Chapter 3

The Corporeal Garden: Masquerading in Paradise

If in *Richard II*, *Hamlet*, and *King Lear*, Shakespeare envisions the degradation of both the personal state of being and the political body of the state, as versions of a fallen paradise overgrown with weeds, in his late plays, *The Winter’s Tale* and *The Tempest*, the playwright begins to imagine the possibility of a paradisiacal personal and political state. This paradise is not simply a return to the Edenic, uncomplicated by the weight of society; rather, it is mitigated through new scientific inventions that radically shift the place of the human in the philosophical, theological, political, and natural worlds. These plays interrogate the agency of the human when faced with both the societal pressures from political and cultural changes and the shifting natural environmental issues of the early modern world. Tempered by the mechanical innovations that populated the large estate gardens in the sixteenth and seventeenth centuries, human agency combats the preconceptions of the past while constructing the possibility of a new future—“a brave new world,” in Miranda’s words (5.1.183). In *The Winter’s Tale*, Shakespeare traces the progression from the fallen world of a lost Eden through to the problematic vision of a paradise of hybridity and finally arrives at a garden that offers redemption by means of mechanical production. In *The Tempest*, the world of the mechanical permeates the entire play: from the opening storm, to the vanishing banquet table, and finally to the enchanting wedding masque—all of which masquerade as magic but are technologically produced, performed by human or human-like agents. Shakespeare utilizes these mechanical devices—actual or imagined—to recuperate a complex idea of paradise. Although *The Winter’s Tale* does not use real mechanisms, the play mimetically reproduces hydraulically driven, moving statuary that recreated organic forms in the aristocratic gardens of Europe. *The Tempest* expands the ideas from *The Winter’s Tale*, not only making human analogues to mechanical devices but implementing garden/stage machinery to create the magical effects, which are the work of supernatural airy spirits governed by the powerful, yet still human, hand of Prospero. Prospero’s manipulated island comes to represent the perfect elysian landscape: Gonzalo’s encounter with the garden isle inspires him to recall the classical golden age “commonwealth” in which labor is evacuated and the perpetually producing earth provides all necessities (2.1.148). Wide-eyed Ferdinand finds Prospero’s masque so wondrous that it makes the island a “paradise” (4.1.125).

In the Renaissance, the garden is a defined and enclosed area, dominated by human control but intended to resemble the mythical gardens that require no human intervention or labor. In the space of the garden, horticultural practices
of breeding, grafting, and environmental control regulate plants; architectural creation modifies the landscape; artificial mechanized production simulates the weather; and theatrical automata recreate human life itself. All of these human interventions employ artifice to reconstitute a classical Golden Age and/or the biblical Garden of Eden in the face of the mundane, fallen world. Shakespeare’s late plays epitomize the early modern idealized horticultural imagination: in The Winter’s Tale control of the garden implies authority over the sexualized, fecund female body that will in turn reproduce the body of the state; and in The Tempest manipulation of bodies in the garden represents a microcosmic control over the body of the nation state. In these theatrical gardens, the mechanical reproduces natural elements (by means of fireworks and water jets) and re-enacts narratives of human experience (such as through mechanized displays of Ovidian scenes). Technology in both plays, especially in The Tempest, enhances the natural ecosystem, making it more spectacular; the grandiose quality of the mechanically altered garden or garden island contains elements of both heightened danger and intensified beauty, providing an amplified sense of the mystical and the paradisiacal. Simultaneously these amplified horticultural spaces also anticipate the Age of Science, by examining the place of the human in the mechanized world. In these plays, the sentient being (Hermione and Ariel, respectively) embodies the artifice of the mechanical to investigate what it means to be human in the rapidly altering natural environment of the early modern period.

I. The Winter’s Tale: Gardens and the Marvels of Transformation

Criticism concerning The Winter’s Tale has given a great deal of attention to Perdita’s “rustic garden” (4.4.84), its relationship to the Renaissance debate about nature and art, and the association between Perdita’s virtue and the garden itself. Critics, however, have rarely mentioned Hermione’s garden, despite its clear connection to how Leontes perceives his wife’s virtue. Hermione’s mention of the garden just before she leaves with Polixenes, “If you would seek us/We are yours

---

The Corporeal Garden

i’th’garden” (1.2.178–9), incites Leontes’s jealous rage. At this moment, Leontes literally and figuratively situates Hermione as a descendent of Eve, repeating Eve’s transgressive actions and causing the ruin of the Edenic kingdom through her perceived desires. When Hermione and her husband’s childhood friend enter this garden together, Leontes accuses her of infidelity—a crime of the female body. The alleged crime of her body is against her husband, but more importantly, against the nation, for royal infidelity is legally treason. In the second half of the play, a garden also emblematizes Perdita, the fruit of the earlier supposed illegitimate union between Hermione and Polixenes. In Perdita’s flower garden, the physical properties of the plants, as they are codified with moral or religious meanings, represent the schema by which Perdita’s body and her sexual conduct can be read. Perdita’s return to her home and to her proper place as princess enables the redemption of her mother. As Hermione loses her initial place because of her association with the garden of love, her restitution also occurs in a garden and her very body appears as garden statuary. Paulina enlivens Hermione’s seemingly lifeless, petrified body in her gallery, which in the period was frequently placed in the garden. Paulina’s actions, then, mirror the Renaissance gardener who would have activated hydraulically powered mechanical statuary in aristocratic and royal estate gardens. Symbolically, the garden owner performs the divine act of animating the inanimate but artificially, as the statuary only mimics life. By means of the direct manipulation of the garden performance, the owner controls the actions and reactions of the guests. Paulina similarly controls Leontes and Perdita though her miraculous performance that vivifies an inert statue with human rather than automatized life. Life imitates art in the scene rather than art imitating life. Through the orchestration of this extravagant garden performance in which the corporeal body appears mechanical, Hermione regains her rightful place as wife and as co-ruler in the political state. The space of the garden in this play then becomes a site where the corporeal body, both the human body and the nation state, is contested. The Winter’s Tale’s gardens reflect how the queen and her daughter are perceived sexually and morally; as royal women, their bodies produce future rulers, and therefore affect the health and well-being of the state itself.

Hermione’s Garden

Hermione’s seemingly innocent comment, “If you would seek us/We are yours i’th’garden,” initiates Leontes’s suspicion of her adultery with Polixenes (1.2.262–3). Leontes’s change in attitude toward his wife is sudden: he goes from praising

---


3 For more information about automata in the Renaissance, see Wendy Beth Hyman, The Automaton in English Renaissance Literature (Farnham and Burlington: Ashgate Publishing, 2011).
her speaking, remembering when she did “utter/’I am yours for ever’” (1.2.103–4),
to condemning her moments later: “Too hot, too hot!/To mingle friendship far is
mangling bloods./I have tremor cordis on me” (1.2.107–9). Leontes’s doubt of his
wife’s fidelity seems completely unfounded, based only on Hermione’s ability to
convince Polixenes to lengthen his visit with them—which he initially praises—
and her physical gesture of giving Polixenes her hand. Nothing in Hermione’s
words gives any indication of her unfaithfulness, until her casual mention of the
garden. Her remark about the garden is often overlooked by the modern reader or
auditor; however, such a reference would have had a host of connections for the
Renaissance audience.

Forbidden love was associated with the garden since the Middle Ages. The
medieval garden or hortus conclusus, enclosed by a wall and filled with fruit trees,
song birds, fountains, trellises, raised grassy benches, secret loges, and flower
beds provided private spaces particularly advantageous to illicit activities. Within
the structure of a Renaissance Italian garden, the giardino segreto, the descendant
of the medieval hortus conclusus, was an enclosed area set aside for private use.
Tucked within the fundamentally public space of the palace and the exterior
landscape, the giardino segreto “was essential to retain a secluded space for the
exclusive use of the family and for the enjoyment of a truly private life,” as Gianni
Venturi notes. “If one considers the evolution of the garden,” Venturi continues,
“as an enclosed space, according to the medieval tradition, it is apparent that there
may be a link between the purpose of a giardino segreto and its interpretation as
a setting for erotic love.”4 In the public space of Leontes’s Sicilian palace and
grounds, the garden to which Hermione refers would be one of the few places
reserved for private, and potentially amorous, activity. In Gli Asolani, Italian
humanist Pietro Bembo illustrates the Renaissance association between the erotic
and the garden, “Let sleep lie behind the curtains of our beds [while we] go into
the Garden” (1.4).5 For Bembo, the beds are reserved for sleep, but the garden
provides a larger world of sensuality.

Leontes, or at least his audience, would have had much literary precedent to
think of gardens as erotic spaces. In medieval romances, gardens are often loaded
with sexual innuendo. The adulterous lovers Fenice and Cligès in Chretien de
Troyes’ twelfth-century romance Cligès are caught when they make love under a
pear tree in the garden. Probably the most famous example is the Roman de la Rose,
in which the protagonist enters the garden and falls in love with the beautiful Rose.
This association of the garden with illicit love is explicit in Shakespeare’s source
text for The Winter’s Tale, Robert Greene’s Pandosto. Bellaria vists Egistus’s
bedchamber, but only after they frequent the garden together does Pandosto

4 Gianni Venturi, “The Giardino Segreto of the Renaissance,” in The History of
Garden Design: The Western Tradition from the Renaissance to the Present Day, ed.
5 Pietro Bembo, Prose Della Volgar Lingua; Gli Asolani, Rime ed. Carlo Dionisotti
(Torino: TEA, 1989).
become suspicious. Bellaria and Egistus are portrayed as idle, leisurely strolling in the garden. The pleasant devices the two enjoy recall the garden of love in the *Roman*, in which Lady Idleness opens the garden gate for the lover. The *Roman*’s garden “haunts the literature of the succeeding centuries,” Alan Gunn argues, and certainly the *Roman* haunts Greene’s romance. The *Roman* would have been available for both Greene and Shakespeare to read in a translation attributed to Chaucer and printed by William Thynne in 1532.

The garden was not only a site for adulterous rendezvous, but in the literary imagination it was also often coded as the female body. The lush landscape in Boccaccio’s *Decameron* garden of the Third Day clearly reads as pudendal. Similarly, Chaucer’s *The Merchant’s Tale*, influenced by the lover and Rose in the *Roman*, uses the iconography of the garden to represent female genitalia. Lady Idleness in the *Roman* opens the wicket for the lover; May signals to her lover and “This Damyan thanne hath opened the wyket” (2152). “Wicket” is a highly charged word, for it means the small opening in the gate and it has the slang meaning of vagina, indicating the close tie between the garden and women’s bodies, as I have discussed in Chapter 1.

In *The Winter’s Tale*, Leontes’s actions parallel those of Chaucer’s January: just as January requests that May act as an intermediary, facilitating January’s friendship with Damyan, so too does Leontes request that Hermione act on his behalf towards Polixenes. When Leontes hears the garden reference, he explodes into a jealous tirade, ranting and raving almost as a fabliau cuckold. Leontes’s line: “Nay, there’s comfort in’t/While other men have gates, and those gates opened,/As mine, against their will” (1.2.198–9), recalls both Lady Idleness and May, who open the garden gate to let in the lover. The gate also leads to the association of his wife’s body with the garden; he proclaims that there is “No barricado for a belly” (1.2.205). As with Bellaria, who is described as a flower, Hermione’s body becomes the garden, to which she has purportedly opened the gate to Polixenes.

Shakespeare makes use of this medieval garden tradition, then, to dramatize Hermione’s situation. This garden trope is not the only one invoked in the play but is the controlling structure of the first half of *The Winter’s Tale*. The enclosed medieval garden works as a metaphor, for the characters are confined, physically and psychologically, tightly within the borders of Sicily and the barrier of the present wintry time. Leontes is confined by jealousy, evident by his reference to the garden. Polixenes is given the choice to stay in Sicily, either as guest or as prisoner, and secretly escapes, barely with his life. And if Hermione’s body

---

8 Ibid.
9 The correlation of the gated, enclosed garden with the female body and female duplicity also appears in *Measure for Measure* (4.1.25–30).
resembles her garden, the fetus is enclosed within the garden of her mother’s womb. “This child was prisoner to the womb, and is/By law and process of great nature thence/Freed and enfranchised” (2.3.58–60), as Paulina argues. Hermione herself is imprisoned with her women under Leontes’s hard decree and un stinting tyranny. Yet from this tightly confined space, the play provides reminders and promises of a pastoral freedom outside the formal, enclosed space that is Sicily. Just as the hortus conclusus of the Italian garden is adjacent and defined in opposition to the wild, so too, in the play, the imagination of the pastoral defines yet relieves the confined space of aristocratic Sicily.

