throws time out of joint", reconciles Hamlet, the timeless becomes impossible to be reached thus creating temporal and ontological instability. The ghost is

a marking of the site where linear chronology breaks down and past, present, and future collapse. As Steven Shavero notes, “The living thing we have murdered is never restored to us, but its death, it having-been-murdered, tracks us relentlessly and will not let us go. This is what Derrida means by specters, ghosts, and haunting.” For Derrida, hauntology supersedes ontology; it is “more basic, more (pre)originary, than Being or than ontology.” This spectral logic proves indispensable when confronting climate change, a phenomenon that cannot be reduced to simple presence, that exists as a hyperobject distributed across time and space, and that manifests as the revenant consequences of industrial modernity’s accumulated violence against the Earth ⁽¹⁰⁾.

While Derrida deployed hauntology primarily within the context of Marxist inheritance and political messianism, British cultural theorist Mark Fisher reimagined the concept for the twenty-first-century condition of cultural stagnation and political paralysis. In *Ghosts of My Life: Writings on Depression, Hauntology and Lost Futures*, Fisher argues that contemporary culture is haunted not by the past, but by “all the lost futures that the twentieth century taught us to anticipate.” These are the futures of social progress, technological liberation, and collective flourishing that modernism once promised but which late capitalism has systematically canceled. As Fisher writes: “the disappearance of the future meant the deterioration of a whole mode of social imagination: the capacity to conceive of a world radically different from the one in which we currently live” ⁽¹¹⁾.

Fisher’s hauntology operates within the framework of “capitalist realism,” defined as “the widespread sense that not only is capitalism the only viable political and economic system, but that it is now impossible even to imagine a coherent alternative.” Following the collapse of the Soviet Union, ideological foreclosure has accelerated as a result of neoliberal restructuring. This cancellation of the future creates the time of slow cancellation of the future, as Fisher talks about. Furthermore, the mutant version of cultural symptom is the obsession with endlessly recycling a past aesthetic. This is just casting back to 20th century forms without that past’s forward-looking desire among which. According to ⁽¹²⁾, this is a stuck traditionalization incapable of producing anything actually new (p. 35).

Fisher’s analysis is very important in respect to the ecological crisis. Climate change is the ultimate challenge to capitalist realism because it exposes a paradox at the heart of capitalist realism. Capitalist realism is a self-justification that posits it as the uniquely viable political-economic system. On the contrary, it looks like capitalism is going to destroy the whole human environment. The demand for continuous growth that defines capitalist accumulation, which refers to increasing extractions and consumption, clashes catastrophically with the material limits of a finite planet. Instead of triggering a fundamental overhaul of economic relations, climate calamity has been absorbed into the advertising machinery of capitalism through greenwashing and the commodification of environmental concern ⁽¹³⁾.

The specter of climate crisis “stalks the present, finding ways to mash and mangle the present into one that is inseparable from a myriad of doomed futures” ⁽¹⁴⁾. This temporal colonization operates through what Andreas Malm describes as the rolling invasion of the past into the present. The unleashed carbon dioxide emissions from the 19th and 20th centuries, whose combustion powered industrial expansion, colonial exploitation, and consumer capitalism, linger in the atmosphere as a literal haunting of society. This ghostly substance will keep warming the planet for centuries. The sky is heavy and heaving under the weight of the past. Macroeconomics, the carbon of years past, itself burned because of decisions made decades and centuries earlier, is embodied in the air we breathe. The past is not only memory or historical narrative. It is an active, toxic presence that determines the horizons of possible futures ⁽¹³⁾.

In contrast to conventional hauntological frameworks, Fisher’s concern with lost futures is predominantly about cultural and political imaginaries. The futures canceled by climate change include the continuation of habitable ecological conditions, the survival of countless species, and the stability of human civilization itself. These are not futures we merely long for aesthetically or politically, but futures whose loss threatens existence at the most fundamental level. As the futures of the climate crisis are ones’

presumably dread,' inverting the typical hauntological structure where "the dreams of a better world do not haunt the present, but by a world on fire" ⁽¹⁴⁾.

