

Bertram, Benjamin**"Richard's Furnace-Burning Heart"**

Focusing on water and fire in Shakespeare's Henry VI plays, this essay presents an alternative to human-centered readings of the psychogenesis of Richard of Gloucester's murderous behavior. I propose that Richard's metaphor of his body as a furnace shows that the elements supersede the maternal—and more broadly the human—in importance for the early development of his character. I argue that breaking down distinctions between inside and outside, subject and object allows us to challenge some of the narratives—especially psychoanalytic ones—that contrast the "old" Richard with the "new" one that emerges late in *3Henry VI*, supposedly extending into the more sophisticated final play of the first tetralogy. The essay is an attempt to understand emotion in the plays—especially the willingness or refusal to cry—through the lens of ecocriticism, cognitive theory, and affect theory.

Brown, Andrew**"Sweet Waters: Memory, Loss, and Infrastructural Thinking in Early Modern Texts"**

The antiquarian John Stow begins his *Survey of London* (1598) by celebrating not only the city's supposed Trojan heritage but also "the Auncient and Present Riuers, Brooks, Boorns, Pooles, wels, and Conduites of fresh water, seruing the Citie." [i] On one hand, Stow praises prominent citizens and mayors of his own lifetime for providing "sweete waters" for Londoners by constructing conduits throughout the city. On the other, he laments that once clear and accessible watercourses have recently become "all decayed and so filled vp... that their places are now hardly discerned." [ii] This decay, for Stow, infects not only the physical body of London but also its memory. What is lost is not merely the sweet water that sustains the city's residents, but its palimpsestic history. This paper will examine how this early modern relationship between water, memory, and the destruction or ruin of both was transformed in the context of North American settler colonialism. In particular, it will explore how Stow's attention to water as a living system within the city—what we might anachronistically call a form of *infrastructure*—took on new forms in texts like Marc Lescarbot's *Nova Francia*, the 1609 English translation of which was issued in the interest of "What good the English Nation may reapre of this worke, by the onely description that is found therein of [Indigenous] Nations, Ilands, Harbours, Bayes, Coasts, Rivers, Rocks, Shoulds, Sands, Bankes, and other dangers, which the Saylers into those parts may now more easily finde." [iii]

[i] John Stow, *Survey of London* (London: John Wolfe, 1598), 10.

[ii] Stow, 14-15.

[iii] Marc Lescarbot, *Nova Francia*, trans. Pierre Eronnelle (London: George Bishop, 1609), ¶¶2v.

Clark, Douglas

"Water is Best? Cognitive Flux in Shakespeare"

Pindar opens his first Olympian ode for Hieron of Syracuse with the enigmatic line, 'water is best' (*ἀριστὸν μὲν ὕδωρ*).[1] Water is presented in this ode as the *sine qua non* of human experience, 'out of which arise the glories of wealth, achievement, and song which make life worthwhile'.[2] Although *μὲν* has been 'notoriously awkward to translate, the point is clear that water is not unqualified best, but is best from a certain standpoint (*μὲν*)'.[3] My paper uses the beginning of Pindar's famous priamel to pose the following questions: was water the 'unqualified best' material or medium to conceive of human thought in the early modern world? Does water take a prime place in the theorisation of cognition in early modern writing? What contribution did Shakespeare make to a long history of 'watery thinking'? I focus on episodes of mental disturbance and mind travel that are linked to bodies of water in Shakespeare's canon to tackle these questions.