The beginning of the play recollects the pastoral, Arcadian space of the king’s childhood. Polixenes’s narrative envisions an Edenic golden age, in which he and Leontes were

as twinn’d lambs, that did frisk i’th’sun
And bleat the one at th’other; what we chang’d
Was innocence for innocence; we knew not
The doctrine of ill-doing, nor dream’d
That any did. (1.2.69–73)

Here Polixenes locates the young kings in a pastoral space, imagining their boyhood not merely as shepherds but as the innocent animals. Even as he recalls the past, the pastoral image points to the future, for Leontes’s daughter will grow up as a shepherdess and Polixenes’s son will disguise himself as a rural swain to woo her. Polixenes’s bucolic imagery, as both memory and forecast, paints a picture of political regeneration intrinsic to the pastoral and to the natural world. Yet, even as Polixenes sees his own adult world as post-lapsarian, this space of childhood is one that inevitably ends in corruption, a corruption that is specifically gendered. When Hermione surmises that the two men have “tripped” from their innocence, Polixenes implicates women, Hermione and his wife specifically, as responsible for the men’s expulsion from pastoral innocence.

Interestingly, Polixenes and not Leontes accuses Hermione of being an Eve, culpable for man’s fall. Edward Tayler discusses the paradisiacal aspects of the beginning of the play and clearly associates the pastoral with Eden. He argues that “the web of allusion in these lines provides a frame of reference within which the main events of the play can receive meaning: the speech introduces the vision of the green world, the ideal of past harmony and associates it with birth, innocence, spring, even with the Garden of Eden.”10 Tayler, however, does not comment on Hermione’s reference to, and close association with, the garden. Polixenes establishes Hermione in the role of Eve, with her body as the garden in which her husband falls from innocence, and Hermione’s allusion to the garden convinces Leontes of her fallen state with Polixenes. The pastoral space of the past works to locate Hermione within the confines of a narrative in which all women are Eve, forever associated with the garden yet barred from enjoying the paradisiacal

condition. Her sin, though imagined, is irredeemable as far as Leontes is concerned and as far as the genre of the first half of the play suggests. All indications are that this winter play is a tragedy: tragically Hermione dies innocent, and Leontes forever is to mourn his error.

Yet winter turns to spring and the garden becomes a place of renewal. Hope of redemption and return to the golden space of the pastoral appears with the description of the island of Delphos:

The climate’s delicate, the air most sweet,
Fertile the isle, the temple much surpassing
The common praise it bears. (3.1.1–3)

As Delphos, the location of the Oracle, implies future possibilities, the paradisiacal vision of the island itself serves as promise of a new golden age. When Leontes rejects the word of the oracle, he is rejecting a return to paradise; only through time can natural regeneration occur, which is figured in the image of the garden.

Perdita’s Garden

Once we leave the tragic landscape of Sicilia, the first image we have of Bohemia is not the calm pastoral space, nor Perdita’s floricultural landscape, but a space outside the garden—uncultivated, untamed, and dangerous. Here one of the most violent and random actions in all of Shakespeare’s plays occurs—the bear attacks and eats Antigonus—and here also the storm in The Winter’s Tale, unlike the benign version in The Tempest, is fatal to all of those on the ship. These events are irrevocable, unlike Hermione’s death. Nature wild, as opposed to the cultivated landscape of the garden, is outside of civilization and uncontrollable by man.

When time advances 16 years, the play’s landscape changes to recall the Italian estate bosco or wood, which is meant to appear wild and natural but is indeed planted and cultivated. At the beginning of Act Four, the allegory of Time intervenes, sliding “O’er sixteen years” and also through the accelerated progression of the seasons, from winter to early spring and then to late summer garden glory. The horticultural transformation, along with the artificial progression of time, marks the play’s generic mutation from tragedy to comedy, for tragedies rarely occur in a verdant setting.

Spring and summer with all their blooming flowers are the times of pastorals and comedies, an image reinforced by Autolycus’s song, which begins Act Four, scene three:

When daffodils begin to peer,
With heigh, the doxy over the dale
Why then comes in the sweet o’ the year,
For the red blood reigns in the winter’s pale. (4.3.1–4)

The reference to the daffodils paints a picture of the earliest springtime because daffodils are one of the first flowers to appear in the “sweet” or early part of the
year—about the beginning of March. Perdita’s entrance at the beginning of 4.4 reiterates the perception that the season is spring, but perhaps April. As Florizel depicts Perdita: “These your unusual weeds to each part of you/Does give a life; no shepherdess, but Flora/Peering in April’s front” (4.4.1–3). One imagines Perdita wearing a bright gown and a corona of early flowers, much like the description of “fayre Elisa, Queene of shepheardes all” (34) in Spenser’s April Eclogue from *The Shepheardes Calender*:

See, where she sits upon the grassie greene,  
(O seemely sight)  
Yclad in Scarlot like a mayden Queene,  
And Ermines white.  
Upon her head a Cremosin coronet,  
With Damaske roses and Daffadillies set:  
Bayleaves betweene,  
And Primroses greene  
Embellish the sweete Violet. (55–63)  

By evoking the *Calender*, the play creates a tangible atmosphere of spring and presents Perdita as resembling Spenser’s vision of Queen Elizabeth as Flora and as the Queene of shepherds. Such a reference creates an iconographic relationship between the young and marriageable Elizabeth and the character Perdita, exemplified in the garden images of the play.

As Elizabeth had been dead for nearly 10 years by the time the play was performed, the correlation between the two women works nostalgically. An image of Elizabeth, especially one that is pastoral, points to the idealized past as a critique of the present political situation and as guidance for the future; in the play, Perdita is a reminder of the corrupt state that located her in exile from her home and her station, yet she is the hope for the state’s eventual salvation. Peter Stallybrass writes that “The state, like the virgin, was a *hortus conclusus*, an enclosed garden walled off from enemies … As she [Elizabeth] ushers in the rule of a golden age, she is the imperial virgin, symbolizing, at the same time as she is symbolized by, the *hortus conclusus* of the state.”

As with Elizabeth, the virgin Perdita is symbolized by a garden; this image parallels the aristocratic cultural practice of cultivating an Elizabethan emblematic garden, a Protestant appropriation of medieval flower associations with the Virgin Mary. In the medieval Marian garden, flowers

---


represented the virgin’s attributes, so too the Elizabethan emblematic garden directly reflected the queen’s virtues and authority—for example, the eglantine represented her virginity and the rose was a symbol of Tudor house. Stallybrass shows how Nicolas Breton’s “Elogy of Queen Elizabeth” associated the queen with the image of paradise: she transforms her realm into “a paradice on earth” or “a gardein of no smale grace.” Furthermore, Stallybrass argues, “But not only was Elizabeth the maker of that ‘paradice’ or ‘gardein’; her enclosed body was that paradise (a word derived from the Persian pairidaeza, meaning a royal enclosure).” Like Elizabeth, Perdita’s role eventually is to renew the state to a paradise, while her body is inexorably connected to the image of her own garden.

Perdita, like Elizabeth, was a princess considered a bastard and was banished from court. Both Elizabeth and Perdita fashion ideas of themselves as legitimate and virtuous. When Elizabeth gained the throne she created an image of herself as the protestant Virgin Mary, saving the country from the earlier catholic Mary Tudor, fashioned as Eve. Elizabeth’s self-representation draws on many sources, but one that she and her image-makers often invoked was that of Astraea, the virgin who returns the earth to a new golden age in Ovid’s fourth Eclogue. Frances Yates notes that by the Renaissance, the virgin “becomes, not merely the virgin Astraea returning to earth in the new golden age of empire, but the Virgin Mary, Mother of God and Queen of Heaven” (34). So when Elizabeth personifies Astraea, she also plays the role of Mary. Perdita too is a kind of Mary, who redeems her Eve-like mother, Hermione, and recovers paradise. Such a reading invites a monolithic view of both Elizabeth and Perdita, yet these images are complicated. Elizabeth maintained her iconography as a perpetual virgin while negotiating various marital arrangements; Perdita’s actual and reputed purity is constantly threatened by Florizel himself and even the January-like Camillo, who would live only by “gazing” (4.3.11) at the lovely sheep-shearing queen.

Perdita’s iconographic resemblance to Elizabeth is represented in her flower garden. Perdita identifies herself emblematically with her own “rustic garden,” in which she refuses to plant “carnations and streaked gillyvors,” which she notes, “some call nature’s bastards” (4.3.82–3). Perdita finds the gillyvor or gillyflower as an example of singular artificiality, such artifice reflecting Perdita’s own tenuous status too closely. As with the streaked gillyvors, her own legitimacy has been at

14 The hortus conclusus that I describe in the first part of the paper is related to, and can be thought of as the secular version of, the Marian hortus conclusus. Strong clarifies the virgin’s garden: “Medieval paintings and illuminations depict the Virgin and Child seated within this garden surrounded by the horticultural attributes of the Virgin: the violet, the lily, the white and red rose” ibid., 49.
16 For insightful information and analysis concerning Elizabeth’s iconographic representation as the Virgin Mary, see Helen Hackett, Virgin Mother, Maiden Queen: Elizabeth I and the Cult of the Virgin Mary (Basingstoke: Macmillan, 1995).
Of course, Perdita does not know this herself, but her potential bastardy is alive for the audience. Perdita might well abhor the “streaked gillyvors” for their wanton reputation, as Renaissance herbalist John Gerard, in his 1597 text, reveals that they are “not used in phisicke, except amongst certain Empericks and Quacksaluers, about loue and lust matters, which for modestie I omit.”

If the garden represents Perdita’s body (as with Hermione’s), then Perdita must be concerned that Florizel could gain access through the “wicket” and that she herself would then produce bastards. Perdita clearly identifies herself with the garden itself, for she will “not put/The dibble in earth to set one slip of them,/No more than, were I painted” (4.4.99–101). As cosmetics and clothes followed fashions, so did flowers, and the gillyflower and its close relative the carnation were the most popular in the period until the 1620s when the tulip became the rage. Perdita will not, unlike Marvell’s latter day white tulip, paint her cheek. Rejection of gillyvors, like the rejection of the fashionable though morally censurable use of cosmetics, preserves and affirms Perdita’s pure, virgin status. As Elizabeth balanced her appearance as a desirable maiden (Flora) and an untouchable virgin (Mary), Perdita balances the imperative to attract her lover Florizel and to remain pure.

Certainly the flowers that she offers to Polixenes and Camillo, hot lavender, mints, savoury, marjoram, and marigold, speak to the decorum of her garden and her self, as these flowers identify her as a good country housewife, who carefully tends her garden to beautify her father’s property. Indeed, these flowers are exactly the kind that William Lawson suggests that women should grow in a “sommer garden” that he describes in his The Country Housewifes Garden (1618). And, all of the flowers here are also herbs that have culinary and/or medicinal benefits, even the ornamental marigold is used “against pestilent agues,” according to John Gerard; these particular flowers not only represent the time of year that corresponds with the men of middle age, but their very usefulness also signifies a moral gravitas.

Yet, Perdita’s disquisition on flowers is hardly devoid of sexuality. Her mention of Proserpina is an allusion to a rape narrative, as Dis abducted Proserpina when she was gathering flowers. When Perdita is describing the myth, she is participating in the same activity of flower collecting, thereby creating the mental landscape in which her own abduction is possible. Her abduction, with her own collusion, does indeed occur later in the play when she and Florizel secretly run away to

---

18 Gerard, The Herball: Or Generall History of Plantes, 373.
20 B.J. Sokol argues that,”Perdita’s extreme attitude associates widely accepted social activities such as plant breeding or the use of cosmetics with the making of monsters, and with sexual perversion” (140). Sokol, Art and Illusion in the Winter’s Tale.
Sicilia. Further, the flowers Perdita desires for Florizel acknowledge his status as a prince with the mention of the French royal emblem, the “flower-de-luce,” and the crown imperial. Yet the flowers also signify an underlying sensuality: the crown imperial, imported into Europe from Turkey in the late sixteenth century by the Ghiselin de Busbecq, is later featured in John Parkinson’s 1629 Paradisi in Sole as deserving “for its stately beautiness … the first place in this our Garden of delight.” Though the play predates Parkinson’s text, the crown imperial even in 1613 must have been known as a beautiful, exotic, foreign flower that takes a prime position in the recreation of an Eden. Perdita’s “bold oxlips” also have a bodily association: Parkinson describes them as “bare and naked,” while John Gerard notes that the oxlips are “curled and wrinkled in a most strange maner.” Though Perdita despises gillyflowers for their mutability and artificiality, the oxlips and lilies that she so craves for her lover are no less changeable. Lilies, like gillyflowers and later tulips, were valued for their ability to produce variations: “amongst the wonderfull varietie of Lillies knowne to us in these daies, much more then in former times, wherof some are white, others blush, some purple, others red or yellow, some spotted, others without spots, som standing upright, others hanging or turning downwards.” The floral categories of artifice and those of nature that Perdita defines, then, are themselves much more mutable than she or the play acknowledges.