Climate change materializes this condition with particular urgency: we are haunted not only by the extinct species and ravaged landscapes of the past but by the doomed futures that shadow every present moment.

Climate Change Theatre is a subset of the broader field of ecodramaturgy, a term coined by theatre scholar Theresa J. May. While traditional theatre has historically focused on human conflict against a passive scenic background, ecodramaturgy "puts ecological reciprocity and community at the center of its theatrical and thematic intent". It challenges the anthropocentric bias of the stage, asking to consider non-humans as agents on the stage ⁽¹⁵⁾.

In her study, "Greening Theater: Taking Ecocriticism from Page to Stage," May discusses two ways to make theater more environmentally friendly. To begin with, looking at classical works through the lens of ecocriticism. Second, writing new, original plays that fit with the ecodrama. Chaudhuri and May, both early proponents of ecodramaturgy, argue that traditional anthropocentric theater seeks to answer the question "Who are we?" Conversely, ecotheatre, encompassing ecodramaturgy, endeavors to address the inquiry "Where are we?" ^(16,17). As May states, "Theatre is not only a means to find an answer to the age-old question of who we are, but also to the urgent ecological question of where we are?" (p. 53).

Ecodramaturgy is not simply "plays about the environment." It is a critical lens and a creative practice that interrogates the relationship between the human and the more-than-human world. May asserts that "The task of ecodramaturgy is to allow the viewer to feel more alive, listen and become more aware of their ecological identity... [It] puts ecological reciprocity and community at the center of its theatrical and thematic intent" ⁽¹⁷⁾.

Theatre and performance scholars, employing a theoretical framework regarding theatre's disengagement from the climate change crisis, contend that theatre has predominantly addressed human interpersonal relationships, as the arts have historically been perceived as endeavors that separate humanity from nature ⁽¹⁸⁾ observes that contemporary Western theatre legitimizes nature "as a scenic backdrop to human conflicts; represented as remote, fixed, and passive, nature is the setting which reinforces and highlights the 'realness' of the human action" (p. 236). Theatre, as an art form, engages in the nature/culture dichotomy by depicting nature as inferior to human endeavors. Nonetheless, theatre scholars, by invoking this gap in their writings, present numerous opportunities for reinterpreting this contradiction. In her article "There Must Be a Lot of Fish in That Lake" ⁽¹⁹⁾ critiques the nature/culture dichotomy, asserting, "By making space on its stage for ongoing acknowledgments of the rupture it participates in—the rupture between nature and culture [...] —the theatre can become the site of a muchneeded ecological consciousness" (p. 28). ⁽¹⁹⁾ critiques Western theater for its insistence on the separation of environment and culture, while also discussing the potential for a "responsible ecological theatre." (p. 23) to cultivate ecological awareness. She critiques the humanist paradigm by highlighting theatre's connection to the non-human realm and dismisses its role as "a wholly social account of human life" (p. 24). ⁽²⁰⁾ similarly emphasize the anthropocentric entanglement in Western theatre, stating, "in its dominant forms, the history of theatre has been coterminous with the history of human subjectivity" (p. 6). Consequently, it is not fortuitous that ⁽²¹⁾ underscores theatre's distinctive role in elucidating how the human imagination engages with and is essential to our ecological 'situatedness' (p. 95). She then argues that theater studies has not done a good job of addressing environmental problems. However, it is now time to consider, support, and develop an ecological theater that demonstrates how the environment is being exploited unjustly and how people are connected to the world beyond humans.

In this sense, ecodramaturgy "puts ecological reciprocity and community at the center of its theatrical and thematic intent" ⁽²²⁾. Ecodramaturgy examines theatrical and thematic content in relation to ecology, primarily questioning "how theatre and performance might shock us into recognition of the inescapable interdependencies and shared contingencies" ^(18,23) with the more-than-human world.

