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### "Business in the Frost: Climate and Imperialism in Shakespeare's *Tempest*"

The initial storm triggered by Prospero in *The Tempest* has recently been linked to the deteriorating climate of the Little Ice Age.[\[1\]](#) Yet, under the influence of post-colonial and Anthropocene studies, a fresh ecocritical reading of the play is likely to complicate this assumption. Historians of climate have notably argued that the deaths of millions of Indigenous individuals across the New World certainly contributed to climatic cooling, thus magnifying the natural changes to earth's climate system that had long been underway, and firmly connecting early settler colonialism to early modern climate change.[\[2\]](#)

Through Prospero, Caliban and Ariel, *The Tempest* not only adumbrates the opposition of the New World against the Old one, it also cogently illustrates the processes of the "reduction of Man to Labour and of Nature to Land under the impulsion of the market economy."[\[3\]](#) Thus, in this article, I suggest that Shakespeare retells this tragic story by staging a former duke-turned-settler who not only demands the servitude of the island's native inhabitants but also gradually destroys the vibrant ecosystem of his newfound "plantation" (2.1.144). I examine how the imperialistic ideals of the early seventeenth century are woven into the fabric of this deeply climatic play and how they are questioned through a decentered perspective: while Prospero seemingly monopolizes most of the play's speeches within the 653 lines of his part, the earthly and airy creatures of Shakespeare's last single-authored tragicomedy remain central to the plot.

In the following development, through five different locations, i.e. Sicily, the Bermudas, Virginia, Newfoundland and Baffin Island, which provide varied and vivid examples of discovery and exploitation issues, I first posit that the island's double climate (one of sweltering heat and extreme cold at the same time) helps us understand how the play's settlers shape the weather at least as much as they are shaped by it. I then study how the play expatiates on settler and indigenous land use,<sup>[4]</sup> before focusing on Prospero's imperialism, as Shakespeare's Milanese settler can be said to rely on an extractive, colonial economy in order to subjugate the original inhabitants. All in all, I contend that the spectacular depletion of the earth staged in *The Tempest* owes as much to imperialist politics as to climate change, and that both causes are more profoundly related than is usually imagined.

### The island's double climate

Traditionally, *The Tempest* is associated with two locations. The route traced in the play by the court party is similar to that followed by Aeneas in the *Aeneid*. The ship supposedly comes from Tunis (2.1.70-72; 97-99) where Claribel, Ferdinand's sister and the "heir of Naples" (2.1.157), has just married the local king. The playwright may thus have been inspired by accounts describing Sicily and the Sicilian Sea. More importantly, this essay focuses on the New World contexts raised by *The Tempest*, in its allusions to the god Setebos (1.2.374), the Patagonian god described by Antonio Pigafetta in his account of Magellan's voyage to Patagonia; the reference to a "dead Indian" (2.2.32); and Miranda's mention of a "brave new world" at the end (5.1.183-4). Because *The Tempest* contains a single reference to the Bermudas, when Ariel tells how Prospero called him "to fetch dew / From the still-vexed Bermudas" (1.2.228-29), it is generally thought that Shakespeare may have used the Bermuda pamphlets, a series of narratives recounting the wreck of the Sea Venture that occurred during an expedition across the Atlantic to colonize Virginia, as a source for his playtext.<sup>[5]</sup> The Sea Venture was "the flagship for the Virginia's Company third resupply mission to Jamestown."<sup>[6]</sup> George Somers, a successful privateer turned country gentleman was in command. On 24 July 1609, a massive hurricane overtook the fleet, which had to fight the storm for three days. Somers finally managed to drive the ship onto the reefs of Discovery Bay, in what later proved to be eastern Bermuda.<sup>[7]</sup> The 150 passengers survived, and ten months later, almost all of them sailed on to Jamestown on two ships built from the timbers of the wreck and the cedars of the island. The climate of the Bermuda Islands is sub-tropical, i.e. mild in the spring, autumn, and winter, but from late May to October, it can be uncomfortably hot and with especially high humidity. The disruptions that caused the shipwreck of the Sea Venture can thus be ascribed to the Little Ice Age to which England was also exposed at the time as much as to this sub-tropical clime.

Indeed, the fleet of the Sea Venture must have experienced this harsh summer climate which corresponded to the hurricane season. The Folio's opening stage direction requests: "A tempestuous noise of thunder and lightning" (1.1.1 s.d.). Then storms appear at regular intervals in Prospero's new realm. As Trinculo wanders on the island, for example, he declares: "another storm brewing; I hear it sing i' the wind" (2.2.19-20). Caliban further alludes to the

south-west winds supposed to harm his abhorred master: "A southwest blow on ye / And blister you all o'er"—lines which testify to the fact that southwestern winds were then believed to be particularly unhealthy (1.2.324-25). As a matter of fact, when south winds prevail in the Bermuda Islands, the humidity rises and thunderstorms sometimes occur.