Though Perdita despises such manipulation in her garden, Shakespeare seems to follow the advice in The Arte of English Poesie, in which George Puttenham praises both the gardener’s and the poet’s art of change:

The Gardiner by his arte will not onely make an herbe, or flowr, or fruite, come forth in his season without impediment, but also will embellish the same in verture, shape, odour and taste, that nature of her selve would neuer have done: as to make a single gilliflore … double … a bitter mellon sweete … or any other figure he will: any of which things nature could not do without mans help and arte. These actions also are most singular, when they be most artificiall. The gillyflower, along with the other hybrid plants, is the positive emblem of artificiality. For Puttenham, the poet, like the gardener, “by his arte,” is commended for his ability to modify form. The gardener’s art also included the practice of manipulating the seasons, as we can see when Sir Francis Carew changed the seasons in his famous garden to please Queen Elizabeth on her visit to Beddington, Surrey in 1600. In his Floraes Paradise (1608), Sir Hugh Platt describes how Carew “led her Majesty to a cherry tree, whose fruit he had of purpose kept back from ripening at least one month after all cherries had taken their farewell of England: he had done this by putting on a canvas cover and

---

22 Parkinson, Paradisi in Sole: Paradisus Terrestris (London: Humphrey Lownes and Robert Young, 1629), 27.
keeping it damp.”24 Like Gerard and Carew, Shakespeare manipulates season: in the middle of his winter, or his winter’s tale, he brings forth “a goodly spring of flours,” ushered in by the Flora-like Perdita. Once Perdita begins her discussion of flowers, we become aware that the season is not spring at all but late summer: “Sir, the year growing ancient,/Not yet on summer’s death, nor on the birth/Of trembling winter the fairest flowers o’th’season’/Are our carnations and streaked gillyvors” (4.3.79–81). Time has advanced from the winter of the first part to early spring, to mid-spring, and finally to late summer or perhaps early autumn all in Act Four.

When Perdita wishes to have her garden produce all the season’s flowers simultaneously, she essentially desires a paradisiacal garden, one that contains both spring blossoms and autumn fruits. Such an image is envisioned in Spenser’s Garden of Adonis that has “continuall spring, and harvest there” (Faerie Queene 3.6.42.1). Correspondingly, Sir Francis Carew’s cherries, emblematic of the whole garden, performed for Elizabeth the illusion of paradise, where “Springtime” lasts all year. Such a performance places Elizabeth in her favored roles of Astraea, who brings about a new golden age; in a similar manner, Perdita wishes for spring flowers in her autumn garden, “I would I had some flowers o’th’spring that might/Become your time of day” (4.3.113–4). However, Perdita’s words essentially call attention to the fact that the play itself, with all its temporal progressions, has been working to perform the illusion of paradise, or more precisely, the recuperation of paradise. Symbolically, her purity is necessary for her role as Mary, redeeming her mother Eve from her fallen state. Only after Perdita returns to Sicily does Paulina reveal the living statue of Hermione. The final garden, Paulina’s, is the location where comedy can finally reconcile the tragic elements of political and marital betrayal. Here in the garden redeemed, paradise can be realized.

Paulina’s Garden

As the narrative reestablishes us in Sicilia, we return to the space of the highly formalized garden, and, though the play does not mention the third garden specifically, the location where Hermione’s statue awakens resembles an Italian giardino segreto. The King’s Men surely did not place plants on the stage or paint a garden backdrop at the Globe, but rather the words, particularly “gallery,” must have inferred a garden. Caroline Patey also sees an association between Paulina’s “gallery” and a Mannerist garden grotto: “Hermione can … be visualized standing in one of these [Mannerist] artificial grottoes covered in pebbles and shells” (115). Patey suggests that we can visualize Hermione in a grotto, and certainly the description of the place would have conjured the picture of a garden to the contemporary audience. After all, in this period, statuary was as likely to be exhibited outside in the garden as inside the house; so Leontes’s description of Paulina’s “gallery” may very well have suggested an Italianate garden:

The gallery could mean a picture/art gallery, and critics usually discuss the setting as such. However, gallery could also mean something like an Italian loggia, which often functioned as the entrance to a garden. The O.E.D. gives a 1598 reference to “gallery” meaning the balcony above a garden: in his translation of Diana, Bartholomew Yong writes, “The Lady is in the gallerie ouer her garden./taking the fresh aire of the coole night.” In the Italian giardino segreto often a gallery or loggia led to, or surrounded, the secluded garden. In 1594, Fynes Moryson describes a gallery in the Medici garden in Rome: “Hence there was a Gallery open on the sides towards the Garden, full of beautifull Images, of Lions, a shee-Wolfe, a Ramme, all of white Marble, with other Images, and very faire pillars.”25 From this space one could enter the grotta that also might contain a loggia, in which frescos, bas reliefs, and statues, or what Leontes calls “many singularities” would be placed.

Another clue that the metamorphosis in Act Five could occur in a garden is provided by the Third Gent’s description of the “singularity” that Leontes and Perdita desire to see, a wonder “newly performed by that rare Italian master Giulio Romano, who, had he himself eternity and could put breath into his work, would beguile nature of her custom, so perfectly he is her ape.” (5.2.87–90). A student of Raphael, Giulio Romano (1499–1546) was a figure of many associations: his fame in Shakespearean England was due primarily to his inclusion in Vasari’s Lives, which gives Romano the highest praise. Romano’s reputation was built upon his playful tricks. As part of his design of the Federico Gonzaga’s Palazzo del Te in Mantua, for instance, he painted the fantastic Sala dei Giganti, a trompe-l’oeil masterpiece of staggering giants amongst the falling columns. Romano created an entire world within the painted room, for one can barely distinguish the actual architecture from the tumultuous, collapsing columns and the stumbling titans. The room is a performance in action, giving the viewers a sense of vertigo, as if they were completely swept up into the scene.

More significantly, Giulio Romano was also a garden designer, though scholars usually do not remark on this aspect of his work; at the Palazzo del Te, Romano created a secret garden, containing a loggia or gallery, much like the one Leontes describes. Giacomo Strada, Romano’s contemporary, depicts the garden of the grotta as, “A secret garden for the service of these apartments, which has all

around and on the walls most beautiful compartments of figures.”26 So if Romano is the supposed author of the artwork, then the statue could also be placed in a secret garden setting, like the one that Romano designed at the Palazzo, inside the grotta, amongst the many other singularities.

Interpreting Hermione’s transformation as a garden automaton makes the Third Gent’s observation more understandable. What exactly is meant by describing a statue as “newly performed”? Usually the word “performed” is glossed as “completed” (the Norton) or as “finished” (the Pelican), which are meanings clearly available; however, the mention of performance might also suggest other dimensions to the statue and its setting. The statue, which comes to life as if by magic, also emulates the moving or performing statues such as those at the Medici villa, Pratolino, and, more locally, at Pratolino’s English imitation at Queen Anne’s Somerset House. The hydraulically powered statues in Italy amazed and amused visitors, such as Montaigne, who was highly impressed by the performing statuary located in the gardens: “Il y a le mouvement de plusieurs statues et portes a divers actes” (There is the movement of many statues, performing diverse acts).27 On the Mount Parnassus at Pratolino, hydraulics also powered organs that sounded through rocks, and around the garden water pipes ran through various bellowed, whistle-fitted boxes, producing the effect of the chirping exotic birds.

A German visitor to Somerset was equally impressed by the allegory and the “water play” of the Pratolino-style Mount Parnassus at the queen’s palace: “Inside it [Mount Parnassus] sit the Muses, and have all sorts of instruments in [their] hands …. On the mountain are built four small arches, in each rests a naked statue of marble … Among others there stands above such a female figure in black marble in gold letters Tamesis. It is the river on which London lies, and [which] flows next to this garden…. [It] sprang up to the very top of the rock thick as an arm and besides here and there out of the mountain. It is thus a beautiful work and far surpasses the Mount Parnassus in the Pratolino near Florence” (see Figure 3.1).28 Such spectacular garden architecture was remarkable for a visitor; perhaps no less so for Leontes and Perdita when they see the statue of Hermione.

Paulina first discourages the idea that the statue could move, saying, “No longer shall you gaze on’t, lest your fancy/May think anon it moves” (5.3.60–61). Yet in the act of denying the statue movement, she suggests the idea. Also, dissuading her audience of such a possibility heightens the dramatic moment when the sculpture does come to life. In imitation of the grotto automata that were accompanied by music, Paulina orchestrates Hermione’s awakening with dulcet tones: “Music: awake her—strike” (5.3.99). Paulina’s music increases the sense of the marvelous, imitating the mechanical melodies mysteriously floated through

26 Frederick Hartt, Giulio Romano (New Haven: Yale University Press, 1981); ibid., 145.
the air at Pratolino. When Paulina orders the statue to come to life, she emphasizes the reaction of her audience, like those who visited the magnificent gardens of Pratolino or Somerset: “‘Tis time. Descend. Be stone no more. Approach./Strike all that look upon with marvel” (5.3.99–100).

Fig. 3.1 Salomon de Caus, Design for a Parnassus, Les Raisons De Forces Mouvantes, 1615. Reproduced with permission of ©Dumbarton Oaks Research Library and Collection, Rare Book Collection, Washington, D.C.
Paulina refuses to allow the animation of Hermione’s statue to arouse erotic passion, emphasizing that this Sicilian garden, unlike its counterpart in Act One, is a redeemed place, a landscape in which unseemly sexuality is inappropriate. Certainly, in the play, the danger of sexuality is made manifest, as Leontes desires to embrace and kiss the statue. First Leontes implores, “Give me that hand of yours to kiss” (5.3.46) and a little later he insists: “Let no man mock me,/For I will kiss her” (5.3.78–9). Paulina, constantly on guard against Leontes’s rash and potentially licentious actions, warns the king that the statue is newly painted and should not be touched: “Good my lord, forbear./The ruddiness upon her lip is wet; You’ll mar it if you kiss it, stain your own/With oily painting” (5.3.80–83). Once again, Paulina’s denial of passion also creates the suggestion of it. As Paulina attempts to control Leontes’s concupiscence, she is also controlling the theatrical performance, which she has so carefully produced. In Paulina’s garden, the tension between the unbridled passion and controlled artful restoration of faithful matrimony is played out in the vivification of the statue.

When *The Winter's Tale* was performed at court for the 1613 royal wedding of the Princess Elizabeth to the Elector Palatine, this metamorphic scene must have reminded the viewers of the 1610 masque performance of Anne and Elizabeth in Samuel Daniel’s *Tethys, Queen of Nymphs and Rivers*. In the set designed by Inigo Jones, a grotto opened to reveal Anne (who performed the title character) and her daughter (who represented *Tamesis*). The scenic background of the masque was a direct recreation of Anne’s garden at Somerset, and the queen, her daughter, and her ladies in waiting all became the iconographic representations of allegorical and mythical statues that populated these gardens. These aristocratic bodies mimicked the hydraulically powered statuary, which in turn was mimicking living bodies. Nature was imitating art, imitating nature. In the masque, the garden statue, *Tamesis*, had come to life in the body of Princess Elizabeth, who was to become the queen of Bohemia; in the play, Giulio Romano’s creation comes to life as queen of Sicily, while her daughter, Perdita, who is the future queen of Bohemia, watches in amazement. Here, the play works at the level of a masque, with all of its dramatic transformations.

Initially, like in the masques, Hermione as statue/masquer/queen moves but does not speak. In the masque, which is intended as a display of royal power by means of its iconography, the actual performance controls and silences the aristocratic and royal persons who appear within the masque. Just as the masque creates an inversion of power even as it glorifies that power, Paulina also transposes the normal social hierarchy, controlling how and when the queen moves and speaks. The queen as statue in the garden becomes a stark emblem of the woman-as-garden in the earlier acts. Paulina tells the queen to awake and instructs her to

---

move and embrace the king. As garden owner and mistress of the revels, Paulina ever more increases her spectacular show, going on beyond the norm of the masque, first commanding the “statue” only to move, then finally instructing her to speak. The actor embodying Hermione becomes all the more marvelous than the real court masquers, for this queen both moves and speaks.

Through this horticultural spectacle/performance, Paulina requires that her visitors have faith in the possibility of renewal, transformation, and regeneration. Barkan observes that in the Ovidian tale, Pygmalion needs faith for the transformation to occur, “[T]he statue requires Pygmalion’s piety, his faith in Venus his capacity for love, in order to achieve the miracle of life.”30 Like a high priestess of Venus, Paulina proclaims to her guests: “It is required that you do awake your faith” (5.3.94–5) before she initiates the machinery of the performance; before Paulina allows the moving statue to speak and thereby become fully human, she asks that Perdita: “kneel and pray your mother’s blessing” (5.3.119–20). Symbolically, Hermione’s revival occurring in Paulina’s garden reveals the significance of Paulina’s character, not only of a pagan priestess but of a Christian Paul (as her name clearly suggests).