Consequently, it facilitates the manifestation of representations of human interactions with the environment within theatrical activities. Ecodramaturgy can also show how wrong ideas and frameworks about culture/nature or human/non-human distinctions are. In doing so, it can provide several access points through which ecological links are embodied and communicated to the audience. ⁽¹⁶⁾ comment on the phenomenon in the following way:

The realization that "culture" is (part of) the nature of our species, and its converse, that the non-human world is both shaped by and experienced through elements of this culture (notably language), is not, for contemporary ecocriticism, a dead end but just the opposite: the emergence of new arena and new set of modalities for ecological and ecocritical practice. (p. 29)

Ecodramaturgical studies contest binary paradigms that separate human culture from the non-human realm and advocates for a reconfiguration of theater historiography to reevaluate the influence of the non-human world on human cultural works. Numerous scholars in theatre and performance studies have responded to the imperative to reevaluate the representation of human-more-than-human relations in theatre. Theatre's distinctive status as an embodied art form might provide avenues for the redefinition of ecology in both scientific and material contexts. Theatre and performance scholars praise "a turn towards the literal, a programmatic resistance to the use of nature as metaphor" ⁽¹⁹⁾ and focus on how humans are "materially embedded and enmeshed in and with the more-than-human environment that contains and sustains us". Ecological theater challenges stereotypical images of nature, such wilderness or landscape, because "theater is both a living art form and a place where bodies, communities, politics, commerce, and imaginative possibilities come together in a material way" ⁽²¹⁾.

From this perspective, eco-dramaturgy contests direct connections between humans and the non-human world, hence emphasizing their material interconnections. Focusing on the physical connections between people and the world beyond people can provide many ways to mitigate the harmful effects of environmental violence on all living things. Nonetheless, playwrights face particular obstacles in representing ecological narratives on stage. The narratives unfold across multidimensional scales that extend beyond human experience, thereby eluding depiction ⁽¹⁸⁾. Ecodramaturgy examines dramatic and thematic aspects of ecological issues, advocating consideration of all scales, including spatial, temporal, personal, and global dimensions. An ecodramaturgical perspective necessitates the consideration of both the individual and global ramifications of climate change. Climate change theater examines the complex relationships between people and their natural surroundings across multiple dimensions. This is because the way people act on ecological issues is reflected in how climate change affects them. In this way, climate change theater connects an environmental problem with the process of making a live show. ⁽¹⁶⁾ have a theory on climate change theater that goes like this:

We think of this sub-genre as an up-dated ecotheatre, dedicated to putting the vast resources of live, embodied performance at the service of the program of radical reimagination called for by the perilous predicament we find our species – and others – in today. (p. 2)

As the quote above shows, climate change theater is a type of ecodramaturgy that tries to show the effects of the climate change catastrophe via physically genuine performance. Utilizing the distinctive potential of conveyed performance, the playwrights integrate apocalyptic scenarios and climate scientists into the dramatic framework to motivate the audience to combat the climate change catastrophe. However, it's important to remember that the size and extent of this problem have made it difficult to address. In other words, you can observe weather events immediately, but the climate remains a complex and diffuse system that people can't fully understand. This means that the range is too broad and the causes are too complex to be presented on stage. ⁽¹⁶⁾ argue that climate change cannot be personally experienced, unlike weather. This makes it hard to show climate change in art. Climate change has recently been characterized as "slow violence" ⁽²³⁾, denoting events whose consequences, while catastrophic, are neither immediate nor striking; thus, climate change eludes description. Consequently, it is not coincidental that playwrights endeavor to explore innovative methods to engage with these topics. Climate change theater seeks to address this

problem by incorporating climate science into the play's structure. Most plays on climate change have scientists as the main characters who explain the facts about climate change and weave their own personal tragedies into complex environmental issues. Climate change connects the arts and humanities with science, as well as nature and culture. In Kirsten (2015) ⁽²⁴⁾ terms:

Theatre provides a particularly potent and fascinating example of how scientific ideas make their way into culture because of its combination of liveness and immediacy, kinetic human bodies in action, and time working on two levels ('real' and 'theatrical' time). (pp. 1-2)