William Strachey was a shareholder and secretary of the colony of the Virginia Company in Jamestown and he is the author of the first report, *True Reportory*.<sup>[8]</sup> In Strachey's words, if the Bermudas "are often afflicted and rent with tempests, great strokes of thunder, lightning and raine in the extremitie of violence," they are covered with "Palme Trees" as well as "Other kindes of high and sweet smelling Woods."<sup>[9]</sup> Silvester Jourdain, who published his narrative of the famous wreck under the title of *A Discovery of the Barmudas*, is even more enthusiastic than his predecessor.<sup>[10]</sup> The Bermudas are characterized as a land of plenty in his text: "Wherefore my opinion sincerely of this Iland is, that whereas it hath beene, and is still accounted, the most dangerous infortunate, and most forlorne place of the world, it is in truth the richest, healthfullest, and pleasing land, (the quantity and bignes thereof considered) and meerely naturall, as euer man set foote vpon."<sup>[11]</sup> Jourdain writes further down that "[t]he Country yeeldeth diuers fruits, as prickled peares, great abundance, which continue greene vpon the trees all the yeare; also great plenty of Mulberries, white and red," a reality depicted not by Prospero the settler in the play, but rendered by Caliban in great detail.<sup>[12]</sup> Towards the close of 1610, a third narrative of the shipwreck of the Sea Venture, *A True Declaration*, appeared, which interestingly describes the shipwreck in dramatic terms, since the whole adventure is called a "tragicall Comaedie" and the account emphasizes "the vnholesomnesse of the climate" as one of the main dangers run by the Captain and his crew.<sup>[13]</sup> The Bermudas, the anonymous author explains, "haue euer beene accounted as an inchaunted pile of rockes, and a desert inhabitation for Diuels; but all the Fairies of the rocks were but flocks of birds, and all the Diuels that haunted the woods, were but heards of swine." <<sup>[14]</sup>

The play's paradoxical views of landscape and climate partly reflect those of the three 1610 narratives of the Sea Venture's shipwreck. So, while the Bermuda Islands are, in actual fact, a horticultural paradise, things are not so simple in *The Tempest*. The island is both desert<sup>[15]</sup> (Ariel himself points to "this most desolate isle", 3.3.80) and luxuriant ("how lush and lusty the grass looks!" Gonzalo exclaims in 2.1.55), its climate is both harsh and temperate. The first scene shows a frightening tempest likely to drown the crew of a ship. Yet in the play's second act, Adrian ponders the question of the island's climate: "It must needs be of subtle, tender and delicate temperance" (2.1.44-45). These diametrically opposed views of climate are perceptions rather than descriptions and, as such, they depend upon the speaker's feelings and state of mind. Whereas Adrian and Gonzalo marvel at the island's temperate air and green grass, Antonio and Sebastian note its harshness and its desolate aspect:

*Antonio:* The ground indeed is tawny

*Sebastian:* With an eye of green in't. (2.1.56-57)

In contrast, the masque of act 4, scene 1, with the presence of Iris, goddess of the rainbow, represents the island's mild climate as opposed to the harsh one of the opening scene. Juno descends on a "grass-plot" (4.1.73) and Ceres mentions "this short-grassed green" (4.1.83), a possible allusion to "green rushes that covered the stages in public theatres," as the editors of the Arden Shakespeare *Tempest* put it.[\[16\]](#)

The deeply paradoxical features of the island echo the profound ambivalence of the inaugural tempest, both real ("We split, we split!" 1.1.60) and illusionary ("Hast thou, spirit, / Performed to point the tempest that I bade thee?" 1.2.224-5).[\[17\]](#) Of course, they also refer to the double geography of the play which, in turn, hints at the traditionally temperate climate of the Mediterranean (1.2.234) as well as at the more extreme weather attributed to southern settlements—an idea which was, however, seriously questioned in early modern accounts by settlers and explorers. Living in the "burning Zone," Jesuit scholar José de Acosta wrote in his *Natural and Moral History of the Indies* (1580), is "very commodious, pleasant and agreeable."[\[18\]](#) Of course, this was in part propaganda. As Jane E. Mangan acknowledges, "Acosta proclaims the Torrid Zone an inhabitable region based on the ability of Spaniards to live there comfortably."[\[19\]](#)

Be that as it may, the knowledge of the world changed in the early modern period and the play also testifies to this change. The voyages to the New World proved that the new lands had meteorological conditions that were not simple extrapolations of the known European ones. However, early modern mapmakers continued to stick to the original Greek theory of the climatic five zones: one torrid, two temperate, and two frigid. Aristotle believed that the excessive heat in the torrid zone would prevent the exploration of this southern area.[\[20\]](#)

The torrid zone, for one, was not the deserted place described in medieval treatises. Indeed, it was not only inhabited in many places but it could also be traversed, as the three 1610 narratives show.[\[21\]](#) Incidentally, when the torrid zone was traversed, it generated much surprise. In his *Natural and Moral History of the Indies*, José de Acosta describes his incursion into the torrid zone as a rather chilling experience: he and his fellow travelers were not dying of heat—they were actually feeling cold.[\[22\]](#) Shakespeare himself, writing in the Little Ice Age, was more familiar with cold than heat: in London, a frost in the winter of 1607–8 had already led to the Thames freezing over, and city residents, trying to keep up their spirits, held a "Frost Fair" out on the ice. This could have affected the way that cold and heat are superimposed in *The Tempest*.[\[23\]](#) When, in the opening scene, the Boatswain exclaims "What, must our mouths be cold?" (1.1.51), he presumably has in mind death by drowning "in the icy ocean waters."[\[24\]](#) In the following scene, it is Prospero who alludes to the "frost" covering the earth (1.2.255-56). Coldness is present until Act 4, albeit in a metaphorical way. Seeking to reassure Prospero and convince him of his honesty, Ferdinand affirms that "The white cold virgin snow upon my heart / Abates the ardour of my liver" (4.1.55-56). Further down, the nymphs described by Iris in the masque are said to be "cold" (4.1.66), a term traditionally connoting chastity. The island is thus both stormy and temperate, hot and cold, and indicative of Shakespeare's kaleidoscopic cosmography.[\[25\]](#)