Take, for example, Pisanio's account of Posthumus Leonatus's actions, as Leonatus sets sail for Rome: 'he did keep / the deck ... still waving, as the fits and stirs of's mind / Could best express how slow his soul sail'd on, / How swift his ship'.[4] Pisanio attempts to define Leonatus's potential thought processes by translating Leonatus's physical gestures into a description of mental discomfort and cognitive flux. This flux, the 'fits and stirs' of Leonatus's mind, then act as a vehicle to exemplify the reluctance of his 'soul' to depart from Innogen (in contrast to the 'swift' passage of his ship). Pisanio relays for us, and Innogen, an interpretation of Posthumus's mental voyage that is juxtaposed to his real, transnational journey. My paper examines the relationship that is constructed between mental agitation, bodies of water, and liquid cogitation in the period, beyond the eroticized impetuses that may inform the depiction of such 'fitful' brains.[5] In short, the state of stirred minds, mental travel, and cognitive flux are central to my attempt to understand prevalence and importance of 'watery thinking' in Shakespeare's work and early modern writing.

[1] Pindar, *The Complete Works*, trans. Anthony Verity (Oxford: Oxford University Press, 2008), p.3.

[2] William H. Race, 'Pindar's "Best is water": Best of What?', *GRBS* 22 (1981), p.124.

[3] Race, p.121.

[4] William Shakespeare, *Cymbeline*, edited by Martin Butler (Cambridge: Cambridge University Press, 2005), 1.3.12-14.

[5] Maurice Hunt, 'The "Fittings" of Cymbeline', *South Central Review* 16, no. 1 (1999), p.82.

Duckert, Lowell

“Flake”

When dayes are long, this Figure may
Help you passe the time away:
And it wil breed you much delight,
To passe away the Winters night.

D.N., *The Figure of Six* (1652)

When William Jackson Humphreys introduced the American photographer Wilson A. Bentley’s collection of *Snow Crystals* (1931) to the general public, he pinpointed the impressions snowflakes make upon the mind: “[the volume] not only quickens that response to the dainty and the exquisite that makes us human, but equally arouses our desire to understand, our curiosity to know, the how and the why of this purest gem of surpassing beauty and of a myriad myriad forms.” Even as their hexagonal pattern and six-fingered shape have become better understood over time – snowflakes are a type of crystal; as water freezes, its molecules bond with the surrounding elements of hydrogen and oxygen, lining up into an orderly lattice – the reason *why* snowflakes sprout six limbs in mirror likeness to one another remains beautifully elusive. As science writer Philip Ball (2000) puts it, “the secret of the snowflake endures.” This paper visits three (not six) early modern texts enchanted by ice crystals’ sextic “secret”: Johannes Kepler’s *The Six-Cornered Snowflake* (1611), Olaus Magnus’s woodcuts from *Historia de Gentibus Septentrionalibus* (1555), and Friedrich Martens’s narrative (1671/94) of his voyage to Spitsbergen. Their firsthand sketches and natural-philosophical hypotheses exhibit a radical curiosity about snowflakes’ radiating animacy; in doing so, they extend, rather than resolve, the mystery of water’s “myriad” formations. These authors, I suggest, offer a kind of cognition I (awkwardly) call “flake thinking”: a thought process that eschews complete understanding in favor of prolific “flaws” (the presumed etymological origin of “flake”). A snowflake’s epistemological brilliance is its ability to congeal (converge) ideas while simultaneously branching (diverging) into others. The “dainty” ultimately proffers mighty lessons in un/knowing: an investigation into “how and why” our knowledge of human-nonhuman networking arises – configured in the late-seventeenth century, for instance, as a delicate “cobweb” susceptible to change – and a realization of just how brittle any assurance of what “makes us human” truly is.

Habinek, Lianne

“Ophelia with spectator”

Why does Ophelia drown? Why should a watery grave consume her? What does water signify for this tragic character, in particular, especially since she is often read as being associated with

flora and fauna rather than with the aquatic? And who witnessed her death? Perhaps the most curious sort of Lucretian pleasure is that which the spectator, safe on shore, derives from watching the shipwreck — a moment Lucretius details at the start of Book II of *De rerum natura* as a means of highlighting the benefits of Epicurean philosophy. This potent metaphor, probed in detail by Hans Blumenburg, raises questions about the nature of the relationship between the philosopher and the public, and about the ultimate duty of the learned to the unlearned. Why specifically this metaphor takes on watery connotations shall be the key through line of this paper.