Theatre connects science and culture, making it possible to see science as a human activity. Through this effort, science shares the same time and location with the audience and the performer. This makes it less abstract and more understandable. In this setting, theater can be a way to share information, and it becomes a cultural institution to be appreciated since it can do this through story and performance by appealing to people's feelings. As stated earlier, the long-term repercussions of climate change, which cannot be directly experienced, have persisted as a challenging problem in climate change drama. Climate change playwrights deal with this intricacy by switching between timelines and using the important idea of embodiment. These playwrights use their limited time to creatively talk about the past, present, and future. This lets the audience connect with both "then" and "now," which shows how climate change has affected people over time (2006) ⁽²⁵⁾ says that "There seems to be an impulse on the part of the science playwright to call on the audience's imagination more than is usually done in the theater" (p. 2). In other words, by using different time periods in the thematic and dramatic framework, these playwrights question the concept that the present is the sole "reality" for people, and that it will always be that way. This means that climate change theater is an important way to deal with the global climate change catastrophe that no other creative form can match. Climate change theatre dramatically reimagines the climate change dilemma by putting the present, future, and history on stage with "real" actors who play characters we can relate to. Climate change theater further illustrates the consequences of climate change, emphasizing the interconnections among humans and the non-human realm. Climate change theater has both analytical and emotional effects on the audience when it does this. It traditionally underscores the importance of heeding climate scientists' warnings by examining the emotional, aesthetic, and experiential dimensions of the Anthropocene.

Relating climate change theatre to hauntology, it can be called the theatre of the uncanny, in which past catastrophes haunt the present moment, as represented in Mike Bartlett's *Earthquakes in London*, in which past actions cause climate catastrophes.

Discussion

Mike in London ⁽²⁶⁾ premiered at the National Theatre and is considered a crucial text in climate change theatre, moving beyond didactic scientific warning to explore the temporal dislocations caused by environmental collapse. The play presents a nonlinear narrative with haunting elements accessible for the Anthropocene, in which the climate catastrophe is a spectral presence that spans across multiple times and spaces, including 1968, 1973, 2010, and the apocalypse.

The narrative centers on three sisters, Sarah, Freya, and Jasmine, who come from a fractured family. The sisters represent a planet whose time is ruptured as well. Their estranged father, Robert Crannock, a climate scientist, predicted an environmental disaster decades ago but was silenced by corporations. As the story shifts back and forth from Robert's love affair in 1968 Cambridge to his Faustian pact with the airline industry in 1973 and the sisters' contemporary struggle in 2010 to a vision of future time, Bartlett creates a dramaturgy in which past emissions literally haunt present atmospheres, and futures retrospectively predicate the meaning of the present.

The prologue, set in 1968 Cambridge, establishes the original moment of haunting: Robert Crannock's first date with Grace, where his scientific discourse on atmospheric gases and planetary life inadvertently foreshadows his future complicity in climate catastrophe. Robert explains to Grace:

"Robert: all life gives off excretions of some kind. Gases, minerals.

Grace: We all give off gases?

Robert: all these gases...these excretions, from all of these creatures, they go up into the atmosphere, and you can imagine globally they would make quite a difference to its composition" ⁽²⁶⁾.

He further elaborates.

"Robert: The atmosphere in this room is completely dependent on how much you move, whether you talk, if you've got a cold, how hot you are.

Grace: How hot I am?

Robert: Imagine if we all came in with a fever, the room would get much hotter, and then we'd get even hotter as a result, our fever would get worse and the room would become hotter in turn and so on and so on, upwards and upwards" ⁽²⁶⁾.

This seemingly innocent exposition becomes retrospectively haunting; the audience knows what Robert does not yet know himself: that he will suppress precisely this scientific understanding for twenty years in exchange for funding from the airline industry. The 1968 scene thus contains the seed of future catastrophe, demonstrating how hauntological logic operates that the past is pregnant with futures that have not yet arrived but are already determined.