For those who, like the playwright, did not travel the globe, geographical knowledge was hampered “by the veil of secrecy” imposed by the authorities “which enwrapped and concealed all geographical data.” In the case of Frobisher’s expeditions, for example, “The contemporary accounts of George Best [...], Dionyse Settle [...] and Thomas Ellis [...] had all precise geographical data expunged.”<sup>[26]</sup> While it is in vain, therefore, to try and give the play a specific location, it remains relevant to note the contrasting perceptions of its inhabitants and to notice that they shape climate as much as they are shaped by it. *The Tempest* is definitely a play about perception: climate is first and foremost a personal experience, Shakespeare tells us, a state of mind before being an actual weather pattern, especially in the case of de-territorialized characters lost in an isolated place. In other words, climate is what you perceive and, above all, what you are ready to endure.

Endurance is generally linked to good physical health. Galen had “instituted the idea that bodies could physically acclimate to new weathers by adopting new lifestyles and diets.”<sup>[27]</sup> More important than the way settlers inhabited their environment, therefore, was to understand how their environment inhabited them. Galen’s easy articulation between man’s humors and the place he lives in is what has been called by Mary Floyd-Wilson and Garrett Sullivan the “similitude model,” which stipulates that humans—being vessels of their surroundings—can adapt to all changing conditions.<sup>[28]</sup> This model, like the coexisting others, predicates a continuous relationship between the body and its aerial environment. De facto, all the characters of *The Tempest*, except Ariel and Caliban,<sup>[29]</sup> its two indigenous inhabitants, have one thing in common: they must adapt to a peripheral region of the world whose specific characteristics are unknown to them.

Whereas the survivors are forced to face and adapt to the wrath of nature, Ariel acts as a powerful agent of climate change: “I and my fellows / Are ministers of fate” (3.3.60-61), he tells Alonso, Sebastian and Antonio, thereby reinforcing their view of climate as a deterministic element.<sup>[30]</sup> While he remains visible to his master, he is often invisible to the victims of the shipwreck. Throughout the presence of his androgynous spirit, Shakespeare provides the audience with a nagging question: who controls the elements? “[I]f you can command these elements to silence and work the peace of the present, we will not hand a rope more” (1.1.21-23), exclaims the angry Boatswain, trying to convince Gonzalo to go back to his cabin in the opening act of the play. Shakespeare suggests a variety of nuanced answers (giving nonetheless his own views on the topic) as nature, divine intervention, or human forces can all be said to govern the weather, depending on the audience’s beliefs and education. Ariel combines these three dimensions in one protean, gender-fluid figure. At the end of the play, the airy spirit logically returns “to the elements” (5.1.318): if nature has apparently been controlled for a short span of time by Prospero, it eventually recovers its autonomous power, marked by Ariel’s freedom, even though it can be partly shaped by human forces: “Gentle breath of yours my sails / Must fill” (Epilogue, 11-12), the Duke of Milan eventually tells the audience.

## Land use

From the dawn of imperialism, settlers have damaged the ecosystems that they tried to dominate. The overuse of land, in particular, has been a significant factor in the rise of fossil fuels which, in turn, affected the climate. The link between land use and climate change is now firmly established and today's scientists focus on the mitigating potential of forested versus agricultural landscapes. While much has been said about the sea and air imagery of the play, one of its most insistent tropes, the earth, remains to be explored. Indeed, *The Tempest* is obsessed by human relationships with the earth, an obsession materialized onstage by the presence of Caliban, likened to earth and filth (1.2.347) and eating earthy fruits, close to the ground, such as "berries" (1.2.335) or "pignuts" (2.2.165).<sup>[31]</sup> "Thou earth, thou: speak!" (1.2.315) Prospero orders, summoning his "slave" (313) from his cave ("therefore was thou / deservedly confined into this rock," 1.2.361-62). "In many modern productions, [Caliban] rises from a trap door down stage centre," Virginia Mason and Alden T. Vaughan note.<sup>[32]</sup> This character thus symbolizes the play's multiple associations with the earth and the underworld; incidentally, his late mother Sycorax is remembered as one voicing "earthy and abhorred commands" (1.2.273).

The earth, in the play, is mostly dealt with in terms of possession and exploitation. However, as the plot progresses, the text enhances a seemingly harmonious use of the land. In the wedding masque, Ariel plays the role of Ceres, a goddess associated with natural bounty and agriculture and who stands in antithesis to those characters whose values are at odds with the harmony of the natural cycle. As Jonathan Bate puts it, "The masque itself might be described as a vision of sustainable agriculture, presided over by female deities—Iris, Ceres and Juno. Male domination and exploitation of nature is replaced by female stewardship and temperance. It is a vision of calm weather—'refreshing showers' (4.1.85) instead of tempests—and food security."<sup>[33]</sup> John Kerrigan rightly observes that "Prospero's masque depicts a landscape improved by the sort of agricultural science that was advocated by contemporaries such as Sir Hugh Plat in his *Arte of Setting of Corne* [1601]."<sup>[34]</sup> The wilderness is thus actively rejected in the European vision of this island: "weeds" are to be avoided at all cost ("but barren hate, / Sour-eyed disdain and discord shall bestrew / The union of your bed with weeds so loathly / That you shall hate it both," 4.1.19-22). The few remaining "[t]oothed briars, sharp furzes, pricking gorse and thorns" (4.1.180) are just here to hurt and to enter the "frail shins" of mutinous men (4.1.181). When allowed to grow, trees, as in the case of Prospero's threat to Ariel, may be used to "peg" people in their "knotty entrails" (1.2.295). Significantly, while Ariel can play a nymph of the sea for the island's colonizer, he never performs the role of a wood nymph.