As a point of contact with this moment of Lucretian pleasure, this paper considers Gertrude's account of Ophelia's death. In both cases, a spectator on firm dry land observes as another less fortunate soul experiences watery destruction. Naturally, any sort of explicit pleasure is absent from the scene in *Hamlet* — but by considering it alongside the moment in Lucretius, and by probing the nature of the metaphor itself, we may derive a similar sort of existential relief, or at least we may posit something of that sort for the unnamed observer of Ophelia's death.

Holmes, Chris

"Prospero's B(ark)"

This seminar paper examines tropes of the ark: as lifeboat, as archive, and as coffin. The ark as lifeboat is the ready symbol for resilience in the face of climate catastrophe, and especially for rising seas. But arks are other kinds of preservation devices, functioning as archives of texts and artifacts. Sometimes arks are both: seed vaults, dna storage facilities, zoos and biological preserves, wonder-cabinets, and the Internet Archive. However vast an ark or archive, not everything is preserved. Who decides what's wanted on the voyage? How is an archive both the product of, and the producer of, a cognitive ecology? Finally, what's the function of simulation, of fiction and thought experiments in modelling experience? This paper launches with Prospero's b(ark) as the great Shakespearean example of a refugee family and a library on the sea, and concludes with some alternative examples from *The Winter's Tale* and *Pericles*.

Jones, Gwilym

"As you to water would": Jonah's prophetic cognition"

My title comes from *A Looking-Glass for London and England* by Robert Greene and Thomas Lodge. As Jonah is, according to the stage direction '*cast out of the Whale's belly upon the Stage*', he delivers a speech that conceives his experience through three bodies: his own, the Whale's, and God's. In this paper, I will situate Jonah's language in the wider context of the play and its performance in Elizabethan London, especially as it relates to Jonah's experience of water. To do so, I will draw on the models of cognition offered by recent neuroscience. I will then try to integrate these with work on the posthuman.

Jonah seems to intuit a kind of embodied cognition in his soliloquy, it is arguable that, in coming to his realisation of divine intervention he also offers ideas that parallel those of extended cognition and situated cognition. I will try to show, then, that Jonah's prophetic knowledge requires a shift in perspective away from his own mind and into his body, the Whale's body, and the heavenly cosmos. This, I will argue, has implications for the performance context of the play, and its specular form.

Kerwin, Bill

"River Memory."

It has been well-established that Michael Drayton had a sharp ecological sensibility. Todd Borlik calls him "England's first environmentalist," Andrew Mcrae calls *Poly-Olbion* "one of the most passionate expressions of environmental concern in the period," and Sukanya Dasgupta says of the poem that "the ecopolitical resonances of the poetics permeate the entire text." But so far, most green readings of this poem have been connected with his concern for England's forests, and historical events surrounding deforestation. In short, our Green Drayton has been a Woody Drayton. But what of Watery Drayton? And beyond this single author, how did early modern ideas about rivers participate in an environmental mindset? And how did Renaissance ideas about rivers—specifically, the deployment of classical stories and tropes, including ones about metamorphoses, nymphs, and *genii loci*—also shape ways of viewing the earth? How did the complaint tradition depend on rivers as part of its registering of memory? I read *Poly-Olbion* as being as much part of the complaint poetry tradition as the pastoral, and this paper I'm going to consider how his complaint work depends upon his investment in rivers, which make up a crucial element in his creation of a network of memories. The land and the rivers have cognition, and that cognition is distributed across the England and Wales, serving the Muse and the poet—and, by implication, general readers, including us—as we all think about where our memories come from, and where our memories are kept.

Perrello, Tony

"Monsters of the Deep: Horrifying Watery Dreams in Shakespeare"

Methought I saw a thousand fearful wrecks,
Ten thousand men that fishes gnawed upon,
Wedges of gold, great anchors, heaps of pearl,
Inestimable stones, unvalued jewels,
All scattered in the bottom of the sea.