Throughout the entire play but particularly in Act Five, Paulina acts as spiritual guide for Leontes. When his advisors suggest that Leontes remarry so he will have an heir, Paulina reminds Leontes of his sins against his wife and his duty to remain true to her memory. She then insists that Leontes swear that he will never marry without her counsel—“Will you swear/Never to marry but by my free will?” (5.1.69–70)—thereby allowing her to control the performance of Hermione’s revival. When Paulina decides to awaken the statue, she is careful to make her audience understand that she is not working against the laws of God and is not “assisted by evil powers” (5.3.90–91). Her misgivings about how her guests might react mirror the concerns of garden engineer, Isaac de Caus, when he explains his hydraulic machines in his treatise, Rare and New Inventions of Water-Works. In his discussion of how “To make an Engin which shall move of itself,” the Huguenot de Caus cautions against men who have sought perpetual motion; “Perpetual or without end” he admonishes, “ought to be applied to God alone, who is as he had no beginning, cannot also have an end, so as it is folly and deceit in Men to make themselves believe that they can make perpetual Works” (21). In his explanation of how an engine, (such as one which presented Galatea drawn across the water by dolphins moves itself) de Caus is careful to show that his work falls within the domain of the natural elements available for man’s use (Figure 3.2). For though the work may seem like magic, it is not heretical but sacred. If the scene plays out as a sacred rite, then the garden owner-cum-priestess presiding over it is none other than the Paul-like Paulina.

If Paulina is a kind of Paul, then it would follow that her administrations would take place in a garden, for it was in a garden that Saint Augustine read Paul’s verse


Fig. 3.2 Salomon de Caus, Design for Galatea, *Les Raison De Forces Mouvantes*, 1615. Reproduced with permission of ©Dumbarton Oaks Research Library and Collection, Rare Book Collection, Washington, D.C.
and was converted to Christianity. In a like fashion, Paulina’s final revelation of the Hermione statue in the garden is meant to deliver Leontes. Hermione herself converts from death to life and is redeemed from shame. “Dear life redeems you” (5.3.103), proclaims Paulina. Similar to the Medici owners of the estate gardens, Paulina controls the movements, actions, and reactions of those within her domain. The final denouement of her power occurs in her garden where she is able to create the illusion of magic, while requiring her guests, or disciples, to have faith in redemption through regeneration.

In the earlier acts of the play, gardens represent Hermione’s and Perdita’s bodies and their potential illicit behavior; in this last act, Hermione’s body, as garden ornament, is literally part of and regenerated in the garden. Nevertheless, the cyclical nature of the garden reminds us that Hermione’s spring-like revival ultimately leads to another winter. Eve is restored and paradise is regained: all that was lost seems finally found. Yet, as the world is still post-lapsarian, paradise is flawed: 16 years have been lost, and Hermione and Leontes are no longer young; Hermione is revived, but their son Mamillius is not; and though we anticipate Perdita’s and Florizel’s marriage, the play stops before the ceremony. We are not given the satisfaction of the “happily ever after” conclusion. If the play is a comedy by the end, it is a melancholic one, for seasonal logic implies the inevitable return of winter.

II. The Tempest’s Tempest

Whereas The Winter’s Tale ends with the illusion of magic to enact the play’s denouement, The Tempest begins with what both audience and characters assume to be a natural event: the catastrophic sea storm that gives the play its name. However, we soon discover that this supposed act of nature is in fact not produced by weather patterns but rather generated artificially by Prospero’s human control over the evidently non-human and supernatural body of Ariel. Reporting to Prospero about his performance of the storm, Ariel exclaims, “I flamed amazement.”

31 “The tumult of my heart took me out into the garden where no one could interfere with the burning struggle with myself in which I was engaged … I threw myself down somehow under a certain figtree, and let my tears flow freely … suddenly I heard a voice … saying … ‘pick up and read, pick up and read’ … I had put down the book of the apostle when I got up. I seized it, opened it and in silence read the first passage on which my eyes lit: ‘Not in riots and drunken parties, not in eroticism and indecencies, not in strife and rivalry, but put on the Lord Jesus Christ and make no provision for the flesh in its lusts’” (Romans 13:13–4). St. Augustine, The Confessions, trans. R.S. Pine-Coffin (New York: Penguin, 1961), 171, 77–8. 171, 177–8.

Sometime I’d divide/And burn in many places” (1.2.198–9). Ariel’s recollection exposes how, in this play, the organic non-human masquerades as inorganic nature that humans manage. The fiction of the play attributes the tempest to magical control of the natural elements, yet the reality of the theatre reveals the mechanical technology that enables the “natural” storm.

Like The Winter’s Tale, The Tempest also realizes the metamorphosis of the human into the non-human: the tempest causes Ferdinand to imagine his father’s body reborn into coral and pearl through suffering this “sea change”; and the threat of another ensuing storm compels Trinculo to hide under Caliban’s gabardine, thereby causing Stephano to imagine them as a four-legged monster of the isle (1.2.401; 2.264–5). In both cases, the transfiguration appears to overthrow political authority: the king of Naples is supposed drowned, leaving Ferdinand heir to the throne, and the gabardine moment leads to Caliban’s betrayal of Prospero in favor of Stephano. As an image of the island’s ecology writ large, the storm—natural in appearance but artificial in form and technological in design—reveals the complex interactions between humans and ecosystems, magic and technology, and finally the natural environment and the political world. This section investigates this multivalent performance of The Tempest’s tempest in the context of sixteenth- and seventeenth-century accounts of catastrophic weather and scientific and technical manuals, thereby addressing what it means to be human in the rapidly changing natural and social environments of the early modern period.

The theatrical representation of Prospero’s artificial creation of the storm, his complete control over an enclosed environment, and the political prowess he exercises with his display of artful spectacle correspond to the realities that existed in early modern aristocratic estate gardens. Though the play does not take place in a garden, nor does any specific scene occur in a garden, Prospero’s island replicates the philosophical associations and the physical possibilities produced within the garden in this period. A microcosm for the world at large, the garden becomes a place where humans control nature by means of the scientific advancements in horticulture and technological inventions in mechanical engineering. Thus the garden, and by extension Prospero’s island, represents a metonym of seventeenth-century European empires as they sought to gain dominance over nature through the developments of technology.

To begin thinking about how this period categorized cataclysmic weather (as acts of God, as natural events, or as supernatural occurrences), I will look at William Strachey’s “True Reportory,” which describes the Atlantic hurricane that caused the shipwreck and stranding of the Virginia Company’s ship, the Sea Venture, off the Bermudas in 1609. Likely circulated in manuscript in 1610 but not published until 1625 in Samuel Purchas’s Purchas his Pilgrimes, Strachey’s letter has long been recognized as a source text for The Tempest, beginning with Edmond

33 Unless otherwise noted, all quotations from The Tempest are from William Shakespeare, The Tempest, ed. Virginia Mason Vaughan and Alden T. Vaughan (London: Arden Shakespeare, 2007).

Malone, who in 1808 saw the connection between the play’s circumstances and the 1609 shipwreck, and then in 1901 with Morton Luce, who identified Strachey’s account specifically. As a probable source and even as a legitimate record of the expedition, Strachey’s letter has come under scholarly fire by Arthur F. Kinney and by Roger Stritmatter and Lynne Kositsky; however in 2008, Alden T. Vaughan persuasively defended the letter and its place as a key document for Shakespeare’s late play. Though I am not entering this debate, per se, (especially as I find Vaughan’s argument most convincing), I am fascinated that the letter has come into sharp focus once again.

My particular interest lies in how the letter as a cultural artifact provides historical evidence of how Shakespeare’s contemporaries thought about the circumstances of disastrous weather: how they defined something that is clearly beyond human control in such a way as to give it meaning or explanation. How, for example, this storm may appear to be from the hand of God, Catholics and Protestants read it quite differently and to what end? Strachey’s 2,400-word eyewitness description of the storm is incredibly detailed, recording not only his own observations but also drawing on contemporary and historical references to flesh out the narrative. Shakespeare, even as he takes up many of Strachey’s images and language, also changes them and gives them new meaning, subtly commenting, as I will argue, on religious and secular politics, on human action, and on the invention of the techno-human.

In relating the circumstances of this natural tempest, Strachey’s vivid description of the storm often offers anthropomorphistic characteristics: the wind appears to scream at the drenched victims with human voice and the storm seems to have a sentient malicious purpose. Strachey observes that “the eares lay so sensible to the terrible cries, and murmurs of the windes”; then he notes how once the rain and swells of water subsided a bit “instantly the windes (as hauing gotten their mouths now free, and at liberty) spake more loud, and grew more tumultuous, and malignant … Windes and Seas were as mad, as fury and rage could make them” (my emphasis). Rather than detailing the elemental effects of the hurricane, Strachey portrays the storm as a malevolent personality bent on terrorizing the ship and its crew and passengers with deliberate intent. Though the winds are clearly natural, Strachey chooses to animate the storm with mouths that cry, murmur, speak, and eventually go mad with rage, as if articulating the


whole of human emotions that the victims themselves experience in the hurricane. As I will discuss later, these very same human sounds of the storm appear in *The Tempest* as the work of Ariel, whom Prospero directs. In essence, Shakespeare literalizes Strachey’s personified storm in the person of Ariel.

When the letter turns to the end of the storm, Strachey describes a strange fiery light—the phenomenon commonly known as St. Elmo’s fire, which is an electrical corona discharge that appears on the masts and shrouds (the ropes that serve as part of the rigging) of the ship and that causes ionization of the surrounding atmosphere. Whereas before Strachey humanizes the storm, here he begins his account with an almost poetic eye to his observation, detailing exactly what Admiral Summers and then all of the company witnessed:

Sir George Summers … had an apparition of a little round light, like a saint Starre, trembling, and streaming along with a sparkeling blaze, halfe the height vpon the Maine Mast, and shooting sometimes from Shroud to Shroud, tempting to settle as it were vpon any of the foure Shrouds: and for three or foure houres together, or rather more, halfe the night it kept with vs, running sometimes along the Maineyard to the very end, and then returning.36

For Strachey, the phenomenon has a magical quality, as an “apparition” that trembles, streams, sparkles, and shoots from place to place on the ship’s rigging. Because the occurrence of St. Elmo’s fire is rare at sea and almost unobserved on land, its appearance on the ship assumes the air of the marvelous: “it might have strucken amazement,” Strachey reports.37 Strachey and the company’s response to the event does have historical precedence: because St. Elmo’s fire materializes at the end of sea storms its manifestation is not only miraculous in form but also signals the miraculous end of the cataclysmic and horrifying experience of the hurricane.

Exhibiting the close associations of the corona discharge and the idea of the fabulous, Strachey provides a history of the known folkloric information about the strange fiery light:

The superstitious Sea-men make many constructions of this Sea-fire, which neverthelesse is vsuall in stormes: the same (it may be) which the Graecians were wont in the Mediterranean to call Castor and Pollux, of which, if one onely appeared without the other, they tooke it for an euill signe of great tempest. The Italians, and such, who lye open to the Adriatique and Tyrrene Sea, call it (a sacred Body) Corpo sancto: the Spaniards call it Saint Elmo, and haue an authentique and miraculous Legend for it.38

Strachey qualifies his explanation of the phenomenon by categorizing it with what “superstitious Sea-men” identify, thereby locating it initially in the realm

36 Ibid., 1737.
37 Ibid.
38 Ibid.
of the supernatural. Strachey provides both the mythological tradition along with contemporary beliefs, provided by the notably Catholic (and therefore “superstitious”) sailors: the Italians and the Spanish. For the Catholic Italians, the St. Elmo’s phenomenon is personified as the body of a generic saint—the Corpo sancto, who saves them from the storm; for the Catholic Spaniards, that saint is specifically St. Erasmus, the bishop of Formia. So, as Strachey moves through his entire description of the corona discharge, he begins with a magical, poetic observation and then proceeds to a more esoteric, preternatural explanation of the “Sea-fire,” one that associates Catholic legends with superstition.