Property rights thus emerge as an important issue in this not-so-desertic, cultivated island. On the one hand, Prospero has been deprived of his dukedom and seeks to build an alternative one without regard for the "savage" (1.2.356) who already inhabited the island before him. In the opening act of the play, the true Duke of Milan underlines the violence of his brother's usurpation: in his own words, he has been "extirpate[d] [...] / out of the dukedom [of Milan]" (1.2.125-26). In an attempt to reverse this initial situation, it is now he who wants to extirpate Caliban from his land. Since Milan and Naples were Spanish possessions at the time, Prospero

must thus first and foremost be seen as a Spanish colonist. The passage in Act 4, Scene 1, when Caliban's rebellion is dispersed with hunters and hounds (4.1.254 s.d.) suggests that Shakespeare was conversant with the fact that the Spanish colonists in the New World used to hunt the Indigenous inhabitants with dogs.<sup>[35]</sup> The playwright, however, also endows his magus with several attributes that characterized English explorers. Bruce Erlich is probably right when he writes that "Shakespeare may have identified a universal aspect of the colonizer's relationship with the world's Calibans."<sup>[36]</sup>

On the other hand, Caliban keeps claiming his rights to the land of his mother: "This island's mine" (1.2.332). While this claim fails to be recognized by Prospero and his daughter, he is the only one in the play who enables the settlers to discover "every fertile inch o'th' island" (2.2.145). In this regard, he regrets having shown his master "all the qualities o' the isle, /The fresh springs, brine-pits, barren place and fertile:/ Cursed be I that did so!" (1.2.338-40). In the early seventeenth century, trees (i.e. timber) and fresh water were the most immediate resources targeted by explorers and colonizers. Fresh water is here depicted as a tradeable good, as something "fertile," and therefore worth exploiting, as opposed to the goods found in "barren place[s]," which cannot be employed for domestic, agricultural or commercial uses. After having been taught the colonizer's language by Miranda, Caliban is thus now perfectly able to differentiate between "the useful or commodifiable and the useless or uncommodifiable."<sup>[37]</sup> This means that, with the arrival of Prospero, fresh water has suddenly been turned into a tradable commodity.

Colonizing new lands was certainly a means of gaining access to resources that were lacking in England—food, as encapsulated in the mock banquet of act 3, scene 3, and wood, more importantly. When writing *The Tempest*, Shakespeare must indeed have remembered the dearth episodes of 1586–7, 1594–7, as well as the Midland Rising of 1607 (alluded to in the opening scene of *Coriolanus*), mainly provoked by dearth and enclosure issues. He could not ignore that Virginia, in particular, was seen as a land of commodities whose abundance could make up for England's scarcity of natural resources. Besides, as Vin Nardizzi argues in *Wooden Os*, "a major attraction to the transatlantic plantation of people [was] the felling of, and the potential uses for, its 'golden' woods."<sup>[38]</sup> Nardizzi also reminds us that, in his "Ode to the Virginian Voyage" (1606), Michael Drayton praised the abundance of trees in the New World and encouraged "the plundering in Virginia."<sup>[39]</sup> In this context, it is ironic that Prospero should see himself as a "princely trunk" (1.2.86), and thus as a commodity to be exploited or dismissed depending on the users' needs. As he explains Antonio's treachery, Miranda's father tells his daughter that his trunk has been covered with "ivy" (a paronym of "envy") and that his brother has "sucked [his] verdure out" (1.2.86-87). Ironically, by exploiting the wood of his new home, he seems to re-enact what he has metaphorically been going through in the long-winded narrative of his extirpation ("Should presently extirpate me and mine," 1.2.125) from his Milanese dukedom.

What was (wrongly) regarded as a *terra nullius* by Prospero on his arrival was thus a place of biological profusion. While Ariel admires the transmutations of nature (in the "Full fathom

five" song, the sea turns the bones of Ferdinand's father into coral and his eyes into pearls, 1.2.398-399) and while Caliban "is attuned to the ecology of the island in a manner analogous to the knowledge of indigenous peoples," [40] Prospero sees in his new environment raw commodities which he uses in order to strengthen his power. He expresses particular interest in corn and vines—two elements already present in William Strachey's depiction of fertile Virginia in his *True Reportory*. [41] "No use of metal, corn, or wine or oil" (2.1.154), Gonzalo suggests in his regressive utopia, promoting idleness over labor (2.1.155). The use of a negative formula here specifically indicates that, in the world he lives in, metal, corn, wine and oil are crucial goods promoted by imperialistic practices and "traffic" (2.1.148). In the masque of 4.1, Ceres is associated with "rich leas" (4.1.60), i.e. with rich fields, and her "pole-clipped vineyard" (4.1.68). Her presence makes the island a temperate land of plenty with "[v]ines [...] growing" (4.1.112) and "[b]arns and garnerers never empty"" (4.1.111). More generally, the agricultural imagery at work in the play (implying cultivation, reaping and harvesting) suggests that husbandry is a practice fit for the New World and that, when applied to new territories, it is likely to shape the social values of the community.

