Edited by Nic Helms and Steve Mentz

Water and Cognition in Early Modern English Literature

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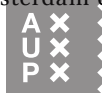Jennifer Munroe, University of North Carolina Charlotte

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Acknowledgments and Dedication

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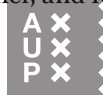
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Nic dedicates this volume to their spouse Alissa.

Steve dedicates this volume to his family, Alinor, Ian, and Olivia.

Introduction: Watery Thinking: Minds and Water In and Beyond the Early Modern Period

Nic Helms and Steve Mentz

Abstract

Water and cognition would seem to be unrelated, the one a physical environment and the other an intellectual process. The animating claim of this book shows how bringing these two modes together revitalizes our understanding of both. Water and especially oceanic spaces have been central to recent trends in the environmental humanities and premodern ecocriticism. Cognition, including ideas about the "extended mind" and other forms of distributed cognition, has also been important in early modern literary and cultural studies over the past few decades. This book contains contributions by influential voices in both early modern cognitive studies and the blue humanities, but its central project aims not only to think "water" and "cognition" as distinct critical modes, but also to combine them in what this introduction terms "watery thinking."

Keywords: cognitive studies, blue humanities, extended mind, distributed cognition, ecocriticism, mindreading

"O Lord! Methought what pain it was to drown" (*Richard III* 1.4.21).[1]

George, Duke of Clarence's nightmare premonition of death by drowning in *Richard III* does more than foreshadow his demise in a butt of Malmsey wine. The dream showcases watery thinking by displaying myriad ways that water

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1   All Shakespeare quotations from *The Norton Shakespeare*.

supplies both metaphors about and the matter of thought. As a medium of sensory experience, water in Clarence's dream provides a material baseline, with "dreadful noise," "sights of ugly death," and the imagined feel of the "slimy bottom of the deep" (1.4.22, 1.4.23, 1.4.32). As a means of chthonic transport, "the envious flood" of the ocean carries Clarence to death's "melancholy flood" beside the "sour ferryman" Charon at the River Styx (1.4.37, 1.4.45–6). Beyond the infernal river, Clarence voyages to hell to meet Warwick, Prince Edward, and a "legion of foul fiends" that "environed" him in torments (1.4.37, 1.4.45–6, 1.4.58–9). Water carries Clarence's imagined body and sweeps away his imagination. As a type and material substance of environment, water in these passages enables and frustrates movement in both the literal and figurative senses. The fluid medium provides the passage of Clarence's ship to nearby Burgundy, connecting him to the wider shipping paths of the growing (and lucrative) global early modern trade. The sea also "scatter[s]" and destroys those ships, transforming them into "a thousand fearful wrecks" (1.4.28, 1.4.24). The dream's undersea world of shipwrecks and jewel-encrusted skulls mocks humankind's supposed dominion over the seas. Clarence might have had forebodings of death in any number of metaphorical registers, but through water he both glimpses the inner workings of his own mind and sees into his own mortality. His internal vision reaches outside his narrow person to become aware of oceanic vistas that include global exploration, imperialism, and the limits of humanity's mastery of the environment.

Any single watery drop of Clarence's dream flows out into a variety of familiar tropes that characterize early modern English literary culture. The dream provides a representation of mental experience, and the lyricism of the speech also gestures toward an undersea aesthetic of distortion and beauty. The narrative contents of the speech further represent internecine violence, global capitalism, and other significant elements of Shakespeare's history plays. The central focus this collection takes from Clarence's dream engages with ideas of cognition through the core element that binds the speech together: water. While "the tumbling billows of the main" into which Clarence falls are initially an imaginative landscape, the substance of his thoughts—and the manner in which those thoughts reach Clarence—leave a "terrible impression" upon him (1.4.20, 1.4.63). The conclusions and convictions generated through the dream narrative shock and soak Clarence's conscience. Or, to phrase it more fluidly, Clarence's sleep submerses itself in, soaks itself with, and is saturated by water. The fluid element will follow Clarence into the waking world and his death at the hands of his brother's assassins. Fathoming the depths of Clarence's watery thinking enriches discussions of early modern literary culture. Doing so requires

interdisciplinary range, bringing early modern literary criticism into contact with the insights of cognitive theory and the environmental humanities. After all, water flows where it wills, from Clarence's insubstantial dreams to his very material death by drowning.