(*Richard III* 1.4.24-28)

With his brother, the visually arresting and theatrically compelling Richard of Gloucester, offstage, Clarence commands the audience's attention with an account of his grisly, prophetic dream of drowning; at scene's end, attention will train, with horror, on a Malmsey butt, the

common item that now contains an ocean into which Clarence is steeped and drowned. Just as the audience's attention is distributed across the stage and the constituent elements of the theater—Clarence's voice and gestures, the language of the script, the actions of the murderers, the cask of wine—so is Clarence's cognitive process, realized in his dream, artifact-mediated. Objects—anchors, ships, jewels, rotting corpses, the mythical undersea environment itself—and the cultural legacies attached to them are all part of a cognitive ecology. Clarence's dream does not *belong* to Clarence; the dream spreads across Elizabethan culture, the objects of that culture, and Clarence's mind and body. The sense of horror arising from this cognitive act and received by the audience relies on several affordances: the affinity between blood and sea water; the dangerously deceptive appearance of the sea and its wild beauty; the loss of self that the thought of drowning triggers; the dread that comes upon us when we know we must confront something so weighty, so consequential, so intractable, that it takes our breath away to even contemplate what may come (climate change and the possibility of global ecological collapse?). Like the pressure of the sea upon a drowning person, it cannot be begged, bargained with, or promised into mercy. The dream speech of Clarence seems to intimate such an inevitability in the drowning and beyond. Even after he seems to have arrived in the afterlife, he is still tormented by a new sort of drowning. In sights of blood and renewed floods, he is smothered again by the accusations of those who he'd wronged, and eventually, again in waking life.

Dreams are crowded with the detritus of the unconscious (for Jung, a great ocean), what Freud and Bachelard think of as shapes that "rise from the plasticity of the imagination, an imaginary raw material like dough, or clay, or molten metal. *Stuff* is indeed the right word for dreams" (Hillman 133-34). In the dream world of the playhouse, *Stuff* describes the play scripts, the actors, the gestures of actors, modulated voices, sounds, music, lights, and the material items crowding the tiring houses of the theater—they are shelved, hung on racks, tossed aside, used, and recycled. The horror of drowning affords a way to talk about not only the aspects of mental horror at a terrifying death, but also about how as a global society we are drowning ourselves and the planet in the products of our fatal ingenuity and acquisitiveness. Clarence's dream reveals a mind fractured with fears of the horror of drowning in the dreamer's own awareness of his sins and guilty actions returned to haunt him from the sea's depths as his body sinks beneath the "tumbling billows of the main." He sees the old forgotten shipwrecks and their lost treasures of the earth, pearls, gold, and jewels. He sees fish-gnawed human bodies and the cast-off bones—the return of the repressed and its silent vengeance. Once a drowning victim goes down for the last time, the actual drowning is likely painfully noiseless. As in space, so underwater: no one can hear you scream as you confront the "dead bones that lay scatter's by" of what you thought was out of sight and out of mind.

We can, in Iago's words, drown all the cats and blind all the puppies we want, but what then? We dump the unwanted, the garbage, the disposables, the obsolete, the unfashionable or inconvenient, letting them slip into the waters of our planet, both salt and fresh, ignoring the

horror of suffering associated with their manufacture and their assumed disappearance into the seas and rivers, as well as into the waters of our unconscious denial of eventual consequences. But these buried things do not stay drowned. They float up into tidal trash deposits on what should be pristine sandy beaches. They fragment and enter the planetary food chain at its foundational level. They gather in distant gyres, such as the Pacific Garbage Patch, so large that they seem almost to constitute a new land mass. Metaphorically speaking, Shakespeare's characters cannot escape the horrors of the "vasty deep" (*I Henry IV* 3.1.52), whether that be the depths of the ocean or of their own minds and memories.