Prospero also relentlessly exploits the rebellious inhabitant of the island by forcing him to deplete the forests of his native land, cut trees and carry logs—a task which may point to the need of making fires to warm up the island's cold air, and one temporarily shared with Ferdinand, who must also "remove / Some thousands of these logs and pile them up" (3.1.9-10) before he can gain Prospero's trust. As Gwilym Jones observes, Ferdinand represents "an imperial, rather than a native, challenge to Prospero's domination in a postcolonial reading." [42] Caliban's treatment by his European "master" is thus often read as indicative of the links between colonial and environmental exploitation. Gabriel Egan cites numerous examples in the play where deforestation is inferred, notably in relation to Caliban's subjugated role in sourcing firewood for Prospero and Miranda. [43] An early modern audience would probably have understood the current deforestation taking place in the island as the mark of a long-lasting settlement rather than of a brief exploration: the characters never mention the need to use the timber for the building of a ship in order to leave this place.

However, the island of *The Tempest* remains a temporary settlement, since Prospero spends no more than twelve years on it ("Twelve year since, Miranda, twelve year since," 1.2.53). If we take the date of the first recorded performance of the play (1 November 1611), some aristocratic members of the audience, on that occasion, probably recalled a cartographic landmark dating back to 1599, i.e. "twelve year since." The Wright-Molyneux world map of 1599 (possibly hinted at in *Twelfth Night*), [44] which included the routes of Columbus's four voyages to the West Indies, was one of the earliest to allude to Virginia and to represent clearly the uncharted areas of the earth by leaving them blank with the mention of *terrae incognitae* instead of filling them with fantastic, monstrous creatures.

The play as a whole, laced with undertones of satire and despair, expatiates on the representation of human land overuse in such uncharted areas, which implies not just the commodification of the springs and the depletion of the forests, but possibly also the draining

of the fens.<sup>[45]</sup> The bogs and fens of the island must indeed have made the audience think about the numerous large-scale schemes for drainage in order to promote agricultural expansion that emerged at the turn of the seventeenth century. Todd Andrew Borlik recalls, in this regard, that "Drainage bills brought before Parliament in 1606, 1607, and 1610 all floundered amid public outcry."<sup>[46]</sup> Faced with such potentially intrusive practices, the disgruntled Caliban is helpless, all the more so as Prospero's colonial gaze debases him by turning him into a rapist ("thou didst seek to violate / The honour of my child" 1.2.348-49)—Indigenous peoples being then regarded as sensual creatures "urged by excessive lust."<sup>[47]</sup> In this context, the mention of the "dead Indian" (2.2.32) does not augur well for Caliban's future.<sup>[48]</sup>

In *The Tempest*, such allusions to the fate of Indigenous peoples in the Americas, combined with the focus on the exploitation of timber and, more generally, on the complex dynamics of colonial discourses, point to the first ravages of the Anthropocene which ultimately amplified the global cooling and disturbed weather of the Little Ice Age.<sup>[49]</sup> According to Simon L. Lewis and Mark A. Maslin, from 1492 to 1650, the estimated population of the Americas drastically dropped from 61 million to only about 6 million people. This decline, primarily due to the introduction of new pathogens and worsened by war and famine, also meant a rapid reduction in Indigenous agriculture and fire use, allowing millions of hectares of land to be re-forested. CO<sub>2</sub> emissions radically fell during that period and hit their lowest point in 1610. As Shakespeare wrote *The Tempest* between late 1610 and early 1611, roughly four years after the beginning of English colonization in Virginia, his insight into land-use behavior on a newly discovered land testifies to the emergence of an eco-minded consciousness at a time when, in parallel, imperial thinking started fueling deep beliefs in the exceptionalism of English culture.

### **Imperialism and extraction**

We have seen, so far, that the island's potential for "plantation" and exploitation (2.1.131), albeit not a permanent one, turns it into an allegory of the settler colonialism created in the infancy of that world-changing phenomenon. The Virginia Company, created by King James I in 1606, allowed investors to buy shares and invest money in the colonies. When the explorers set out from England to establish Jamestown, they landed in present day Massachusetts on April 26, 1607. When they arrived, the area was marshy and humid. In his allusion to "all the infections that the sun sucks up / From bogs, fens, flats" (2.2.1-2), Caliban's description definitely fits in with the wet climate and the spongy grounds of the Virginia settlement. The "unwholesome fen" (1.2.323) mentioned elsewhere in a dialogue with Prospero reinforces this idea.

Shakespeare knew of the company's colonizing effort in Virginia. He had contacts with members of the Virginia Company, which included his former patron, the Earl of Southampton, who was very heavily invested, as were two other friends, the Earl of Pembroke and Phillip Herbert. This connection with the Virginia Company may have allowed Shakespeare access to unpublished accounts of the wreck of the Sea Venture in 1609, and maybe as well to stories about the murderous violence which, in Jamestown, increasingly

characterized the relationships between the starving British settlers and the native Algonquians.

A pernicious form of brutality similarly impregnates the microcosm of *The Tempest*, where it is exerted against both Indigenous people and the earth. Scholars have long debated how profoundly the Europeans may have been influenced by the biblical injunction which we encounter in Genesis 1:28: "And God blessed them, and God said unto them, 'Be fruitful, and multiply, and replenish the earth, and subdue it: and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth'" (KJV). In 1967, Lynn White, Jr. pointed to those lines from Genesis as having a deleterious effect on the lands colonized by Europe.<sup>[50]</sup> The biblical imperative of Genesis is entrenched in European visions of nature. We should see it as part of the cultural *habitus* of Europe and recognize that the Bible has been a "key semiotic element" of thought.<sup>[51]</sup> Colonial explanations of the right of Christians to expropriate Indigenous lands so as to "improve" or "increase" (4.1.110) them are rife in the colonial record<sup>[52]</sup>