The play jumps to 1973, where Robert meets with airline executives Roy and Daniel. This scene dramatizes the moment when climate science becomes corrupted by capital, when knowledge is suppressed for profit. The executives offer Robert lavish funding to produce research that minimizes aviation's environmental impact. The dialogue drips with euphemistic violence:

"Roy: Results that seem to be useful.

Daniel: Meaningful.

Roy: Right. Meaningful" ⁽²⁶⁾.

This repetition of "meaningful" ironizes the concept of meaningful to whom? For what purposes? Robert's science will be considered "meaningful" only insofar as it serves capital accumulation, only insofar as it permits continued emissions. Robert initially resists, but ultimately accepts the executives' offer:

"Roy: This could make a real difference. For you. To keep" (p. 42).

This 1973 scene thus haunts both 1968 (the corruption of youthful idealism) and 2010 (the origin of present catastrophe). It occupies a "spectral" position, neither fully past nor simply origin, but a moment that continues to produce effects across time.

The narrative then crashes into 2010, where Freya, Robert's middle daughter, on stage, pregnant and increasingly paranoid about bringing a child into an apocalyptic world. The temporal disjunction is radical: we have skipped decades, and the romantic optimism of 1968 has curdled into 2010's anxious paralysis. Sarah works as Secretary of State for Energy and Climate Change, attempting to manage the disaster through bureaucracy and compromise. Jasmine, the youngest, distracts herself with hedonism and nihilistic burlesque performance.

The setting of London is portrayed as more than just a city. Instead, London is an endangered relic of civilization threatened with deterioration. Robert talks about the coming disaster:

"Robert: The enemy is on its way, but it doesn't have guns and gas this time, it has wind and rain, storms and earthquakes" ⁽²⁶⁾.

London is presented as a site of disconnection, where people have lost touch with each other and the earth, yet are connected with each other through the city's carbon doom. The term "earthquakes" in the title is used literally, referring to tremors and other seismic phenomena mentioned by the characters, and metaphorically to the shattering impact of ideas on interpersonal relationships, including social and family ties. At the heart of the play lies the earthquake metaphor, a seismic rupture that is repeatedly anticipated but never arrives. Throughout the play, characters discuss impending tremors:

"Freya: They think something might...there's going to be an earthquake

Peter: Right here, yes, they've detected tremors" ⁽²⁶⁾.

Peter, an enigmatic teenage figure who may himself be a spectral entity, tells Freya:

"Peter: There's a long history of earthquakes in the capital...the most recent was in 2008. They happen quite a lot" (pp. 113-114).

However, the earthquake remains in a state of imminence, neither fully present nor safely future a perfect embodiment of climate catastrophe's temporal structure. As one critic notes: "we don't even get the much-talked about earthquake. Barely a tremor." This refusal of spectacular climax is precisely the point: the ecological crisis is not a single cataclysmic event but a condition of permanent emergency, a catastrophe that has already begun and will never definitively end. The earthquake haunts the play as climate change haunts the present as a disaster that has already occurred in its causes and early effects and is yet to come in its full realization.

Bartlett announces his hauntological project through radically disjunctive temporal structure. The play fragments time that "crash into each other impolitely,"⁽²⁶⁾ as Bartlett's stage directions specify. This violent juxtaposition of temporal frames refuses linear narrative progression, instead creating a dramaturgy of simultaneity, a theatrical architecture in which past, present, and future haunt each other, exist alongside and within one another. Bartlett's stage directions explicitly call for an aesthetic of theatrical excess to mirror the carbon-heavy, over-consuming society he critiques. He instructs: "The stage should overflow with scenery, sound, backdrops, lighting, projection, etc. Everything is represented. It is too much. The play is about excess" (p. 5). This effect of 'too muchness' has been employed in theatre, which prevents the audience from calmly absorbing the meaning. The production is expansive and intricate, with elaborate projections, a multilevel stage, numerous costume changes, and a large cast engaged in feature-rich activity, which consumes substantial energy and resources.