Strachey’s knowledge of St. Elmo’s fire likely originates from Richard Eden’s 1561 translation of Martín Cortés’s The Arte of Navigation, a work that would have undoubtedly been on the Sea Venture, as it was the leading book of navigation in the sixteenth and early seventeenth centuries. Laurence Young credits Eden’s translation with enabling the possibility of the English sailing to the New World, as it provided the theretofore concealed and coveted knowledge of the deep and unknown waters of the Atlantic. The popularity of the text in England is evidenced by the fact that it went through seven reprints in total, and five reprints (the latest of which was in 1598) before Strachey sent the letter to the Virginia Company in 1610. The Arte of Navigation contains a lengthy description of the corona discharge and its historical associations from the classical Greeks to Cortés’s Christian contemporaries. Strachey only hints at the story behind the Spanish moniker, but Cortés gives the full explanation of the legend and the story behind the name, St. Elmo or Santelmo. Cortés relates that mariners call upon Santelmo (that is Saint Erasmus the patron saint of sailors) in times of terrible tempests because Santelmo during his lifetime and after had the power to calm turbulent weather. Therefore, when this strange fiery light appears, the sailors believe that it is the embodiment of Santelmo, who signals the nearing end the storm and of the sailors’ strife.

---


40 Martín Cortés, The Arte of Navigation trans. Richard Eden (London: Richard Jugge, printer to the Quenes maiestie, 1561), Fol. 52, 53. Cortés’s original work, Breve compendio de la spherea y de la arte de navigar, was printed in 1551 (reprinted in 1557) in Seville by Anton Alvarez. Eden’s translation was subsequently reprinted five times (in 1572, 1579, 1584, 1589, and 1596) before Strachey’s “Reportory” was sent to the Virginia Company in 1610, and then it was reprinted two additional times, in 1615 and in 1630. The information that originated from Cortés about St. Elmo’s fire also appears in Jan Huygen van Linschoten, John Huighen Van Linschoten. His Discours of Voyages into Ye Easte & West Indies Devided into Fourre Bookes. (London: John Windet for John Wolf printer to ye Honorable Cittie of London, 1598), 167.

41 Cortés notes that “This name of Erasmo, they of Naples call Ereemo: and processe of time taking away one e. by the figure of Sincope, remayned the name of Santermo. And the Spaniardes, who neuer can long keépe any strange vocable, call it Santelmo, turning r. into l.” Cortés, The Arte of Navigation Fol. 54 v.
The direct relationship between St. Elmo’s fire and St. Erasmus probably stems from Erasmus’s association with storms of salvation in his hagiography. According to the tradition recorded in Wynken de Worde’s 1527 edition of Jacobus de Voragine’s *The Golden Legende*, the Emperor Diocletian tortured the Syrian Bishop Erasmus numerous times for preaching the word of God, including placing sodden pitch and oil in his mouth and making him sit on a furnace. Erasmus was not in the least harmed by the furnace, as Voragine explains, “Then rose there so great tempest of thundering and lightning, that the furnace burned that Saint Erasmus sat on, and he no thing grieved nor hurt, but all the other cruel people that were by were burned up with the same fell weather.” As with many hagiographies, the moral component of the tale in Erasmus’s life is prominent: the “cruel people,” who tortured the Bishop, are themselves burnt in a corresponding manner by lightening, the fire that could only originate from God; the man of God is tested and found sound in faith. So in times of great need, faithful sailors call upon Erasmus, who was aided by tempests, to pacify any dangerous storm. As if in answer of their prayers, the strange and beautiful dancing light of the electrical corona appears to calm the tempest, which the pious would then attribute to the work of Erasmus and in turn metamorphose into the Saint himself.

As in this legend of St. Erasmus, Strachey’s narrative casts the cataclysmic storm as a struggle between good and evil: the “unmerciful tempest” seems to be the work of vicious spirits, and then the merciful St. Elmo’s fire appears to be a miracle of God. Strachey muses, “it might haue striken amazement, and a reuereunce in our deuotions, according to the due of a miracle.” The miraculous quality of the storm (just as in *The Tempest*) has to do with its severity that in the end causes the entire company no lasting harm and then more astonishingly deposits them on a beautiful island paradise. In Strachey’s account, the storm is not only a literal meteorological phenomenon but also it symbolizes God’s directing hand. Throughout the letter, Strachey makes reference to God’s active participation both in the storm itself and in their survival; for example, when the ship begins to leak, Strachey comments that, “It pleased God to bring a greater affliction yet vpon vs,” and Strachey exclaims that “by the mercy of God vnto vs” the company is brought to the island just as their ship was sinking. Whereas the storm for Strachey works on the level of divine metaphor, Shakespeare humanizes Strachey’s trope by creating the character Ariel to enact the tempest. In this way, Shakespeare secularizes the agency of the storm: the natural elements are no longer the work of God but of Prospero and his emissary, Ariel. What was divine power now rests in the domain of the human. Prospero is a human being with supernatural powers and supernatural beings at his disposal, but he nonetheless is

---

42 Voragine, *Here Begynneth the Legende Named in Latyn Legenda Aurea, That Is to Say in Englyshe the Golden Legende* (Westminster: Wynkyn de Worde, 1527), folio CCLxxxiii r.

43 Purchas, *Purchas His Pilgrimes*, 1737.

44 Ibid., 1736–7.
mortal. Strachey, who is clearly Protestant, attributes the storm and their survival to God but also scoffs at the Catholic “superstitious sea-men” for crediting a saint for the electrical phenomenon that appears to calm the hurricane. Shakespeare, on the other hand, completely excludes God from the realm of the storm and the island. Rather, the human Prospero possesses the power over the natural elements of the earth, replacing God’s hand with his own, and substituting a saint with a spirit who is the essence of air itself. The character Ariel becomes the sentient incarnation of the punishing tempest that appears in Strachey’s “True Reportory” and in Isaiah 29 but who nevertheless is also the supernatural salvation of the Italian party. It is also Ariel who deposits the company about the island with “Not a hair perished,/ On their sustaining garments not a blemish, But fresher than before” (1.2.17–9).

As many who study the play have noticed, Ariel’s description of his performance of the storm recalls the spectacle of St. Elmo’s fire that Strachey relates:

I boarded the King’s ship: now on the beak
Now in the waist, the deck, in every cabin
I flamed amazement. Sometime I’d divide
And burn in many places—on the topmast
The yards and bowsprit would I flame distinctly,
Then met and join. (1.2.195–200)

However, while in Strachey’s letter the fire dances about the ship magically, Strachey can only surmise the cause of the strange occurrence; in the play, the secret of the corona discharge—the strange phenomenon—is revealed to Prospero and the audience at large by Ariel’s first-person report of his theatrical performance. The storm and its fiery aftermath are no longer mysterious manifestations of God’s work but an illusion that Ariel creates under the directive of his master, Prospero. It is as if the audience is allowed in on the mystery—or, at least, we are allowed to know the agency if not exactly the techne of the storm. What in the “True Reportory” is a third person description of the fiery phenomenon becomes Ariel’s first person account of his action as he performs the storm, making the storm more immediate for the theatrical audience. Shakespeare repeats Strachey’s language of the “amazement” that the victims experience—they are “taken up with amazement,” are overtaken with “fright and amazement,” and finally are struck with “amazement” by St. Elmo’s fire—but, instead of describing the victims’ reaction to the unknown, the word becomes Ariel’s action, as he “flamed amazement.” The grammatical modification in person is indicative of what Shakespeare does with Strachey’s narrative more generally, as he provides a tangible agency to an unknowable natural event. To Strachey the phenomenon can only be attributed to God or, in the eyes of the “superstitious sea-men,” to the supernatural actions of a saint; to Shakespeare, it becomes the direct actions of the airy spirit Ariel, his own private scourge for those who wronged him.

If Ariel assails the ship with Prospero’s tempestuous vengeance, he benignly approaches the marooned Ferdinand with a prophetic dream-song, meant to inform him (falsely) of his father’s death and to comfort him in his grief and loneliness.
this capacity, Ariel and his ensemble perform the calming acts of saints or angels who guide and succor a lost soul; here, in this later scene, Ariel as a St. Elmo figure elicits the emotions analogous to those redeemed sailors grateful for the storm’s passing. As for Ferdinand, he is unsure of the provenance of the sound, whether it is “I’th’air, or th’earth,” natural or preternatural, but muses that the song might be the ethereal music of “Some god o’th’island” (1.2.388, 390). Though indeed not a god, Prospero functions with god-like power for whom Ariel performs this and all tasks to facilitate his desire for revenge and restitution. Ferdinand correctly identifies the connection between song and storm, as he proclaims that “This music crept by me upon the waters,/Allaying both their fury and my passion/With its sweet air” (2.1.392–4). He sees that the music (which like the fire in the tempest) has agency, since it both creeps and allays, yet Ferdinand does not understand the true relationship between tempest and music, does not understand the truth behind the magic. Though outward appearance suggests that the music does placate the tempest, it is in fact Ariel’s figural transformation from furious storm to invisible minstrel that creates the illusion. In the second verse of the song, the airy spirit sings of Alonzo’s drowning—not exactly as his death but rather more as his metamorphosis:

Full fathom five thy father lies
Of his bones are coral made:
Those are pearls that were his eyes.
Nothing of him that doth fade
But doth suffer a sea-change
Into something rich and strange. (1.2.397–402)

Ariel reports a transformation that moves across time, space, and form. First, Ariel compresses time as he describes the decomposition from body to sea elements: the king is sunk deep in the sea, implying the removal of flesh by its creatures, and then the remaining bones fossilize into the beautiful red coral, his eyes replaced by precious pearls. What Ariel describes in the song is born out of reality of the island, in which transformation from one element to another is not only possible but preternaturally occurs. After all, we know that Ariel had been imprisoned in a cloven pine, was in essence transformed into wood (much like Aeneas’s drowned pilot, Palinurus, or Spenser’s Fradubio); more recently, he has performed a tempest and changed himself into the fire of the corona discharge. The song assures Ferdinand that his father is not actually dead, for “Nothing of him doth fade” but rather he undergoes a “sea-change,” recalling how Ariel himself had also changed into the tempest of the sea. Alonzo is to be converted into a non-human entity of the water, “something rich and strange.”

In the play, Shakespeare marks a shift in the way that humans interact with the natural elements: no longer are nature and the weather beyond human control; now, at the beginning of the seventeenth century, Shakespeare can imagine humans controlling nature, as Prospero could “Put these waters in a roar” and then “allay them” (1.2.2). Unlike the Catholic belief in the power of the patron saint of sailors,
St. Elmo, or the Protestant belief that both the storm and the relief of the storm come from God, Prospero does not draw his authority from the divine but appears to gain his power through knowledge alone, unlocking the secrets of nature even as he unlocks Ariel from his piney prison. In Shakespeare’s earlier comedies and romances, such as *The Comedy of Errors, Twelfth Night, Pericles,* and *The Winter’s Tale,* catastrophic weather represents the forces that drive humans into chaos and separation, and even death; in the tragedies, in *Lear* and even in *Macbeth,* the storm is the outer expression of the inner human turbulence of the protagonist. But in *The Tempest*—the play named for the storm—humans can master what only God could control in the past. The play, in essence, creates a world in which transformation is organic, both ecological and meteorological, thus subverting the religious symbolism. In so doing, the ecological and biological phenomena become a microcosm for the divine. This change, I argue, coincides with a nascent paradigm shift occurring at this early part of the century, for the play sits on the brink of the development of mechanical technology. Perhaps Shakespeare in his creation of this world imagines the possibility of human interaction with and manipulation of Nature writ large without the intervention or volition of God—a possibility that envisions or anticipates a transformation from a world controlled by God to a world whose nature can be controlled by humans. Some scholars read Prospero’s powers as linked to a medieval, cabalistic, hermetic, or alchemical magic, associated with ideas that are ancient and backward looking. I see, however, Prospero’s ability in this play as a great “sea-change,” a moment when Shakespeare is instead looking forward to what will eventually become the mechanical age.

**From the Natural to the Mechanical**

If we view *The Tempest* in light of the historical transition from superstitious medieval magic to early modern technology then Prospero becomes a figure who anticipates the development of technology, science, and engineering. Perhaps most

---


**Strong, The Renaissance Garden in England, 103.**
famous magus of the period, John Dee, began not as a magician but as an engineer, employing Greek calculations for dramatic effects. While an undergraduate at Cambridge, Dee constructed a flying dung beetle for a university production of Aristophanes’s *Peace*. The students and faculty at Cambridge were both amazed and frightened, and the device, as Stephen Orgel and Roy Strong point out, “was so effective that there were dark mutterings of witchcraft.”\(^{47}\) Dee’s flying machine undeniably falls within the category of what we would call technology, yet even for Dee science and magic were not mutually exclusive; indeed, Dee himself termed technology as “natural magic.”\(^{48}\) Following Euclid, Dee conceived of his machine through mathematical calculations, and, though Dee left no exact record of its construction, he most likely employed pneumatics, mirrors, and springs, all of which he discusses in his “Praeface” to Euclid’s *Elements*, which Dee published in 1570. At its most accomplished, technology creates the illusion of magic, for technology is indeed magic for the uninitiated. As Jonathan Sawday has recently demonstrated, science and engineering during this period were beginning to impact all parts of society—from war, to construction, to agricultural invention; engineers, such as Agostino Ramelli, designed perpetual motion machines that moved water for milling, for agriculture, or for theatrical display.\(^{49}\) If we see what Prospero effects in the play through the lens of technological development, then he begins to look a very modern figure, learning how to manipulate natural elements by means of their own laws; in essence, he becomes a scientific engineer.