The growth of extractivism, i.e. the activity of mining and of the extraction of metals, minerals and oil from the earth, started at the turn of the seventeenth century.<sup>[53]</sup> The expropriation of nature is intrinsic to capitalism which, according to Marx, is driven to rob the soil as well as the worker in its ruthless quest of profit. We know, today, that there is an obvious link between climate change and investments in the extraction of fossil fuels through fracking, deep-sea mining, coal mining, oil and gas drilling, and exploitation of tar sands:

Capitalist production [...] disturbs the metabolic interaction between man and the earth [...] All progress in capitalist agriculture is a progress in the art, not only of robbing the worker, but of robbing the soil; all progress in increasing the fertility of the soil for a given time is progress towards ruining the more long-lasting sources of that fertility [...] Capitalist production, therefore, only develops the technique and the degree of combination of the social process of production by simultaneously undermining the original sources of all wealth—the soil and the worker.<sup>[54]</sup>

Extractive practices are obviously part and parcel of capitalist production. It is significant that, at the end of the play, Prospero acknowledges that he has "by the spurs [the roots] *plucked up* / the pine and cedar" (5.1.47-48, my emphasis): in other words, his magic has served him to wound rather than heal the land. Similarly, he manages to make pines "gape" (1.2.291), a violent process warranted by presumably noble objectives—in this case, freeing Ariel from the pine in which Sycorax had imprisoned the spirit. *The Tempest* also sheds light on well-known extractive sectors such as mining and fishing, which have always been particularly destructive when practiced for commercial purposes (even though rocks were not blasted with gunpowder until the 1620s).<sup>[55]</sup> Fishing is present early on in the play, when Prospero demands that Caliban catch fish by damming streams:

No more dams I'll make for fish,

Nor fetch in firing at requiring,

Nor scrape trenchering, nor wash dish.

Ban' ban' Ca-caliban,

Has a new master, get a new man. (2.2.176-80)

Caliban, moreover, is said to look and smell like a dried fish:

*Trinculo*: What have we here, a man or a fish? Dead or alive? A fish: he smells like a fish, a very ancient and fish-like smell, a kind of—not of the newest—poor-John. A strange fish! (2.2.24-27)

While the phrase “Poor John” could be a term of abuse (*OED*, 1.†b), the *OED* explains that it mainly referred to “[f]ish, usually hake, salted and dried for food” (1.a). This expression occurred for the first time in *A summarie and true discourse of Sir Frances Drakes West Indian voyage* (1589) and was thus strongly associated with imperial enterprises.<sup>[56]</sup> When Shakespeare wrote *The Tempest*, “Poor John” was more specifically associated with the unregulated English settlement of Newfoundland. Edward M. Test makes it clear that “English fishermen had harvested Newfoundland waters since at least the 1550s, using temporary spring fishing stations to dry cod ashore and abandoning them in autumn at the end of the fishing season.” Thus, by comparing Caliban to a kind of “poor-John,” “Shakespeare places on stage what his contemporaries would unmistakably recognize as the name for Newfoundland salt-dry cod.”<sup>[57]</sup>

In this northern counterpart to Jamestown, the bartering of North sea herring and cod (i.e. Poor John) for wine was crucial to the economy of the place.<sup>[58]</sup> Fishermen produced salt-dry cod for trade in the Old World, while merchants had wine (mostly imported from France) for the mobile labor force of the New World. Arthur R. Clausnitzer Jr. perfectly summarizes this economic model: “colonial resource-extraction industries [were] established and developed as part of a system in which the peripheral colonies provid[ed] commodities and resources to a core metropolis by transforming the wilderness into a product suitable for exchange to and consumption by the domestic realm.”<sup>[59]</sup>

The transformation—or erasure—of wilderness, as well as vinicultural and piscatorial politics, are precisely the main issues at stake in act 2, scene 2 of *The Tempest*, when its two carnivalesque figures, the drunkards Trinculo and Stephano, encounter the “monster” (2.2.30) Caliban and endeavor to enslave him in their own way. The audience would have been intrigued, in particular, by the main prop of the scene, i.e. a bottle. In Newfoundland, liquor was “thought to satisfy the need for warmth in a cool climate.”<sup>[60]</sup> Mariners, in particular, “thought of alcohol as a source of warmth [...] although it actually contribute[d] to cooling the body by dilating surface blood vessels.”<sup>[61]</sup>

In act 2, scene 2 of *The Tempest*, Shakespeare not only shows European crew members seeking to fight the harsh weather conditions by getting drunk, he also hints at the Newfoundland habit of trading wine against cod. As soon as Stephano enters, he expresses the wish that Caliban “taste[d] of [his] bottle” (2.2.73). Both fish (“poor-John,” 2.2.27) and fisherman (“I’ll fish for thee,” 2.2.158), Caliban is more than ready to exchange fish for wine (“*Caliban drinks*,” 2.2.140 s.d.). Beyond its comic undertones, the scene thus emblemizes a merchant economy closely related to the world of the planters and of the fishing crews.[\[62\]](#)

In Shakespeare’s “brave new world” (5.1.205), extractivism is not limited to fishing: goods must also be dug from the soil.[\[63\]](#) Up to a certain point, the play anticipates John Locke’s justification of private property in his *Second Treatise* (1689): “the Ore I have digg’d in any place where I have a right to them in common with others,” Locke wrote, “become my *Property*, without the assignation or consent of any body. The *labour* that was mine, removing them out of that common state they were in, hath *fixed* my *Property* in them.”[\[64\]](#)

