Mind the (Time) Gap: Layered Temporalities in Climate Change Theatre

ABSTRACT

According to Amitav Ghosh (2016), climate change constitutes also a “crisis of the imagination,” as it evades our grasp due to the vastness of its temporal frame. Any shifts in climatic patterns are measured in geological time, whose uncanniness makes it difficult for people to meaningfully relate to it. Hence, addressing the current crisis must start by finding ways of enhancing our imagination and capacity for understanding. It can be argued that the medium of theatre is uniquely suited to bringing unfamiliar timelines within the boundaries of a framed temporal experience, which enables juxtaposing different worlds and temporalities. Based on the example of two plays: 2071 by Christ Rapley and Duncan Macmillan, and Extinct by April De Angelis, the article examines the ways in which playwrights engaging with the topic of climate change explore the capacity of theatre for colliding various timelines in order to address the “crisis of imagination” that is currently barring audiences from fully grasping the implications of the ongoing changes.

KEYWORDS: geological time, historical time, embodied time, climate change, theatre

STRESZCZENIE

Uwaga, zmiana czasu: wielowarstwową temporalność w sztukach teatralnych poświęconych kryzysowi klimatycznemu

Jak wskazuje Amitav Ghosh (2016), kryzys klimatyczny jest zarazem „kryzysem wyobraźni”, ponieważ z uwagi na niewyobrażalną skalę czasową zmian klimatycznych trudno nam jest w pełni uchwycić jego znaczenie. Zmiany klimatu rozgrywają się w czasie geologicznym, tak odmiennym od ludzkiego doświadczenia, że wynikający z tej różnicy dysonans kognitywny stanowi mentalną barierę, którą nielatwo przekroczyć. Można jednak argumentować, że z uwagi na swoją specyfikę, umożliwiającą łączenie różnych planów czasowych w obrębie doświadczenia ujętego w konkretne ramy temporalne, teatr


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One of the most striking features of climate change is that it is ungraspable, unimaginable. It constitutes a model example of what Timothy Morton (2013) describes as a hyperobject: while it evades our comprehension, we find ourselves completely enmeshed in it. Part of the reason why hyperobjects are so difficult to fathom is the fact that they “involve profoundly different temporalities than the human-scale ones we are used to” (Morton, 2013, p. 1). Attempting to imagine the temporalities involved in the climate change makes our heads spin, as human history – our familiar benchmark – fails to provide any meaningful frame of reference:

I read that 75 percent of global warming effect will persist until five hundred years from now. I try to imagine what life was in 1513. Thirty thousand years from now, ocean currents will have absorbed more of the carbon compounds, but 25 percent will still hang around in the atmosphere. The half-life of plutonium – 239 is 24,100 years. (...) The paintings in the Chauvet Cave in France date back thirty thousand years. But 7 percent of global warming effects will still be occurring one hundred thousand years from now (Morton, 2013, pp. 58–59).

No wonder then that Morton describes these vast temporalities as “horrifying,” “terrifying” and “petrifying” (2013, p. 59), capable of paralysing our understanding and inhibiting our capacity for relating to these changes in any meaningful way. Their sheer incomprehensibility and uncanniness account for the “peculiar forms of resistance” that, according to the novelist and academic Amitav Ghosh (2016), climate change poses to literary representation; one of the reasons why “the climate crisis is also a crisis (...) of the imagination” (Ghosh, 2016, p. 9). Consequently, one of the great challenges of today’s environmental science and environmental humanities is to find ways of narrating and visualising these massive
timescales; in other words, to bring into focus “not just individual and local but geological durations of time” (Johns-Putra, 2019b, p. 9); or, as Robert Markley specifies, “to reassess the relationships among three different registers of time: experiential or embodied time, historical time, and climatological time” (2019, p. 16; see also Markley, 2012, p. 43). This, however, requires a significant shift of perspective.

As Dipesh Chakrabarty explains, our current geological epoch “produces a peculiar sense of historical time” (2021b, p. 326), in which we are confronted with both incredibly distant planetary futures as well as much more immediate hereafter – so immediate, in fact, that they can only be thought of as “the present” (Chakrabarty, 2021b, p. 327). Making sense of both these futures is essential to our understanding of the climate change; and in order to do so, Chakrabarty argues, we must find adequate means to translate ideas connected with earth history, geology, and geological time into the language of human history (2021a, p. 159). Imagination is the key faculty involved in this process since, as Markley explains, “the time-scales of climatic change cannot be experienced viscerally but only imagined” (Markley, 2012, p. 57). Unfortunately, as Chakrabarty points out in his seminal essay on the “climate of history,” when it comes to the climate crisis, our usual practices for imagining the past and future times that extend beyond our personal experience suffer from “deep contraction and confusion” (2009, p. 198), which inevitably evokes a whole spectrum of affective responses, ranging from hope to anxiety. As Chakrabarty puts it, “this is what climate change as ‘world history’ is: a stage for the play of various human emotions including those of hope and despair” (2021a, p. 165; my emphasis).