As this opening textual example demonstrates, *Water and Cognition* brings together cognitive science and ecocriticism to ask how the environment influences how humans think, and how they think about thinking. The collection explores how water—as element, as environment, and as part of our bodies—affects the way early modern and contemporary discourses understand cognition. Meditation and water are wedded forever, intones Melville—but this book's contributors aim to show older and more varied confluences between water and thinking in early modern England.[2] From submersion to drowning, from metaphor to matter, these essays address wide-ranging topics such as cogitation, drowning, spectating, foggy thought, freshwater infrastructure, humoral metaphors, monsters of the deep, toxicity, river memory, sewers, snowflakes, affect theory, and vessel ecology, among others. Water affords and constrains thought, both as metaphor and as a physical feature of environments. Watery thinking, as we describe it, provides a tool to craft literary forms and a theoretical model, both contemporary and early modern, for how cognition flows. By drawing together early modern ideas about water and cognition with contemporary theories of both the element and intellectual processes, we aim to extend early modern blue humanities ecocritical reading practices in new directions.

Early modern literary criticism has shown increasing interest in watery and oceanic thinking over the past two decades. Recent scholarly books in what has become known as the "blue humanities" include volumes such as Steve Mentz's *At the Bottom of Shakespeare's Ocean* (2009) and *Shipwreck Modernity* (2015), Dan Brayton's *Shakespeare's Ocean* (2012), and Lowell Duckert's *For All Waters* (2017). (For an overview of the blue humanities that is not exclusive to the early modern period, see Mentz's *An Introduction to the Blue Humanities* [2023].) Further early modern publications in this discourse include an essay cluster in *Studies in English Literature* in 2019 that features essays by Mentz, Joe Campana, David Bevington, and others, as well as newer articles and chapters by Dyani Johns Taff, Laurence Publicover, Benjamin VanWagoner, Debapriya Sarkar, and James Seth.[3] Cognate blue-inflected

work in early modern French studies includes Jennifer Oliver's *Shipwreck in French Renaissance Writing* (2019). A southern hemispheric perspective appears in Sandra Young's *Shakespeare in the Global South* (2019). Early modern Portuguese scholarship has long been a leader in oceanic criticism, in particular through Josiah Blackmore's influential study *Manifest Perdition: Shipwreck Narrative and the Disruption of Empire* (2002) and more recently his *The Inner Sea: Maritime Literary Culture in Early Modern Portugal* (2022). Oceanic scholarship in early modern literary studies appears robust and thriving.

Two key modes of blue humanities criticism with which the essays in this volume engage are its experimental form and its desire to plumb alternative ways of environmental thinking made available by premodern texts. Among many examples of creative-critical work in this discourse, the collection *Thinking with Water* (2013), co-edited by Cecilia Chen, Janine MacLeod, and Astrida Neimanis, stands out for its mixing of literary criticism, poetry, and visual arts. Treating water as both affordance and collaborator, the authors in *Thinking with Water* model how to imagine with, and about, this mobile element. In scholarship that is in some ways more traditional but equally imaginative, James L. Smith and Hetta Howes's open-access collection *New Approaches to Medieval Water Studies* (2018) emphasizes the need for "disciplinary agility" in order to apply "medieval hydro-social insights to twenty-first century problems."[4] While the medieval texts and traditions of Smith and Howes's collection are not the same as the early modern subjects of these essays, we take inspiration from Smith and Howes's efforts to make the premodern past connect to contemporary water issues. What Smith calls the "energies" of medieval water speaks to the efforts of this book to bring early modern water-writing into the urgent environmental questions of today.[5]

This collection combines increasingly visible blue humanities ecocritical approaches with strains of cognitive literary studies that also have become prominent in early modern studies. Perhaps the most influential recent book to bring cognitive theory directly into contact with early modern literary studies is Evelyn Tribble's *Cognition in the Globe* (2011), which analyzes the particular practices and skills of cognition and performance necessary in

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and the Marital Ship of State in Jonson's *The Staple of News*"; Seth, "Sea Music and Shipboard Performance Culture."

4   James Smith and Hetta Howes, "Medieval Water Studies: Past, Present, and Promise," *New Approaches to Medieval Water Studies*.

5   James Smith, "Medieval Water Energies: Philosophical, Hydro-Social, and Intellectual," *New Approaches to Medieval Water Studies*.

the early modern theater. Mary Thomas Crane's book *Losing Touch with Nature* (2014) also employs cognitive theory in order to demonstrate how an increasing emphasis on rational analysis and early modern science fractured traditional understandings of the human-nature relationship. The substantial collection of essays, *Embodied Cognition and Shakespeare's Theatre* (2014), co-edited by Shakespeare scholars Laurie Johnson and Tribble in collaboration with philosopher John Sutton, has continued to advance this important scholarly conversation. More recently, Lianne Habinek's *The Subtle Knot* (2018) and James Knapp's *Shakespeare and the Power of the Face* (2015) testify to continuing critical engagement with the overlap between mind and world in early modern literary studies.