Such words on property could have been those of Prospero, whose attitude testifies to the growing attraction of property and soil issues for Shakespeare’s contemporaries at the turn of the century, all the more so as “[p]rospecting, extracting and transforming metals and precious stones were part of [Spain’s] imperial project,”[\[65\]](#) while England was lagging behind. Indeed, Prospero’s imperialism in the cold, forcing Ariel “to do [him] business in the veins o’th’earth / When it is baked with frost” (1.2.255-56) alludes to the mining activities of the self-described master of the island. Interestingly, when the conspirators, in act 4, come close to Prospero’s cell, Caliban warns Stephano and Trinculo: “Pray you tread softly, that the blind mole may / Not hear a footfall. We now are near his cell” (4.1.194-195). Editors generally gloss these lines as: “Caliban asks Stephano and Trinculo to tread so softly that even the mole will not notice them,”[\[66\]](#) a mole being able to hear when hidden inside the earth, according to Topsell’s *Historie of Foure-footed Beasts* (1607).[\[67\]](#) However, it is also possible to read Caliban’s image as a comparison between Prospero and a “blind mole”[\[68\]](#) drawing attention to Prospero’s interest in the soil.

Moreover, Ariel’s “business in the veins o’th’earth” further testifies to the tyranny of European colonists,[\[69\]](#) and may be read as an allusion to the mining industry undertaken by the English settlers in 1578 on the Countess of Warwick’s Island, a small barren piece of land located approximately 500 miles off the northeastern shore of Frobisher Bay. Indeed, in 1576, Martin Frobisher had set sail on a voyage of exploration which turned out to be a quest for gold, a central trope in early colonial history. Near Baffin Island, Frobisher discovered what he wrongly believed to be gold and he captured an Inuit man who died on his arrival in England.[\[70\]](#) He left again in 1577 and 1578. While his initial goal had been a quest for the Northwest Passage, he became gradually obsessed with the idea of mining for gold on Baffin Island. By the spring of 1578, a fleet of fifteen ships with more than four hundred men had been assembled to mine gold on Baffin Island, where, just like Prospero on his island, Frobisher failed to establish a colony. Two mines were opened on the Countess of Warwick’s Island. In his narrative, George Best suggests that the English were “best suited to reveal what is hidden,

with the right moral outlook to recognize the hidden potential in Arctic ore.”<sup>[71]</sup> However, all these mining operations ultimately proved to be in vain. The ores which Best brought back from his third voyage contained neither silver nor gold and were mainly iron pyrite. While Prospero cannot be seen as Frobisher’s perfect alter ego, he certainly borrows some of his features from the figure of the English explorer. Greedy, likely to be obsessed with extracting the island’s riches buried under the frozen Arctic ground, unable as well as unwilling to settle down in a permanent way, Prospero makes Ariel dig mines for him and he treats the natives like “slave[s]” (1.2.270). Digging was of course not part of the natives’ habits; Caliban makes clear that his traditional lifestyle prevents him from spoiling the land: he simply “dig[s]... pignuts” (2.2.165), which entails no damage to the earth.

Interestingly, while digging the ground is part of the settler’s goals in the play, it is also an activity which materializes, or de-metaphors, a parallel process implying memory: Prospero must exhume his past in order to start a new life and ensure his dynastic succession. “A life without ground has no reality,” Robert Pogue Harrison reminds us in *Forests. The Shadow of Civilization*.<sup>[72]</sup> In the play, Prospero gradually comes to acknowledge this truth. He needs to face real life and to give up some of his core beliefs; in particular, he must shed the fantasy that he can control the world thanks to his “books” (1.2.166).<sup>[73]</sup> The “dark backward and abysm of time” (1.2.50) force him and his daughter to go deep into the successive layers of the past and to root out evil before uncovering their hidden bounties. So, while much has been said on oblivion and “cultural amnesia” in connection with the colonial background of *The Tempest*, it is time to shift the focus from the shaping force of oblivion to the scrutinizing power of memory.<sup>[74]</sup> “I must / Once in a month recount what thou hast been, / Which thou forget’st” (1.2.261-63), Prospero thus tells Ariel at the beginning of the play. While he is tempted to manipulate the memories of the island’s legitimate inhabitants, he nonetheless has to explore both their past and his own personal history: the play shows us precisely the moment when the father finally decides, after all those years, to remember what causes him and this daughter to live in the middle of nowhere and to “inform [Miranda] further” (1.2.22). Digging and extracting are thus both physical and mental acts, implying labor forces as much as inwardness and the remembrance of things past. While the metaphorical act of digging one’s memory has often been seen as a potentially redemptive move, I would like to suggest here that Prospero’s probing of memory should more likely be aligned with his extractivism. His own dynamic of (white) inheritance seems indeed ideologically linked with Indigenous disinheritance.<sup>[75]</sup>

## Conclusion

Sicily, the Bermudas, Virginia, Newfoundland, Baffin Island: all these reinvented *loci* are as many regions of the earth, or as many “climes”, offering Shakespeare fictional material to illustrate how living in the “weather-world” affects human experience and foreign politics.<sup>[76]</sup> Attuned to the ideologies of its age, with its kaleidoscopic geography reflecting the playwright’s varied interests in the various colonial enterprises of his era, *The Tempest* remarkably paves the way for today’s cli-fi literature while offering a compelling study of risk perceptions, one in which the imbrication of deterritorialization, ecology and

cultural practices conveys the dual vision “of the Earth as a whole and of the different earths that are shaped by varying cultural contexts,” as Ursula K. Heise puts it.<sup>[77]</sup> Much more than a hoary play on seventeenth-century ideals, Shakespeare’s pioneering work is a multi-layered drama which unravels a story of enslavement and oppression, one in which a European magus decides to turn the earth to his own image with the help of the enforced labor of the people native to the island. Probing colonial logics and exploring settler-Indigenous relations, it is a climatic drama embracing ecological as well as post-colonial issues and challenging deterministic ideas on the ways in which weather shapes humanity as well as traditional Western assumptions about human agency over the environment.