Dreams and things in Shakespeare's ocean are assemblages that interact and change. In *Othello*, for instance, Brabantio dreams of his daughter and a moor, a devil, a Barbary horse, an old black ram and a pure white ewe, and calls for a taper, the light of reason to dispel the nightmare. Iago dreams of an erotic encounter with Cassio, describing it to a captivated Othello and occasioning the general's epileptic nightmare of copulating goats and monkeys, a handkerchief, noses, ears, lips, the horns of the cuckold. Finally, Desdemona is "false as water," a cistern for toads "to knot and 'gender in.'" Objects in Shakespeare's watery plays create affordances for the metaphorical use of such objects, cognitive assemblages that can be brought into contact with other assemblages to engender nightmares and madness.

Rose, McKenna

"Muddying the Waters: Thinking Thinking with *Hamlet*"

Throughout *Hamlet*, watery figures act as metaphors for human cognition. For instance, to further perpetuate the hoax of Hamlet's insanity on Claudius, Gertrude explains her son is "Mad as the sea and wind when both contend/Which is the mightier" (4.1.7-8). Gertrude conveys to Claudius, and the audience, the state of her son's madness by activating proverbial images and ideas of coastal storms, while also recalling for him the plan he has to send Hamlet to England by ship. Not only does this metaphor for madness as a storm, in which two elemental forces seem to battle for supremacy, trade on the characters' and audiences' shared linguistic markers, but it also allows Gertrude to illustrate the internal functions of her son's brain. The image of the sea and wind is a metaphor that helps audiences to think about how thinking works, or, in this case, how thinking is failing to work correctly. While we can describe, categorize, and name all the types of metaphors through which we figure human thinking, cognitive critics point out that we cannot think thought itself because thought is only available to be thought through metaphors that are prelinguistic, embodied, and determined by what Mary Thomas Crane calls, "prototypical categories" (16). Since the unconscious processes that create prototypical categories, i.e. the standard against which we measure what we perceive, are contextual, setting *Hamlet* within our immediate present offers some insight into our

perilous, ecological moment. By emphasizing cognitive criticism's insight into ways context accounts for the production of meaning, in this paper, I will examine ways the current state of the world's water ways redounds onto *Hamlet*'s watery metaphors. In other words, given that the prototypical categories of water for modern audiences likely include ocean acidification, industrial effluent, or plastic gyres, I will explore the effects that contemporary toxicity has on our thinking about thinking in *Hamlet*.

Tribble, Lyn

"An Alacrity in Sinking"

Drowning was one of the chief "hazards of everyday life" in early modern England. Many died not only in maritime occupations, but while pursuing everyday activities such as fetching water, doing laundry, or simply walking through an environment in which watery hazards abounded. Such mishaps are "a reminder of how much water there was in past landscapes before drainage schemes created more desiccated surfaces" (Towner and Towner 952). In this paper I will look at several watery encounters, most notably Falstaff's repeated narration of his misadventure in the river Thames. Falstaff's wetting is played for laughs, but his elaborated descriptions of the psycho-physical effects of this sudden submersion belie the comedy. I will contextualize this moment within what Lowell Duckert describes as "early modern wetscapes"; contemporary physiological accounts of sudden submersion in cold water, asking questions about the relationship between watery thinking and everyday dangers in early modern England.

Towner, Elizabeth, and John Towner. "The hazards of daily life: an historical perspective on adult unintentional injuries." *Journal of Epidemiology & Community Health* 62.11 (2008): 952-956.

VanWagoner, Benjamin D.

"Watery Thinking / Capillary Imagination: Oceanic Debt in Fletcher's *Island Princess*"

When Edward Misselden and Gerard de Malyne laid the "decay" in foreign trade at the feet of the East India Company, their anxiety was not only over the matter of exported bullion, but also their "bills of debt" traded for "forraine Commodities." The merchants who initially funded the Company had by 1621 already "set themselves in debt," they worried, and thereby globalized London's financial insecurities, placing English concerns in the hands of other nations. While the mercantilists' unease regarding the "overballancing" of trade may have been misplaced, this paper suggests that their increasingly capacious conceptualization of debt was not. The East India Company's project nursed to life a capillary imagination, recasting England's proto-imperial "body politick" as a distinctly oceanic—ranging, unmediated, and torrential—system of obligation, inventing a logic of globalized debt.