Arguably, seldom can these emotions and layered temporalities be examined as successfully as on the actual stage, given that the medium of theatre is, in its essence, a “temporal art form” (Hamilton, 2006, p. 222), i.e. one that can only exist in the specific time the performers and audiences are sharing together. Plays, as David Wiles explains, “are neither in time nor about time, but are of time” (2014, loc 90, original emphasis) – in other words, they necessitate complex configurations between audiences’ time, performers’ time and layered temporalities within the play itself. As Matthew Wagner argues, a theatrical performance “dismantles and reconfigures” time (2012, p. 12), which is a distinct feature of the medium of theatre, viewed as the “unique activity that allows for contradictory modes of time and temporal experience to exist simultaneously – indeed, not only allows such temporal dissonance but also fosters it and is built on it” (Wagner, 2018, p. 69). Consequently, the theatrical medium offers a unique opportunity for bringing unfamiliar timelines within the boundaries of a framed temporal experience and exploring their
interconnections, confirming Lisa Woynarski’s assertion that “theatre and performance have the potential to engage ecological thinking in unique ways to other mediums” (Woynarski, 2020, p. 2).

The aim of the present article is to examine the ways in which this particular characteristic of theatrical medium is explored by playwrights engaging with the topic of climate crisis, who wish to address the “crisis of imagination” that is currently barring audiences from fully grasping the implications of the ongoing changes due to the incomprehensibility of their vast temporal frame, extending far beyond the scope of human history. It is my contention that through meaningfully incorporating those varied timeframes into the layered temporality of a theatrical performance, playwrights attempt to bring them within the scope of the audiences’ immediate experience. Both plays analysed below reflect Carl Lavery’s suggestion, voiced in his discussion of the interplay between performance and ecology, that ecologically conscious theatre should focus not so much on “what the theatre text means” but rather on “what the theatre medium ‘does’,” namely, on how “its dramaturgical distribution of (...) bodies in actual time and space creates sensations and experiences in the here and now” (Lavery, 2016, p. 230; my emphasis).

2071 (subsequently published under the extended tile 2071: The World We’ll Leave Our Grandchildren) is a play co-written by Chris Rapley, a distinguished scientist and Professor of Climate Science at University College London, and playwright Duncan Macmillan. It was directed by Katie Mitchell and performed by Rapley himself at the Royal Court Theatre in 2014. Designed as a “dramatised lecture,” the performance was intended to bring science to “centre stage” (Royal Court Theatre). Critical responses proved strongly polarised, ranging from the appreciation of The Guardian’s Michael Billington, who enjoyed the fact that the show was “based on scientific data rather than heated emotion,” through much less enthusiastic outlook of Alex Sierz, for whom its “recital of facts, however devastating, [was] never gripping nor particularly inspiring,” to the outright disgust of What’s on Stage’s Michael Coveney, who not only found 2071 “outrageously anti-theatrical,” but also did not refrain from naming it “probably the worst play ever seen on [the Royal Court’s] hallowed stage” (Donn, 2014). It appears, however, that in spite of the obvious reference to temporality provided by the title of the play, apparently none of the critics paid attention to Rapley and Macmillan’s treatment of various timescales. Yet it seems to have been a legitimate concern for Mitchell, who in one
of the interviews spoke about the difficulty involved in the project, stemming from the fact that the scope of climate change is much too vast to be “boiled down,” while “theatre needs to boil things down” (quoted in Love, 2020, p. 226).