The excess formality implicates theatre in the regime of consumption it critiques. Theatre's environmental impact raises questions: can climate plays serve as models for acting sustainably, or do they simply participate in the spectacular economies they critique? The stage play does not resolve this contradiction, but rather, it stages this as a contradiction through theatrical excess, which makes the present moment appear as excessive. In any case, the logic on which the work's aesthetics operates is apocalyptic: if catastrophe is inevitable, if the future is already cancelled, then the only excess left to us is expenditure, the burning of which is theatrical in nature.

The play also uses surrealism to bridge the gap between scientific data and emotional reality. The talking fetus, sudden dance numbers to pop songs like "2525" or Arcade Fire's "Rebellion (Lies)," and dreamlike transitions serve to disorient the viewer. These techniques are hauntological in nature; they disrupt the "realism" of the stage, suggesting that reality itself is becoming unstable, that the ecological crisis has rendered conventional representation impossible.

The familial configuration of the play, of three sisters stricken by the abandonment of a father, and the betrayal of science, gives emotional architecture to an inquiry into generational responsibility. The moment Robert admits to Sarah that he has never loved his kids (that he "started pretending" (p. 112) the moment she was born), the failure of fatherhood shifts from a personal defect to a structural condition. He informs Sarah:

"Robert: now she's gone, now your mother's dead,
there's no reason to pretend. She was the one I loved. Just her"⁽²⁶⁾.

While this news shatters Sarah, it also symbolizes a larger desertion. Robert belongs to the generation that knew and could have prevented the ecological catastrophe but instead opted for fulfilling their short-term interests, thereby leaving their children with a dying world. This abandonment enters the play through literal and symbolic disappearance. Robert has not seen his daughters for twenty years; he is more absent, a rumor, a ghost than a father. Although he is not involved in their lives, he still shapes them. Sarah works in climate policy, Freya grapples with reproductive ethics, and Jasmine rebels against everything. The father is a ghost whose absence is felt as much through his physical absence as his emotional unavailability and corruption of science. The play shows how past actions disturb or disrupt contemporary physical and

psychological landscapes, and one sees the ecological crisis manifested as trauma passed between generations.

Robert serves as the main ghost in the play. He is a figure from a modernist era who thought the advancement of science would help mankind, but he has crafted the present apocalypse. His 1973 betrayal, in which he consents to bury his findings for the loss of the Earline executives, is described as the play's "original sin." He says he is a prophet of history who looks into the future. His constant speaking has the thing of doom inevitability:

"Robert: The world as it is, a disgrace.

The world as it will be, unbearable" (26).

Robert Crannock embodies the hauntology of expert knowledge under capitalism. As a climate scientist, he has the data to see catastrophe coming; as a father and human being, he is part of the very systems that produce it. His biography captures the clash of sensible rationality and capitalist rationality, the latter of which subsequently ghosts and neutralizes the former.

The research that Robert suppresses does not just disappear but rather comes back as a ghost. Sarah receives leaked copies of the preliminary reports, which reveal the truth her father buried.

"Carter: These are signed by your father,

the results of a project he did for the largest airline in the UK...

For twenty years, his public reports said the opposite" (26).

This spectral archive haunts Sarah's political position as Secretary of State for Energy and Climate Change. Her father's sins compromise her authority, making her vulnerable to blackmail by airline executive Carter, who possesses the same ghostly documents. The suppressed science thus operates as what Derrida calls a specter, neither fully present (it was never officially published) nor absent (it exists, circulates, exerts pressure). It haunts the present precisely because it was denied presence in the past, because knowledge that should have transformed history was instead buried, only to return at the worst possible moment.

Robert's late-life conversion to apocalyptic prophet does not resolve this haunting, but intensifies it. Estranged from his daughters, living in isolation in Scotland, he has become the figure he should have been from the beginning, the scientist who speaks truth regardless of consequence. However, his prophecies come too late; the catastrophe is already irreversible. He tells Steve:

"Robert: Every model suggests things are going to be

worse than anyone imagines...