Performances of early modern drama put the East India's Company's logic of debt under pressure, particularly when they attempted to stage the new markets of the Americas and the

Indies. Here I take up John Fletcher's contemporaneous *The Island Princess* (1621), a financial romance that situates the moral obligation for the failing economy of two Indonesian islands, Ternate and Tidore, in the hands of an indigenous Governor, "an ill man." Through the construction of natural and moral hazard—conflagration on the one hand and religious "redemption" on the other—the play demonstrates how the concept of indebtedness acts as a means of producing amoral loyalty under precarious circumstances. By bringing the accounts of the East India Company into conversation with *The Island Princess*, this paper shows how Fletcher recognized—and satirized—the new economic imagination of debt on which the East India Company came, in the course of the seventeenth century, to be premised: that of a population always-already owing their colonizers.

Wakeman, Rob

"Thinking Through Biodiversity on the River Trent"

A manuscript in Nottingham's Bromley House Library dated to 1641 is the oldest extant example of an attempt to list the thirty species of fish that supposedly give the Trent its name. This account repeatedly refutes skeptics who "do not believe that this River affords so many kind of Fishes," a defamation that has prompted the author to make a definitive list, "partly by my own Experience and partly by Conference with many ancient Fishermen, who have spent most of their Days upon that River, but principally by Discourse with a most expert Angler who I suppose admits of no equal either for the knowledge of the kinds of Fish, or Skill to take them." The list follows, with sturgeon pride of place, despite their evident rarity. The author insists that if "any Man shall doubt whether Sturgeon be taken in this River, he knows little," claiming they are taken yearly. But the skepticism is understandable. As Richard Adams Carey puts it, "Fish are hard to count except after they have been caught." Additionally, the author defends inclusion of minnows and pinks because "when Almighty God had by his mighty Power created all Things in his Wisdom he pronounced them all to be good, nor is it reason to conclude the Smallness of the Fishes a sufficient Argument to exclude them the Nature." From largest fish to smallest, the list evidences a desire for a structured wholeness in a world that is receding. In a world of loss, lists of fish dream of plenitude.

In this paper I think of early modern attempts to enumerate all thirty species of the Trent as forerunners to the Census of Marine Life, published by the Royal Society in 2010, which sought to reckon the biodiversity of the world's oceans in order to better preserve the life there. As Ursula Heise shows, cataloguing and listing is one particular response to ecological loss. Attempts to reckon the extent of species loss of the Sixth Extinction through database projects such as ARKive.org and the Encyclopedia of Life contrast with the "elegiac mode" that "dominates verbal and visual representations of endangered species." Heise argues that even the most powerful last-of-kind photographs – such as Martha, the last passenger pigeon who lived out her days at the Cincinnati Zoo, or the last Tasmanian tiger kept in its cage – fail to

trace the loss of biodiversity: "mourning for individual species cannot adequately capture the magnitude of a crisis that affects thousands of species and the entire globe." In this paper, I will explore the seventeenth-century conceptualizations of biodiversity through lists of fish in the River Trent.

Wright, Myra E.

"Stink or Swim: Knee-deep in Marlowe's *Edward II*"

This paper examines Marlowe's image of a king standing in sewage, which appears near the end of *Edward II*, in relation to the other aquatic environments and creatures conjured in the play's dialogue. Edward's beloved Gaveston thinks of himself as another Leander, and imagines producing a sexy amphibious performance for the king, featuring a swimming boy "in Dian's shape." Conversely, Gaveston is figured by his rivals in a decidedly less lovely way, as both a torpedo (an electric ray) and a flying fish. I argue that the image of the sewer, with its tortured, vertical human prisoner, is an up-ending of the play's pattern of metaphors that submerge human bodies, mobilizing them in a horizontal, piscine position.