In 2071, this tension is addressed by interweaving three distinct, albeit overlapping timelines: geological time, historical time, and Rapley’s personal and professional history. While the play’s alleged inaccessibility may be at least partly attributable to its vast abundance of numbers, of which dates and timespans constitute a large portion (for instance, as Rapley attempts to “put [climate changes] in the context of geological time” [loc. 150], references to 4.5 billion years ago, 3.5 billion years ago, 2.3 billion years ago, 500 million years ago, 250 million years ago, 65 million years ago, 43 million years ago, 20 million years ago, 12 thousand years ago follow one another in rapid succession), they nevertheless allow the creators to establish a very clear linear narrative, which makes it easy to register the exact point in time where geological time intersects with the timeline of human history. Twelve thousand years ago, Holocene began and from that moment onwards climate variations have directly impacted historical occurrences (such as the freezing of the Thames or Viking settlements in Greenland, loc. 190). Rapley illustrates these changes both objectively reporting the facts and occasionally referring to his own experience. For instance, while explaining that certain spaces and routes are now becoming accessible to humans due to global warming, after remaining beyond the reach of our species for millennia, he may merely state that since 1995, when the most northerly ice shelf of the Antarctic Peninsula collapsed, certain sea routes became sailable “for the first time in thousands of years” (loc. 209), but on another occasion he illustrates the same point with his own experience of watching a drill retrieve samples from an ice shelf, relating his sensory and emotional responses.

Interestingly, in his account Rapley offers a meticulous timing of the event: “It took an hour to lower the drill, a few minutes to drill the core section, and an hour to winch it up to the surface” (loc. 271), before he could pick up a piece of ice “that had not seen the light of day since before the dawn of mankind” (loc. 277) and breathe in the ancient air it released. As critics point out, such narrative strategy allows Rapley to “inflect the science with intimacies and idiosyncrasies” (Chang, 2021, p. 72), “perhaps in an attempt to humanise and individualise the scientist” (Love, 2020, p. 231). Yet he achieves more than that: such scenes allow the playwrights to establish a tangible temporal connection between the scientist’s embodied experience (decades of scientific career, two hours and a couple of minutes spent on extracting the ice sample) and the vast lifespan of the ice shelf, measured in geological rather than historical or human time.
A similar effect of blending timescales is achieved when Rapley relates his life story by linking personal and historical events (e.g. when he was ten years old, he received an atlas as a gift from his mother, and in that same year “the Commonwealth Trans-Antarctic Expedition embarked on the first-ever crossing from coast to coast via the South Pole,” loc. 47; when Neil Armstrong and Buzz Aldrin stood on the Moon, he was staying at his parents’ house, awaiting his science degree results). Through repeated juxtaposing of these different temporalities, *2071* makes it clear that any present moment must be mapped onto three timelines (embodied time, historical time, geological time) simultaneously, which in turn allows the playwrights to redefine and reconfigure the future.

Future time serves as the frame for *2071*, which opens with Rapley’s declaration: “I have been thinking about the future” (loc. 8) and closes with the scientist’s appeal for climate action necessary to safeguard our shared future. But it is only at the end of the play that the meaning behind its title is finally revealed. After naming more general, political and scientific goals for the 2030s and 2050s, Rapley explains: “I look at my eldest grandchild (…). I tell her I think she should become an engineer. She will reach the age I am now in 2071” (loc. 558). Here, again bringing together various temporal perspectives, Rapley looks into the future that is simultaneously part of personal (family) time, historical time and geological time, which is stressed by the fact that he does not stop there, immediately moving beyond his granddaughter’s lifespan (“I try to imagine 2071, and then I find myself thinking what 4071 will look like. Or 10071,” loc. 561). And as a large photograph of Rapley’s granddaughter Josephine appears at the end of the play (both projected in the performance and printed on the final page of the playtext), the happy little girl with a sweet smile showing off her freshly grown adult front teeth seems to be looking directly into all three futures. Incorporating his granddaughter’s lifetime into the play, Rapley appeals to the ethics of posterity, which commonly informs contemporary climate fiction (see Johns-Putra, 2019a) as well as climate drama (see de Waal 2021), but also stresses how his own embodied and family history is embedded in the much vaster timeline he is drawing.

Yet perhaps the most significant overlap is achieved by intersecting the play’s timeline and the time of the performance. In *2071*, Rapley takes the role of both author and performer. Appearing on stage in person, he provides an embodied link between the timelines of the play and the time passing in the theatre while the performance is taking place, which in turn becomes part of the embodied time of the audience. As a result, the extensive timeline of *2071* can no longer be perceived as a distant perspective, abstract, ungraspable and unconnected to one’s individual experience of time. As the viewers participate in the shared temporality with Rapley, they
must become aware that their personal timelines also overlap and merge with historical and geological time. As Wagner argues, we are “never more aware of time, never more in the presence of time, than we are when we experience temporal difference (...)” (2018, p. 63) in a work of theatre, and it is a mechanism that the creators of 2071 actively explore in their work. Some critics point to the “spirit of inclusivity” (Chang, 2021, p. 72) pervading the play and attribute this feature to Rapley’s efforts to make science accessible. It can be argued, however, that this inclusivity is at least partly owed to making the viewers aware of the shared temporalities in which we are all immersed. As a result, these temporalities may no longer appear as uncanny and petrifying; instead, they become a tool that can be used to address the crisis of imagination pointed out by Ghosh.