Always Steve, faith will come before truth. That's who we are" (26).

The pessimistic epistemology – that humans always opt for comforting lies rather than upsetting truths – both justifies Robert's prior capitulation and condemns it retroactively. He says that his concealment of climate data just sped up a betrayal that was going to happen. Someone would eventually have buried the science. This fatalism is similar to Fisher's "reflexive impotence": when one knows something bad is coming, but one's powerlessness makes one cynical and ensures that what one believes will happen eventually.

Further, Freya's pregnancy is central to the play's investigation of haunting futurity. Freya's heavily pregnant body throughout the play embodies the convergence of questions of inheritance, responsibility and futurity. Her becoming pregnant exemplifies Lee Edelman's notion of "reproductive futurism," or the idea that political legitimacy is grounded in "the Child" as a figure of futurity and continuation. However, in the ecological collapse context, to reproduce becomes an ethical monstrosity. This crisis is represented by Freya, telling the doctor:

"Freya: I've been smoking. And drinking. I fell over in the bath.

Tim: She's fine.

Tim: She's too advanced...

Freya: If I was a cave woman, I could do it myself. Punch myself in the stomach...

Or wait till it was born and hide it or bury it" (26).

This disturbing fantasy of killing a child literalizes the play's key dilemma: is it morally acceptable to bring children into a world scientists say will be uninhabitable? Mark Fisher characterized slow cancellation of the future as the inability of contemporary culture to imagine a future different from the present. Freya personifies this paralysis. Pregnant and terrified, she is haunted by the future life of her unborn child, Emily. Freya's depression is not merely hormonal; it is ontological. She tells her husband: "Freya: I can't not with this, it's like it's watching" ⁽²⁶⁾.

The play literalizes this haunting in Act Three when Peter, a socially awkward teenager, reveals himself to be a "carrier signal" for the unborn baby. The fetus speaks through him, crossing the temporal barrier to plead:

"The foetus is on the screen. Kicking

Its mouth moves and we hear a small voice

Foetus: Mummy?

Mummy?

Help.

Help me

Sound of the womb getting louder and louder. Sounds like an earthquake.

Mummy?

Shaking

The foetus turns its head to face us and screams.

Blackout. ⁽²⁶⁾.

This is a profound example of hauntology: the future (the unborn child) is a specter haunting the present, demanding action. Referring to the bump that represents a future she cannot reconcile with the dying planet. The child is simultaneously present (visible on ultrasound, kicking in Freya's womb) and not-yet-present (unborn, spectral), occupying precisely the impossible temporal position Derrida ascribes to the specter, between the no longer and the not yet ⁽⁸⁾.

What makes this scene particularly hauntological is that the unborn child, Emily, subsequently haunts the play's temporal structure. Emily exists in multiple temporal registers: as a foetus in 2010, as an adult in the play's future scenes, and as a specter of foreclosed futurity. She is a "revenant," one who returns before having arrived. The cry of the unborn child retroactively implicates Freya for continuing the pregnancy, making the mother guilty of a crime that has not yet taken place. The time travel paradox of feeling for someone who has not yet been born captures the moral vertigo of the climate crisis. Our choices today condemn future generations to catastrophes they must endure.

Robert Crannock's reply to Freya's reproductive crisis is unequivocal and devastating. When Freya visits her estranged father seeking guidance, he tells her:

Robert: The planet can sustain about one billion people.

We currently have six billion. So, in the next hundred years it
will balance the books...

Five billion people wiped from the face of
the earth in a single lifetime.

Mass migration away from the equator, world wars, starvation.

Steve: And Freya

Robert: Freya came to ask my advice about children.

Steve: And what did you say?

Robert: I told her that her child will regret she was ever born. Hate her mother for forcing her into a terrible world. I told her to do whatever it takes. I told her to kill it" ⁽²⁶⁾

Robert's apocalyptic calculus transforms reproduction from an act of hope into one of violence. His command to "kill it" is both horrifying and, within the play's logic, scientifically rational, a rationality that makes rationality itself monstrous.