The environment in which Prospero practices his control of Nature, however, is limited: Prospero’s power is effective only within the island and the waters that immediately surround it. In essence, Prospero’s island along with the surrounding sea is a bound space analogous to the enclosed Renaissance estate gardens, in which the elements of earth, water, air, and even fire are controlled by artificial technology. It is in the great gardens of sixteenth and seventeenth centuries that aristocratic owners could govern Nature herself by means of horticultural practice and of mechanical invention. Understanding the secrets of horticulture meant that the aristocrat (or his gardener) could control the seasons, providing fruit past its natural time of harvest or rare floral blooms in the winter; understanding the secrets of mechanical engineering meant that aristocrats could divert an entire river to water the garden and to power hydraulic theatrical mechanisms; understanding the imported technology of fireworks meant that one could create the illusion of

war, of storms, or even fire-breathing dragons. These technological manipulations created the illusion of magic: from earthworks that created a completely new environment, to hydraulically driven, moving statuary and theatrical scenes, to spectacular fireworks displays. Reading Prospero’s tempest in the context of courtly garden festivals that included water and fire shows allows us to see how Prospero’s art, like that of aristocratic garden owners (and Paulina), served to display political and monarchal power through technologically generated control of Nature.

During the seventeenth-century productions of The Tempest, just how much of Prospero’s storm was created through mechanical means is not clear. If we can take at face-value the stage directions at the beginning of the play, “A tempestuous noise of thunder and lightning heard” (1.1.sd), then at the very least we can surmise that the company was using some kind of noise machine to create such loud sounds of wind and thunder. Storms in the theatre, according to Dessen and Thomson, would have been created by hanging squibs (fireworks) from a rope across the rear of the stage for lightening and the sound of a drum would be used for thunder.\(^{50}\) It may also be that the indoor performances of The Tempest at Whitehall or Blackfriars meant that the company had more technology available to them, perhaps reusing scenery or machines from previous court masques. Even if the actual production provided little in the way of technology to create the storm, the context and the language itself make dramatic allusions to the technological mechanisms employed both in court masques and in estate gardens—especially for the aristocratic audience who would attend the indoor productions, such as the earliest known performance in 1611: “Hallowmas nyght was presented att Whitehall before ye kinges Maiestie a play Called the Tempest.”\(^1\) What is clear is that the exact kind of control that Prospero wields on his island—storms, fireworks, appearing and disappearing banquets, and masques—was realized in Renaissance gardens by means of mechanical technology.

Knowledge of mechanically produced magic would have been available to Shakespeare through the many technological texts, such as the pseudo-Aristotelian Mechanical Problems, Euclid’s Elements, and Hero of Alexandria’s Pneumatics, all of which describe machines powered by the natural elements of air, water, and steam. Hero’s treatise includes many devices specifically meant to create the illusion of supernatural forces in temples: “Sounds produced on the opening of a Temple Door,” “Temple Doors opened by fire on an Altar,” and “Libations poured on an Altar, and a Serpent made to hiss, by the Action of Fire.” The viewer is meant to be awe-inspired by the magical effects—of the temple door opening, or the serpent hissing, or musical accompaniment—seemingly performed without


any human or animal power. Although the effects are magical, the understanding of natural, not supernatural, powers in fact fashion them.

These classical treatises concerning mechanical engineering enjoyed a renewed interest in the sixteenth century, due to their translation from Greek into Latin and eventually into vernacular languages. The University at Padua introduced the study of mechanics into the curriculum in the 1560s, and numerous treatises on hydraulics and engines began appearing during the later part of the century. The most widely known was Agostino Ramelli’s *The Diverse and Ingenious Machines* (1588), which illustrates 110 devices for lifting water. The increased attention to hydraulic machinery had a practical basis: a rise in population caused the need for land drainage, irrigation, and clean drinking water. Though initially driven by social necessity, the incipient field of hydraulics served aristocratic amusement as well—particularly through garden spectacle. The mathematics, which made such mechanical illusions possible, also underpinned the science of perspective. Salomon de Caus was the first to publish in England a full-length treatise concerning perspective: *La Perspective, avec la raison des ombres et mirors* (1611), which was dedicated to Henry, Prince of Wales. The text exemplifies the Renaissance association of art with science, as it included explanation of mechanics and hydraulics along with the study of perspective in painting, music, geometry, science, and mathematics. *La Perspective* also contained a plate illustrating a garden, a subject that would become the focus of his next publication *Les Raisons des forces mouvantes* (later known as *Rare and New Inventions of Waterworks*) first published in 1615 and dedicated to Elizabeth of Bohemia.

This treatise was highly influenced by both Hero’s and Ramelli’s works, and it also included a specific emphasis on waterworks as they apply to spectacle in the garden. The text provided plates and texts describing how to construct fanciful fountains, singing birds, automata, and hydraulically powered theatrical scenes, such as that of Galatea and Neptune. As Claudia Lazzaro points out, “In the garden were displayed the latest advances in mechanics, and thus in manipulating the raw materials of nature.” By means of technology, engineers reconstructed nature to create a new kind of magic in the garden. At the Villa D’Este in Tivoli, Cardinal D’Este instructed his engineers to divert an entire river and to build aqueducts that tunneled through the hills so that the enormous force of the water could power his many waterworks, including enormous cascades, a pipe organ, and numerous fountains and automata. In England, de Caus built an elaborate pumping system to

---

52 Information about the history of mechanical interest in Italy comes from Claudia Lazzaro, *The Italian Renaissance Garden* (New Haven and London: Yale University Press, 1990), 16.

53 De Caus was also employed by Elizabeth and her husband, Frederick, Elector Palatine in 1614 to construct elaborate gardens for their palace in Heidelberg. In 1620, De Caus published two editions, in French and German, describing the Palantine gardens.

extract water from the Thames to power the fountain system for Mount Parnassus, the centerpiece of Queen Anne’s Somerset House garden.\footnote{55}

I am not suggesting that Prospero makes horticultural machines, but rather that his magic refers to the technologically produced “magic” that existed in aristocratic gardens of the period, such as at the Villa D’Este and Somerset House. In some cases, the players may have used machinery similar to that used in court masques and gardens. And these garden motifs would have been familiar even to those audience members who had never left London: Montaigne and other travel writers reproduce the Italian gardens for the reading public, and Thomas Nashe in *The Unfortunate Traveller: or Life of Jack Wilton* (1594) envisions and recreates the gardens without having ever seen them. So too, Shakespeare reconstructs the magic of the Renaissance garden on the stage for theatergoers. Certainly, Prospero’s magic refers to figures such as John Dee, or even to street wizards, as Barbara Mowat has suggested.\footnote{56} However, Prospero is no street performer but a disenchanted aristocrat who has been banished from society and who reacts as his historical contemporaries would have done—that is, by constructing a country estate—if on an island—by means of engineering and technology into a fantastic “magical” microcosm of the larger world.

**Creating Paradise: Waterworks, Fireworks, and Mechanical Devices**

In the late sixteenth century, Giovanni Vittorio Soderini describes the technology, laid out in the works of Hero, Ramelli, and de Caus, as the art of making a tempest in a garden: “And then in the grottoes make the water come out furiously so that it drenches people suddenly, with a great spout of water which streams out from one wall, opening a cataract which covers and almost drowns one from head to foot in an instant.”\footnote{57} Along with these water jokes, or *giochi d’acqua*, fireworks were also an integral part of garden spectacles. In 1578, Pope Gregory XIII made a visit to the Villa Lante at Bagnaia, where he was presented with a display of the garden’s wonders, which featured fireworks. The pope’s secretary, Fabio Arditio, recorded that four dragons were placed in the central ponds, where they would shoot fire, and that the spectacle also involved “a thousand other effects of water.”\footnote{58} Another pope, Clement VIII, visited the garden in the 1590s and was also presented with a dramatic exhibition of water effects and pyrotechnics, including artillery and fire-breathing animals. Moreover, the entire garden at Villa Lante was designed

\footnote{55} Roy Strong provides records from the Works Accounts, showing that in May 1609 payments were made for garden walls and for “making of the new Terrass … with the railes and ballesters of stone” and “the making of a Force with divers brass workes (and a new House for it) to bring water to the garden.” Strong, *The Renaissance Garden in England*, 87.

\footnote{56} Mowat, “Prospero, Agrippa, and Hocus Pocus.”

\footnote{57} Quoted in Lazarro, *The Italian Renaissance Garden*, 67, 297 n.104.

\footnote{58} From Arditio, “*Viaggio de Gregorio XIII.*** quoted in ibid., 252.
to capture visitors in a web of aquatic pranks, as the garden contained over 400 hidden water jets. In these gardens, technology provided the owner with essentially two modes of entertaining while simultaneously controlling guests: theatrical spectacle that amused and amazed, and pranks that tricked and surprised. In both cases, the visitors’ movements had to be orchestrated for the spectacle and pranks to occur successfully. Yet, this prankish fun had another, more significant import, one that communicated the political power of the aristocratic owner, who like Prospero, controlled the very elements of the earth.

Prospero’s raising of the thunderstorm that floods the ship and its passengers evokes these hydraulic special effects and the political motivation behind the extravagant show of power. The tempest in the play is both spectacle and prank; for the audience in the theatre, the storm is spectacle, whereas for the characters, the tempest is a full-blown hurricane that turns out to be a harmless aquatic trick. At first, Miranda also believes the storm to be truly dangerous rather than a dramatic production and a trick. Seeing the strange storm, Miranda implores her father:

If by your art, my dearest father, you have
Put the wild waters in this roar, allay them.
The sky, it seems, would pour down sticking pitch,
But that the sea, mounting to th’welkin’s cheek,
Dashes the fire out. (1.2.1–5).

Since Miranda pleads for her father to cease the storm, she clearly has some idea of the capabilities of her father’s “art.” As an inhabitant of Prospero’s island, Miranda has experienced first hand how Prospero is able to manipulate the elements and the ecosystem. Prospero chooses to educate his daughter further about his art; that is, he lets her in on the secret (or at least part of it); he calls the storm and the wreck a “direful spectacle,” words that have often led critics to think of Prospero as Master of the Revels in the theatre. Yet, Prospero’s complete dominance of his environment speaks to this ideological shift from superstitious belief to scientific knowledge. What before would have been considered a disastrous storm controlled by God alone now has become a spectacle governed by human agency. Technology empowers the mere human agent to appear larger than life, to appear almost as God, commanding the elements and emulating Nature’s own spectacles. Miranda sees the storm (similar to the one that causes the shipwreck in *The Winter’s Tale*) as nature wild and uncontrolled, whereas Prospero’s tempest is one that is tempered by cultivation and by mechanical and chemical invention.

As much as Ariel’s performance reflects the St. Elmo’s fire of Strachey’s letters, his performance also mirrors the realities of fireworks shows in aristocratic garden settings. Originating in China, fireworks were increasingly becoming a part of the spectacle that entertained early modern elite in the gardens of the privileged classes: from the Italian gardens at Villa Lanta, where the fire-breathing dragons were placed in a large pond and between the dragons were boats full of men shooting water, to the English gardens at Elvetham, where the Earl of Hertford produced for Elizabeth I a pyro-extravaganza from structures he had had
built in his large pond: fire and rockets shot out from a Snail Mount, a Ship Ile, and a Fort and “[o]n either side were many fire-wheeles, pikes of pleasure, and balles of wilde fire, which burned in the water.”

Though not published until 1635, John Bate’s *The mysteries of nature and art* gives us an idea of the hydro- and pyrotechnics available in the early modern period. The second book, dedicated entirely to fireworks, pictures a man holding an exploding rocket (Figure 3.3). If we think of the magical display as technologically produced, then we can imagine Ariel exploding rockets, which might “divide and burn in many places” to create the illusion of the corona discharge. Bate devotes a whole section to “Fire-workes for the Water,” which includes: “rockets that shall burn a good while in the water and then mount up into the ayre,” fireballs, and a dolphin that swims in the water by means of an underwater rocket and shoots out fire-serpents. Bate also claims, “I might have been infinite in the describing of such like with Ships, Towres, Castles, Pyramids.”

Bate’s book illustrates the numerous technical ways to create what Ariel recounts in his description of St. Elmo’s fire on board the ship.