Extinct

A similar mechanism can be identified in April De Angelis’ play Extinct, which premiered at Theatre Royal Stratford East in 2021. Although offering a fictional rather than non-fiction narrative, this is also a play for one performer – who, significantly, plays a character named “April.” Bearing the same first name as the author, April suggests that the play constitutes a personal message. Another similarity between Extinct and 2071 is that both texts begin by looking towards the future – in fact, De Angelis’ play opens with a section titled “Future Nightmare.” Its timing is very precise and, interestingly, situated both in geological and historical time: there is a caption projected over the stage explaining that the events take place in the “Anthropocene; the age of human-made climate change” (geological time) and in her first speech April names the exact date – it is 2030 (historical time).

The future described by April is markedly dystopian. Sweltering heat (mean temperature in Britain in the summer exceeds forty degrees Celsius) results in fires and severe drought; unseasonal rainfall triggered by climate change destroys agricultural crops and causes widespread famine. Food rationing leads to street riots and army is dispatched to control the streets. Hungry people gather in front of food distribution depots, hoping to get enough sustenance to survive. As she describes the scene, April dreams of travelling back in time: “Wishing myself back a year, two years, five years, a decade – to when there was still time to do something about it” (p. 319). And at this point a time jump in the play occurs: we are plunged back into the performance timeline.

As lighting changes, April reveals herself as the playwright’s alter ego and explains her motivations, addressing the audience directly:
Hello.
Thanks for coming.
I have an hour to convert you to the cause of climate change
So we can avoid the kind of nightmare I just imagined.
So we can change our future (p. 319).

In this way, De Angelis clearly hopes to elicit an affective response: drawing the viewers’ attention to the fact that their present time is, in fact, the past to which April in the play so desperately wants to return in order to be able to take action before it is too late, the playwright attempts to encourage active engagement in climate activism. But at the same time, quite similarly to Rapley’s presence on stage in 2071, the creation of April as the playwright’s alter ego narrows the temporal distance between the audience and the reality of the play. Extinct makes it very clear that theatrical reality and the real world overlap, which is openly addressed when the performer eats a snack on stage and explains: “This – what is it – a prop? – it was something in the real world” (p. 321). The same mechanism is explored with reference to temporality. As April is so clearly embedded in the time of the performance, which is stressed by her directly specifying its duration (although the timing in this monologue is not necessarily exact – the original performance at Theatre Royal Stratford East lasted for eighty rather than sixty minutes), she becomes the link anchoring the viewers in other temporalities presented in the text.

It can hardly be incidental that immediately after drawing the audience’s attention to the time of the performance, April moves on to referring to geological time as she discusses previous mass extinction events, most notably the Great Dying dated 250 million years ago (p. 320). As she explains that we are currently living through the sixth mass extinction, the geological timescale is stretched to incorporate our present. Further, again not unlike Rapley in 2071, April relates the playwright’s personal history of developing awareness with respect to the climate change. She describes the Extinction Rebellion meeting that she attended in 2018. In the show, the meeting is represented through recorded voices as April remains on stage, linking these two moments in time: the present of the performance, in which she keeps addressing the audience, and the time of the meeting, when she engaged in the discussion with other participants.

A similar effect of two overlapping temporalities is achieved as April uses historical time to map planetary events (e.g. “In 2020 methane had hit the highest levels ever on record,” p. 325). Referring to such recent dates, constituting part of the viewers’ embodied time, makes it clear that we are also living in the geological time, and the realities that are currently unfolding (climate anomalies and calamities) are part of our embodied
experience. But perhaps the most poignant overlapping of temporalities is introduced with the personal narratives of “future April” and another character named Suhayla (both performed by the same actress). Suhayla’s family are from a village in Bangladesh and they have already been suffering from the results of climate crisis. Significantly, although these two storylines are situated in different temporalities (Suhayla’s in recent past and April’s in the future), this difference is blurred as both these stories are narrated by the same actress in the present tense.