Sarah, the eldest daughter, attempts to manage the climate disaster through bureaucratic compromise as Secretary of State for Energy and Climate Change. Sarah's position is compromised from the start: she is vulnerable to blackmail because her father's suppressed research exists as a spectral archive that can be weaponized against her at any moment. Her political legitimacy is always already haunted by her father's crimes, making her subject to inherited guilt and responsibility for actions she did not commit but cannot escape.

One of the play's most hauntingly charged moments occurs when temporal boundaries dissolve entirely. In Act Two, Freya encounters an "Old Woman" on Hampstead Heath who speaks nostalgically of wartime England:

"Old Woman: It was a different country then. England was made of wood and metal. Not plastic, like this...

Devonshire cream, Coventry steel, the home guard, the muffin man, the post man, larders in the kitchen, fires in the living

room, the damp smell of gravel in outdoor toilets" (26).

This nostalgic litany embodies Fisher's concept of lost futures the vanished worlds of twentieth-century modernity.

The specter materializes as "a young man in a Second World War uniform" who takes the Old Woman's arm and kisses her. The Old Woman becomes young again, a spectral couple from the 1940s materializing in 2010's heath. This moment literalizes hauntology: the past does not stay past but erupts into present visibility. The Old Woman warns Freya:

"Old Woman: There's a gathering storm" (26).

Collapsing wartime Britain with climate catastrophe, historical memory with environmental apocalypse. When Freya asks how she knows, the Old Woman replies:

"Old Woman: Old people can predict the weather" (p. 50).

This line shows both traditional knowledge and the way age makes one sensitive to temporal hauntings. The environment itself is shown to be a ghost full of desires. The former "solid" England is gone, replaced by a "plastic" present. In addition, the absence of the "redwings" (birds) that Robert moved to the country to see were "gone before I even moved in" (p. 97). Then, everything in the environment is natural. This absence, referred to as a ghost species, symbolizes the loss of biodiversity that remains undetected.

The haunting of the past generations manifests in the epilogue 2525, where an adult Emily faces the ghost of Freya. The failure of the previous generation, whose children-dragging the parents rather than the other way round, one more dramatizes the temporality paradox of the climate crisis beyond conventional understanding. Thus, today's children will judge their parents from a future that parents cannot fully comprehend. Every choice made in the now time travels through the ether leaving, behind a ghost. A future debt to the not-yet-born. The final scenes completely collapse time limits. We simultaneously witness the 2525 future in which Emily prepares to walk to London, writing "Gone to London" on a blackboard, while, in 2010, Freya confronts her mortality in the hospital. The two time frames occupy the same theatre space, collapsing into hauntological simultaneity. The ending embodies a future anterior, a temporality not of simple futurity but of what will have been. The future represented by Emily is both promised (she writes on a blackboard, preparing to journey) and impossible: Freya dies, and the future itself depends on events that did not occur.

Conclusion

Mike Bartlett's *Earthquakes in London* demonstrates how hauntological temporality can serve as the formal and thematic architecture for articulating ecological crisis. Through calculated scenic disjunction and non-linear storytelling, the play collapses time, producing a modern awareness in which the ghosts of knowledge and responsibility long ago denied or deferred now make their presence felt in the instant, with little to no escape. The play's innovation of form replicates the hauntological condition, whereby past decisions, such as Robert's false 1973 report on aircraft emissions, manifest as catastrophically present in

the play. Capitalism itself operates like a ghostly force. The limitless nature of capitalist imperialism relays a constant ecological violence across time. What can the activists do but conquer or be conquered? Moreover, the live performance in the theatre can be considered an alternative hauntological tactic, as it offers the audience an opportunity to move beyond the scientific abstraction and to engage emotionally with the slow violence of climate change, which cannot be directly captured. As shown in the play, climate change theatre need not lapse into resignation; it can instead use the temporal disjunctions of hauntology to mobilize what remains our most precious resource: collective imagination and corporeal solidarity, as we confront an increasingly phantom-like future.

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