“As a consequence of direct observation and the rapid expansion of the *oikoumene*, Greek knowledge started to be questioned, at least in part, even though Aristotelian natural philosophy and climatic theories forged by Hippocrates proved astonishingly flexible and adaptable in the long run,” as Sebastian Grevsmühl observes.<sup>[78]</sup> While this questioning of ancient knowledge is put to the fore in *The Tempest*, Shakespeare not only depicts an epistemological shift; he also highlights environmental issues by relating them to political and imperialistic motives in an era when knowledge of the New World began to be more rigorously collected and codified, and when natural phenomena often proved decisive in the success or the failure of expeditions of discovery and conquest. “What we call Nature is monstrous and mutating, strangely strange all the way down and all the way through,” Timothy Morton writes in *The Ecological Thought*.<sup>[79]</sup> This assumption shows the reasons why, more than 400 years after its composition, a play like *The Tempest* remains relevant for modern audiences, alert as it is to environmental degradation. Its interrogations of the workings of nature and on the interaction between the human and the natural spheres are still shared by scholars who are keen to explore environmental issues.

Supplying a holistic approach to the understanding of climate in connection with human activity, and therefore suggesting a complex interaction between climatic deregulation and imperialist politics, Shakespeare also examines the impact of extractive practices on the ecosphere—practices which resonate today as “We’re losing the very ground under our feet.”<sup>[80]</sup> It is significant that, towards the play’s denouement, Prospero should “break [his] staff, / Bury it certain fathoms in the earth” (5.1.54-55), and “drown [his] book” (5.1.57). While the “master” of the island has extracted trees and ores from the earth, fish from rivers, he decides, at the end of the play, to do the exact contrary and to “bury” a part of himself deep in the seabed. We are born from the earth and we return to the earth: this is what any environmental experience teaches, even to its most reluctant subjects.

<sup>[1]</sup> Virginia Mason Vaughan and Alden T. Vaughan, eds., *The Tempest* (Walton-on-Thames, Thomas Nelson and Son Ltd., 1999). Regarding the link between the initial storm and the climate of the era, see for instance Kate Ravilious, “Shakespeare’s World in the Grip of Winter and Witchcraft,” *The Guardian*, Sunday 24 April 2016, n.p.

[2] The depopulation of the Americas resulted in vast tracts of lands being left uncultivated and returning to forest. This regrowth soaked up vast quantities of carbon dioxide from the atmosphere, a fact which, in turn, cooled the planet's temperature. On this, see Alexander Koch, Chris Brierley, Mark M. Maslin, and Simon L. Lewis, "Earth System Impacts of the European Arrival and Great Dying in the Americas After 1492," *Quaternary Science Reviews* 207, no. 1 (March 2019): 13-36.

[3] Sylvia Wynter, "Unparalleled Catastrophe for Our Species? Or, to Give Humanness a Different Future: Conversations", in *Sylvia Wynter: On Being Human as Praxis*, ed. Katherine McKittrick (Durham, N.C., Duke University Press, 2014), 9–89, 23. Quoted in Kathryn Yusoff, *A Billion Black Anthropocenes or None* (Minneapolis, University of Minnesota Press, 2018), 34. I thank Madeline Bassnett for calling this reference to my attention.

[4] Human land use is now recognized as "the second human source of climate change after burning fossil fuels." See Shuaishua Jia, Cunyi Yan, Mengxin Wang and Pierre Failler, "Heterogeneous Impact of Land-Use on Climate Change: Study from a Spatial Perspective," *Frontiers in Environmental Science* 10 (2022): n.p.

[5] Tiziana Lanza, "Using Geosciences and Mythology to Locate Prospero's Island", *Geoscience Communication* 4, no. 1 (2021): 111–27. "From what we have described until now, we can for sure assert that the island of *The Tempest* it is not a tropical island. There are not even any palm trees, which [...] are the prime requirements for a modern tropical island, although Shakespeare speaks of palm trees in other plays" (117).

[6] Hannah Wojciehowski, "Hunger: The Jamestown Context of Shakespeare's *The Tempest*," *Shakespeare Quarterly* 73, No. 3–4 (Fall-Winter 2022): 254–78, 255.

[7] "La Bermuda" first appears in an untitled woodcut map of the West Indies found in Peter the Martyr's *Opera Legatio Babylonica Oceani Decas Poemata Epigrammata*, published by Jacob Cromberger (1511).

[8] Dated July 15, 1610, Strachey's *True Reportory* circulated in manuscript among Virginia Company investors until 1625, the date when Samuel Purchas published it. The Strachey letter is believed to have been sent in 1610 to the wife of Sir Thomas Smith, the treasurer of the Virginia Company in London.

[9] Virginia Mason Vaughan and Alden T. Vaughan (eds.), *The Tempest*, 295.

[10] Silvester Jourdain, *A discovery of the Barmudas, otherwise called the Ile of Diuels by Sir Thomas Gates, Sir George Sommers, and Captayne Newport, with diuers others* (London, 1610).