For instance, present tense is used in the section titled “Earth future nightmare,” in which April describes how she wakes up one night to discover that her and her husband’s house is flooded with “stinking, brown” water from the overflowing Thames. Not only most of their possessions are destroyed with no hope of recovering them (“they will be rife with bacteria and need burning,” p. 330), but also she realises that her adult son (who lives in an apartment with cheaper rent due to its location on lower ground) is not answering his phone. As she describes her fear and anticipates hunger in the future (crops will surely rot in the flooded fields), she struggles to come into terms with her husband’s suggestion that they should abandon their house while they are still able to escape. The above-mentioned scene cuts to the actress sharing information on the current impact of meat industry on exacerbating pollution and deforestation, before cutting again to Suhayla, who relates her visit in her grandparents’ village, which is now submerged under water so that “people travel by boat now to visit each other” (p. 332). Some of her family members have been forced to relocate due to the flooding, which made it impossible for them to survive – rising sea levels pushed salt water into the river and killed all the fish, so with flooded fields there was nothing to eat. On top of that, water is polluted, and Suhayla’s pregnant cousin lost her baby because of the toxins. Similarly to April and her husband in the future storyline, Suhayla’s family live in constant danger due to climate crisis.

Through the consistent use of the present tense, De Angelis situates these two narratives within one theatrical temporality despite their different timelines, thus making the past and the future converge. This illustrates the capacity of theatrical time to overlay differing temporalities, which – as Wagner argues – gives theatre the potential to “change the nature of the present moment: it restructures and redefines ‘now’” (2012, p. 12). It is evident that such redefinition of the present is De Angelis’ goal, as in the play this is indicated as the only hope for fostering necessary climate awareness. “It is hard to believe that our reality, the here and now, could be any different, but to save ourselves we have to begin to try and imagine it” (p. 330), April says in the play. Through its treatment of time and the use of the present tense *Extinct* clearly conveys the impression that
these terrifying realities can easily become part of our embodied present if we do not take action now. The hour’s deadline that April has given to herself for converting the viewers is slowly ticking away.

Conclusion

Although the two plays are very different in their approaches to engaging the audience with the topic of ongoing climate crisis (while 2071 opts for a more objective, scientific tone and aims predominantly to educate and inform the audience, Extinct is clearly meant to provoke an emotional response, which is especially evident in the last segment of “future April’s” story, where she witnesses a mother and a child being killed by soldiers in a queue for water and herself becomes a victim of the authoritarian state, as her ration cards are withheld for “criticising the government”), interesting parallels can be observed in terms of their treatment of time. As Wagner explains, theatrical performances inevitably “frame time,” which may involve, for instance, “the relationship between fictional time and real time, on-stage and off-stage time” (2018, p. 62, original emphasis) as well as the relationships between different temporalities within the fictional time. In their works, both De Angelis, and Rapley and Macmillan draw attention to this mechanism by stressing the temporality of the performance (through Rapley’s personal onstage appearance, or April’s character as the author’s alter ego and her direct reference to the timing of the play) and its relationship to other temporalities evoked in the text.

Another shared feature is the playwrights’ commitment to embed the future in the present in order to stress the link between the present decisions and policies, and future reality. In 2071, this is achieved through the reference to Rapley’s granddaughter – as her current childhood photograph hovers over the stage, the viewers are made aware that the seemingly distant future date in the play’s title is, in fact, comprised within this girl’s lifespan. Similarly, Extinct uses the connection between the “present April” and the “future April” in 2030 to bring that bleak future within the timeframe of the performance and, consequently, make it appear less distant and more tangible for the viewers.

But what is perhaps most visible in the two plays is their consistent overlapping of different temporalities. By mapping geological, historical and embodied timelines onto one another the playwrights stress the connections between these different timeframes and make them more relevant for the audience. As a result, both 2071 and Extinct can be viewed as attempts to overcome the “peculiar form of resistance” that climate change poses to artistic representation according to Ghosh. Within the
reconstructed “now” of the performance, all three layers of the present (geo-
logical present, historical present, embodied present) become equally rel-

everant. By interconnecting the paralyzingly vast scope of geological time to
much more graspable timeframes of historical and personal time the play-
wrights seek to overcome the “crisis of imagination” linked to the uncan-
niness of climate change temporalities that tends to hinder people from
engaging in climate action today.

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