If we can read Prospero’s tempest in the context of courtly festivals that included fire and water shows, such as those at Villa Lante and Elvetham, then his political purpose becomes highlighted by historic examples, as these aristocratic displays served to “exalt the principles of monarchy and dynasty, [and] to demonstrate power through expenditure,” as Kevin Salatino explains. Most often the courtly festivals culminated in a spectacle of fireworks, but Prospero begins with a pyro-extravaganza for his “direful spectacle,” to establish his power and ingenuity, even his monarchy, from the moment his enemies enter his arena of control. It is true that Prospero’s guests are unaware that the storm is merely a spectacle of harmless fireworks created by Prospero’s agent, but the report of the display establishes Prospero’s monarchical position for the audience. Ariel’s replication of the kind of fireworks—displays shown at Villa Lante and Elvetham and depicted in Bate’s treatise—emphasizes the importance of spectator reaction; the line, “I flamed amazement,” implies both Ariel’s amazing fire tricks and the amazed onlooker. The fireworks are meant to be harmless, but they would also cause a certain amount of fear. In fact, fear must have been a factor for all of early modern spectators, for many accidents occurred during fireworks displays; as Salatino explains, “Disasters, in a medium as volatile as fireworks, were common, and though state-sanctioned representations give no hint of this (for obvious political motives), the private accounts of those who were present frequently do.”

Certainly, in Shakespeare’s theatre, fire represented a very real fear, given that the Globe did


62 Ibid., 3.
Fig. 3.3  John Bate, *The Mysteries of Nature and Art* 1635. This item is reproduced by permission of The Huntington Library, San Marino, California.
eventually burn from a mishap with a canon in 1613.) For Prospero, creating fear in his guests enables the initiation of his control over them.

Once the stranded court party arrives on the shore, they wander through the island as if it were a kind of maze, similar to the labyrinths that graced many aristocratic gardens; in essence, Alonzo and his followers experience the mysteries of the island as if they were the guests to a large estate garden. For example, the Swiss traveler to England, Thomas Platter, describes a labyrinth which he experienced while visiting Hampton Court in 1599: “And just as there is a park on the one hand, so opposite this in the middle of the other side there is a maze similarly decorated with plants and flowering trees, and two marble fountains, so that time shall not drag in such a place; for should one miss one’s way, not only are taste, vision and smell delighted, but the gladsome birdsongs and plashing fountains please the ear, indeed it is like an earthly paradise.” In the Renaissance garden, labyrinths were designed to divert the wanderers as they made their way through the twists and turns to the center and to amuse the garden owner, who of course knew the simple solution. Unlike the historical garden guests who are aware of their own status as guests and of the garden owner, however, these Italian visitors are ignorant of their situation on the garden island and of the “host” Prospero, though indeed they seem to have an inkling of the labyrinthine nature of their environment. Gonzalo remarks, “By’r lakin, I can go no further, sir./My old bones ache. Here’s a maze trod indeed/Through forth-rights and meanders!” (3.3.1–3). Usually, we think of his description as metaphorical, but the line does describe the party’s physical situation, illustrated by Alonso who comments that: “This is as strange a maze as e’er men trod” (5.1.242). In creating the island reminiscent of the aristocratic gardens, Shakespeare enables Prospero to orchestrate the Italians’ movements, so that they experience the landscape as a magical entity that in the end reveals his didactic purpose.

The theological use of a labyrinth is contemplative, as many medieval churches contained a labyrinth intended as physical meditation that would lead to God; the garden maze is more playful and designed for jest and amusement rather than divine reverie. Prospero’s labyrinth is meant to engender contemplation of a moral and political nature more than a religious, yet it also works from the capricious principle that more often rules the garden maze. As the visitors’ bodies are led, almost propelled, through the labyrinth, the Italian party encounters many garden tricks that play on their senses: strange noises, music, and spectacles, conceived by Prospero but carried out by Ariel and his “fellow ministers” (3.3.65). All of the visitors hear music and sounds, coming out what seems to be thin air: as they walk through the labyrinth, Alonzo and Gonzalo remark on the “Solemn and Strange music” that they hear: Alonzo asks, “What harmony is this? My good friends, hark!” to which Gonzalo responds, “Marvellous sweet music” (3.3. sd, 18–9). This strange marvelous music refers back to the earlier scene in which

---

Ariel plays and sings to Ferdinand on the shores of the isle. These ephemeral noises in the play also parallel those in Renaissance gardens: such as on the Mount Parnassus at Pratolino, where music sounded through the rocks and hidden piping boxes, whistling the tunes of song birds, and in Thomas Nashe’s *The Unfortunate Traveller* (1594), in which Jack Wilton describes a garden that contained a theatre where one could hear the music of the spheres and a tree of mechanical singing birds: “Who, though [they] were bodies without souls, and sweet resembled substances without sense, yet by the mathematical experiments of long silver pipes secretly inrinded in the entrails of the boughs whereon they sat … they whistled and freely carolled their natural field note.”

Nashe’s classification of the melodious birds as “bodies without souls” in this Italian garden might very well characterize *The Tempest*’s music maker, Ariel, a non-human creature resembling various “substances” throughout the play. Like the stationary birds, Ariel was (prior to Prospero’s arrival on the island) confined within the trunk of a tree; this image is reminiscent of Nashe’s “mathematical experiments,” essentially the machines that garden designers such as de Caus constructed: for example, his mechanism that is “To counterfeit the Voice of small birds by means of Water and Air.” Musical machines were central to the fantasy of magic in the garden; and, in the theatre, music was fundamental in creating the atmosphere of magic, for music was one element of what we now call “special effects” that were readily available for their staging of the play.

When Ariel in the guise of “a nymph of the sea” made the noises, played the pipes, and sang to Ferdinand, his visage and actions recall the popular garden automata, Galatea, the figure whom both de Caus and Buontalenti presented as a hydraulically powered musical scene in the estate gardens. For the audience, the actors in both *The Tempest* and *The Winter’s Tale* reenact such automata of the garden. Though the audience knows that an actor, performing the role of Ariel, is playing the musical tricks on Ferdinand and the other courtiers, the spectators are meant to believe in the illusion of magic, and this illusion of magic is the same that engineered effects produce in the aristocratic garden. Such a sentiment is reiterated in *The Unfortunate Traveller*: Nashe’s narrator explains the mechanics of garden devices, yet Wilton nevertheless concludes that, “[E]very man there present renounced conjectures of art and said it was done by enchantment.”

Nashe’s usage of the word “art” implies its equivalence to what we would now term technology. In fact, Nashe initially refers to the garden ornaments as

---


65 Stephen Orgel points out that “The disguise is, of course logically pointless if Ariel is invisible to everyone except Prospero. But he is visible to the audience, and the costume is the appropriate one to adopt in singing to Ferdinand on the shore.” William Shakespeare, *The Tempest*, ed. Stephen Orgel (Oxford: Oxford University Press, 1987), 117, n. 301. (*The Tempest* 117, note 301).

“mathematical experiments,” a language associated with science; this science, however, easily slips into the realm of enchantment or magic for the uninitiated—the men who renounce “conjectures of art.”

Nowhere in *The Tempest* do we see the “conjectures of art” taken for enchantment more distinctly than in the banquet sequence, which appears within the island labyrinth. Banquet tables often graced the interiors of labyrinths, as illustrated in a painting that now resides in Hampton Court Palace, *Labyrinth of Love*, painted by the workshop of Tintoretto sometime in the late sixteenth century. In the painting, the labyrinth also contains many statues, ones that very well could be hydraulically powered, and at its center a banqueting table, one that might have had curious surprises produced by mechanical means. In the play, Gonzalo’s line, “Here’s a maze trod indeed/Through forth-rights and meanders!” opens the scene in which Prospero has set up the disappearing banquet table (3.3.2–3), mentioned above. As the sounds of music lead Ferdinand on his path to Miranda and Prospero, these harmonic strains also guide the royal court party through their “meanders” to where, as the stage directions inform us, “several strange shapes [are] bringing in a banquet, and dance about it with gentle actions of salutations; and inviting the King, etc., to eat, they depart.” After seeing the strange shapes and the enticing feast, Sebastian (like Wilton’s companions who prefer to see the garden device as “done by enchantment”) perceives the banquet in the same category as unicorns and the Arabian phoenix (3.3.22–3). He understands the sight as magic, though indeed it was mechanically produced. In *The Tempest*, of all the spectacles that refer to mechanical tricks, the banquet table is the one that appears not simply as an allusion to both garden and stage machinery but is an actual automated device. If we can suppose that the stage directions—“with a quaint device the banquet vanishes”—represent what actually occurred on the stage, as John Jowett has argued, then the “quaint device” of the disappearing banquet is in fact mechanical. Jowett proposes that the stage directions in *The Tempest* are later additions to the text, not written by Shakespeare or by the book-keeper, but by the scrivener to the King’s Men, Ralph Crane. The stage directions then, according to Jowett, are not so much directions for the actors but descriptions of what occurred on stage.67 If we take the “quaint device” to be a description of an actual machine, then we begin to see the entrance of mechanical technology onto the stage, even as it masquerades as the supernatural.

When *The Tempest* was performed at court in 1611 for “Hallowmas nyght” and in 1613 for the princess Elizabeth’s wedding, the device could not help but recall for this royal audience machinery used in the gardens at Somerset and in the Italian gardens, as well as those used in the masques, just as the final scene in *The Winter’s Tale* would have done. Such a reference places Prospero in the light of both English and Italian aristocrats who use technology to entertain and play tricks on their dining guests. For the playhouse audience, travel narratives describing

---

the Italian garden devices would have been available to the general public. The characters themselves invite the audience to see the strange display through the lens of a traveler’s tale. Sebastian declares: “Travellers ne’er did lie,/though fools at home condemn’em” (3.3.26–7), and Gonzalo compares the banquet spectacle to dawdlapped mountaineers and “men/whose heads stood in their breasts” (3.3.44–5, 46), an exotic image that Othello conjures for Desdemona but one that likely comes to Shakespeare by way of Sir John Mandeville’s famous travel narrative. What Sebastian and Gonzalo describe would be classified as miraculous, just as the Italian garden devices received similar descriptions by travelers like Michel Montaigne who says of one of the grottos at Pratolino “Il y a de miraculeus une grotte à plusieurs.” What seems a miraculous feat in The Tempest—the trick of food appearing suddenly in a garden, while accompanied by a “drollery” or “dumb discourse”—regularly occurred at Italian estate gardens.

At the Medici estate Pratolino, the fantastic Dining Grotto (also known as the Grotto of the Samaritan), a complete dinner would be served and then cleared away without the aid of any visible servants (Figure 3.4). When Francesco de’ Medici and his party entered the grotto, an automated servant would pour water from a pitcher to a basin, so that the guests could wash their hands. Over a fountain was built a jasper table, which contained eight small round disc-covered openings at each setting. When the discs were removed, the visitors had access to the cool fountain water, where they could wash their fingers, cups, or pieces of fruit. At the center of the table a bottle of wine would be cooling over a jet streaming from the fountain. The food arrived at the table as if by magic, though in actuality a mechanized wheel moved from the adjoining kitchen into the grotto. When the guests were finished with the dishes, the meal would disappear out of the grotto by the same means. During the feast, entertainment was also provided by a hydraulically powered female statue, the good Samaritan, which appeared from a loggia, dipping a bucket into a well, and then retreating back; all the while mechanical birds sang and bagpipes played. Similarly, in Naples, Duke Alfonso II would invite guests to dine in his garden at Poggioleale, then suddenly mid-meal the water jets would be turned on and the courtyard flooded; the guests would find themselves in two or three feet of water, effectively not allowing them to finish their dinner. These two examples illustrate the historical backdrop against which Shakespeare’s play was presented. At Pratolino, technological magic provided the appearance of food and the entertainment, much like Prospero’s strange shapes that serve and then remove the food; but the banquet Francesco served was not illusory, for he and his party would eat the food that appeared. However, Duke Alfonso acts with the same kind of aristocratic caprice that we see in Prospero, offering food and then obliterating the offer; in essence, Prospero demonstrates his supreme power to give and to take away—essentially the power of a godhead.

---

68 Montaigne, *Oeuvres Complètes*, 1193.
70 Story found in Lazarro, *The Italian Renaissance Garden*, 65.
Fig. 3.4 Giovanni Guerra, Dining Grotto, Pratolino, 1604 Graphische Sammlung Albertina, 37.214, Vienna; www.albertina.at.
When the banquet table laden with delicious food suddenly disappears, thunder and lightening simultaneously sound, recalling the opening tempest with all its various associations from celestial punishment to technologically produced magic. Now masquerading as a Harpy to the Italian party, Ariel plays the role of divine scourge admonishing these men for their sinful trespasses; more than a reprimand, however, Ariel’s words are intended to disclose the moral purpose of their experiences on the isle and its surrounding waters. Proclaiming that the “three men of sin” are “most unfit to live,” Ariel incites Alonzo, Sebastian, and Antonio to draw their swords; however, Ariel then informs the guilty men of the futility of their actions: their swords “may as well/Wound the loud winds, or with bemocked-at stabs/Kill the still-closing waters, as diminish/One dowl that’s in my plume” (3.3.53, 58, 62–5). Though the Italians are clearly unaware of Ariel’s performance of the storm, his reference to the “loud winds” and “still-closing waters” reminds the audience of Ariel’s protean shape-shifting that enables Prospero’s “magic,” which brings the visitors to the island and then provides the means of Prospero’s punishment. In this visage of the scourging harpy, Ariel deciphers the mysteries and vagaries of the island as punishment for the political crimes of the Italians. Ariel causes the men to “remember/(For that’s my business to you) that you three/From Milan did supplant good Prospero” (3.3.68–70). At the end of Ariel’s commanding performance, Prospero credits him with securing the Italians in his power. Ultimately it is Ariel’s liminal position between organic and inorganic matter that creates the circumstances of Prospero’s redemption. Without Ariel’s illusory performances that oscillate between the human and the supernatural, the sentient being and the unconscious storm, the air and the water, and perhaps even between slave and master, Prospero’s magic could not function on a practical level, nor would the visitors understand the didactic lesson encrypted within the performances of these supposed supernatural events.

Encoding moral meaning in the final spectacle, Prospero produces a wedding masque for Miranda and Ferdinand that reflects his own political agenda, while creating a magical extravaganza. In the masque, theatrical display consolidates the political connections between Naples and Milan through the official state marriage of Prospero’s daughter to the king of Naples’ son. Through this marriage Prospero can reassert himself as Duke of Milan, not so much as a present ruler (for Prospero tells us that when he returns to Milan that his “Every third thought shall be my grave”), but as the progenitor and purveyor of the future rulers: his daughter and Ferdinand (5.1.311). Perhaps nowhere else in the play does Prospero demonstrate his place as monarch more clearly than by producing the masque, for the masque is the theatrical form by which rulers assert their authority through allegorical emblems symbolizing their virtues and by the sheer expenditure representing their economic power.71

Especially given the Italian context of the play, *The Tempest* recalls spectacles such as the fêtes for the marriage of Ferdinando de’ Medici to Cristina of Lorraine in 1589 that lasted three weeks and comprised seven intermezzi (concluding with *Balet Comique de la Reyne*, an intermezzo incorporating humanist ideas of music and spectacle); several plays, including a new one entitled *Zingara*; a river fête on the Arno; and, most spectacularly, the Boboli garden performance with a naumachia between Christian galley ships, representing Florentine interest, defeating the fortress of the Turks, the enemy who was causing increasing problems for the Medici (see Figure 3.5).

Prospero’s masque also recalls another Medici intermezzo given at the wedding celebration for Ferdinando’s niece, Marie de’ Medici to Henry IV of France. In this masque, Juno appeared during a wedding banquet in which each course was presented as an allegory. In the midst of the meal, two clouds floated across the Salon in the air above the diners. One cloud, led by peacocks, carried Juno, and the other, drawn by a unicorn, belonged to Minerva. Juno complained to her sister that she should not appear at the peaceful nuptial celebration. Minerva replied with a gesture toward a rainbow, indicating she only intended to bring peace and love to the couple. The masque ends with an encomium to Henry and his military prowess and then a prophecy of the expansion of his empire into the Orient. 72

Prospero’s masque is not nearly as elaborate as the Medici examples; however, the stage directions reveal that Prospero’s art is akin to that of the Medici designers; that is, art based on mechanical technology. Just as Juno and Minerva descended in cloud chariots floating from the ceiling, “Juno descends,” in Prospero’s masque, according to the Folio stage directions. What exactly these directions indicate has been a topic of discussion amongst editors and critics, especially as the direction occurs during the lines “Bids thee leave these, and with her sovereign grace,/Here on this grass-plot, in this very place” (4.1.72–3) before Iris announces “Great Juno comes; I know her by her gait” (4.1.102). 73 John Jowett writes:

> [I]t is very unlikely that the stage at the Banqueting house would have facilities for free flights…. Ariel and Juno would be discovered on an upper stage, from where they could be lowered by a ‘cloud’ type of machine or descend by the way of steps. In the context of a stage play, the latter is more probable. But it does seem that the suspended free flight of the Blackfriars or Globe would be an equally or more effective stage for the descents in *The Tempest*. 74

If Jowett is correct that some kind of flying machinery was used, at least at Blackfriars and Whitehall and perhaps at the Globe, then the audience experienced

---

72 Description of the Juno masque is from Strong, *Splendour at Court: Renaissance Spectacle and the Theatre of Power*, 198.


74 Jowett, “New Created Creatures: Ralph Crane and the Stage Directions in *The Tempest*,” 115.
Fig. 3.5 Giacomo Lauro, Naumachia of Nero, *Antiquae urbis splendor*, Rome 1612–1628, Courtesy of ©Dumbarton Oaks Research Library and Collection, Rare Book Collection, Washington, D.C.
Prospero’s art as the technology employed at court performances. The audience within the play (Ferdinand) sees Prospero’s art only as magic, identifying the flying actors as “spirits.” Ferdinand’s reactions mirror Dee’s Cambridge audience who muttered about witchcraft when they saw the amazing flying dung beetle in the college production. Even if Juno, played by Ariel, entered down a staircase rather than in a flying machine, her descent still refers to the mechanical devices that audiences would have seen in the garden or at court, for The Tempest’s masque is not a court masque but a “dramatic allusion to one,” as Stephen Orgel reminds us. “Prospero’s masque for his daughter’s betrothal constitutes the prime example we are shown of his art.”

Prospero’s masque also allows for an idealized vision of the island in miniature—in essence, the world of the masque representing microcosmically the entirety of the water-enclosed landscape—much as gardens in the period are often the microcosmic allusion to the larger political and physical geography of the nation-state, as we have seen in Richard II, for example. The characters in the masque make direct reference to the island as a cultivated garden spot: Iris beckons Juno to “this grass-plot” (4.1.74) and later calls the naiads to “this green land” (4.1.130), and Ceres asks “why hath thy queen/Summoned me hither to this short-grassed green?” (4.1.83). The many images of cultivation and fecundity—full barns, clustered vines, heavily burdened plants—reflect Prospero’s “majestic vision” of his estate and of Ferdinand and Miranda’s future fruitfulness. Ceres’s blessing, “Spring come to you at the farthest,/In the very end of harvest” (4.1.114–5), invokes the paradisiacal fantasy of perpetual and simultaneous spring and harvest, such as those found in Spenser’s Garden of Adonis and Tasso’s Garden of Armida, both versions of the Garden of Eden. Prospero’s vision of the island, his art, and his daughter is so convincing that Ferdinand reacts by wishing “to live here ever” in what he calls “paradise” (4.1.122,124).

Earlier in the play, Gonzalo’s dream of a “plantation” on the island follows an aesthetic similar to what Prospero will present to Ferdinand in the masque, that of a pre-lapsarian garden in which bounty is supplied without labor:

I’th’commonwealth I would by contraries
Execute all things, for no kind of traffic
Would I admit; no name of magistrate;
Letters should not be known; riches, poverty,
And use of service, no none; contract, succession,
Bourn, Bound of land, tilth, vineyard, none;
No use of metal, corn, or wine, or oil;
No occupation, all men, idle, all,
And women too, but innocent and pure;
No sovereignty—(2.1.145–54)

Gonzalo’s vision reproduces almost verbatim Florio’s 1603 translation of Montaigne’s essay, “Of Cannibals”: “It is a nation, would I answer Plato, that hath no kind of Trafficke, no knowledge of Letters … no use of service, of riches, or of poverties; no contracts, no sucessions, no occupation but idle … no manuring of lands, no use of wine, corne, or mettle.” 76 Most striking in both Montaigne’s and Gonzalo’s descriptions is the elimination of any occupation, physical or mental. The inhabitants busy themselves neither with education and learning, nor with tilling and harvesting. The idea of the land as a new Garden of Eden, providing all necessities through its own natural abundance, becomes a popular Renaissance motif, though the origin of this nostalgic view is classical. Montaigne himself mentions Plato, but Montaigne and Gonzalo seem to follow the idealized worldview expressed by Virgil in his fourth eclogue: “every land will bear all fruits. Earth will not suffer the harrow, nor the vine the pruning hook; the sturdy ploughman, too, will now loose his oxen from the yoke” (Latin 39–41). 77 Other classical texts important to the Renaissance, in particular Ovid’s Metamorphoses, describe the Golden Age, but Virgil is specifically important to Gonzalo precisely because he envisions the re-creation of the Golden Age (in which all labor ceases) in a contemporary time. The culture as a whole is in the process of imagining Edenic space from the perspective of the post-lapsarian world—exactly what Shakespeare does in The Tempest. 76

Gonzalo’s vision of utopia is labor free and, in Prospero’ masque, Ceres eliminates any sign of labor in her description of the abundant earth: “Earth’s increase, foison plenty/Barns and garneres never empty/Vines with clust’ring bunches growing/Plants with goodly burden bowing” (4.1.110–14). Yet labor is necessary to the island and Prospero’s control over those who step foot on it. Prospero commandeers any available male, first Caliban and then Ferdinand, to work on his island. Stephen Orgel points out, “There is a great deal of physical labour to be done on the island, and except for the brief hour of Ferdinand’s servitude, only Caliban can be made to do it. What Prospero’s magic chiefly enables him to do is control his servants.” 78 Some of the labor that Prospero controls is also done by the invisible hands of the various spirits. They act as the strange shapes that bring in the magical banquet, appearing and disappearing, reminiscent of the automated bodies in Francesco’s dining grotto. In the masque, they work as the actors, playing the characters who present an idyllic, idle golden world; the reapers are the most obvious symbols of hard labor, yet their only work is to dance with nymphs rather than toil in the fields. These invisible hands “work all exercise” on Caliban, functioning on the level of insects in the garden; they

78 Orgel, Introduction to The Tempest, 25.
are busy bees who keep Caliban, Stephano, and Trinculo in line with pinches and frightening “urchin shows” or fireflies that lead Caliban astray “like a firebrand in the dark/Out of my way” (2.2.5–6). They become apes, hedgehogs, and even adders, hounds and dogs; yet they create the “Sounds, and sweet aires, that give delight and hurt not./Sometimes a thousand twangling instruments/Will hum about mine ears” (3.2.34–6). The idleness that Gonzalo imagines on the “desert” island is hardly the case. Just as any functioning estate garden required armies of laborers to cultivate the landscape, essentially to create and maintain the magic of the garden itself, so too Prospero needs the invisible hands of his laborers to produce the technologically generated atmosphere of magic, thereby enabling his control over both inhabitants and visitors. Such a use of labor indicates the kind of position to which Prospero was accustomed as duke, but in reality he commands a labor force that is not sustainable in the world outside his garden island.

Though not as outwardly rebellious as Caliban, Ariel, perhaps more than any other character, expresses his desire to be free of his servitude—most of which is invisible to others’ eyes. From the beginning of the play, we know that what Ariel wants most is his “liberty” from his subjugation (1.2.245). Performing all that Prospero’s magic requires—storm, singing sea-nymph, harpy, spy, goddess, and the island’s psychopomp, directing both spirits and lost souls alike—Ariel’s form reflects the reality of the performance situation, in which the actor playing Ariel must also create the illusion of changeability of human form into the non-human—both the supernatural and the forces of nature. The labor of the character is reproduced in the body of what was likely a boy in the company; this actor, like the character, must perform the transformation of himself into a sometimes visible, sometimes invisible spirit, who puts on a myriad of roles. His actions must in each case be in concert with the technological realities of the production of the storm, the disappearing dinner table, and the masque. The masquerading of human to supernatural being to inorganic phenomenon requires both the creative transformations embodied by the actor and the enchantment produced by the stage’s garden machines, whether those machines are evoked or materialize on stage. Similarly, the boy actor who had played Hermione in The Winter’s Tale also had to reenact the queen who in turn appears as a moving statue, itself imitating the queen—or in another light, the young male acts as a female, acting as a machine, acting like a woman. Imaging the machinery of the Renaissance garden augments the mimetic possibilities of the human form in the plays and in the world at large. In both of these plays, the garden or garden-esque allows for a kind of technical and cultural experimentalism that was regularly occurring in the estate gardens. Both The Winter’s Tale and The Tempest, with all of their associations with mechanical technology, anticipate the seventeenth-century desire to unlock all the secrets of Nature through technological advancement. Both plays imagine precisely the world that the natural philosophers will seek to discover—a world in which mechanical knowledge will enable control over the natural elements and transplanting of its flora for the express purpose of recreating paradise on the island called England.

This page has been left blank intentionally