In their 2011 essay, "Cognitive Ecology as a Framework for Shakespearean Studies," Tribble and Sutton provide a clear structure for how the cognitive method operates in early modern literary criticism. The collaboration between these two scholars—Tribble the Shakespearean and Sutton the philosopher—has produced probably the most influential thinking-together of these discourses in the context of early modern studies over the past decade.[6] Tribble and Sutton observe that, "Cognitive ecologies are the multidimensional contexts in which we remember, feel, think, sense, communicate, imagine, and act, often collaboratively, on the fly, and in rich ongoing interaction with our environments."[7] Together they suggest that the structures through which humans conceptualize their environments have potent resonance for early modern literary scholars. "Human brains," they write, "are adapted to latch on to, create, manipulate, incorporate, and assimilate external resources—tools, languages and notations, notebooks and neighbors—that have themselves become apt for incorporation. The individual is essentially incomplete, in being deeply sculpted and continually transformed by plugging in to wider socio-technical networks" (96). Literary practices, such as the theater, and even literary genres, such as tragedy or lyric, become enabling tools through which humans engage with their environs. Tribble and Sutton conclude that a "cognitive ecological approach … stands to enrich a range of questions currently engaging early modern studies, including theatrical history, historical phenomenology, object studies, and body studies" (101). We aim to show through this collection of essays

6   Sutton's first public engagement with early modern studies appears in "Spongy Brains and Material Memories," a chapter in *Environment and Embodiment in Early Modern English Literature*.

7   Tribble and Sutton, "Cognitive Ecology as a Framework for Shakespearean Studies," 94. Further citations in the text.

that water studies and the blue humanities also interface productively with the theories of embodied cognition that Tribble and Sutton have introduced to early modern literary studies.

This collection entwines these two active threads of contemporary criticism by examining how water, as both material environment and popular metaphor, engages with thought and its representations. As the wide range of early modern subjects and materials in this book's chapters shows, water as metaphor and feature of the environment flows everywhere in early modern culture and experience. Bringing blue humanities ecocriticism in touch with cognitive studies enables these critics to produce novel readings of character, cogitation, poetics, ecology, and memory.

Another resonant early modern example of watery thinking that counterbalances the vivid materiality of Clarence's dream appears in Robert Burton's description of melancholy through the image of stagnant water: "water itself putrefies … if it be not continually stirred by the wind … 'so do evil and corrupt thoughts in an idle person.'"[8] Burton's focus on cognition maps the physical, environmental, and biological processes of spontaneous generation onto human thought. His treatments for melancholy emerge from his physical understanding of the imagined flow or stoppage of cognition's physical and metaphorical water. Like Burton, modern cognitive science often models the brain and the extension of thought into the world through water and watery environs. Stephen Kosslyn and Olivier Koenig's *Wet Mind* (1992) charts the shift from understanding the brain as a computer to re-imagining the brain as network; they illustrate networked cognition through the extended metaphor of fictional "octopi networks" in Southern California tidal pools, which can pass signals amongst themselves by squeezing one another's tentacles in a layered grid. Edwin Hutchins's influential study *Cognition in the Wild* (1995) offers naval navigation as a model of how cognition integrates people, tools, and environments. Using observations of various navigational practices, from the cooperative recording of compass readings on U.S. naval vessels before the advent of GPS, to the Micronesian methods of navigation by way of celestial cues and cultural memory, Hutchins demonstrated the highly physical methods and networks required of complex cognition in strenuous practice. More recently, Nicholas Helms has applied theories of cognitive mindreading to Shakespearean character criticism in *Cognition, Mindreading, and Shakespeare's Characters* (2019), arguing that contemporary discourses on how humans perceive, read, and misunderstand one another's minds can be applied to the construction of

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8   Robert Burton, *The Anatomy of Melancholy*, 1.2.2.6.
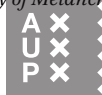
characters in early modern literature, particularly where tragedy, madness, and misreading are at play.

This book combines these two unlike practices through engagement with multiple kinds of texts. From cognitive literary studies our contributors take a series of potent structures, including the embodied mind and distributed cognition. From the blue humanities we adapt poetic and aesthetic practices that engage with water in the human environment, from the fetid waters of sewers to the vast expanses of the global ocean. In juxtaposing these modes, these essays enable deeper insight into both watery environments and the habits and processes of cognition than either mode has accomplished yet in isolation. Watery thinking, our term for the combination of the blue and the cognitive, provides new insights into both thought and matter in early modern literary texts.

Modes of Watery Thinking

The thirteen essays in this volume present different approaches to cognition, watery environments, and the relationships between these things. The ecopoetics of water and the structures of human cognition turn out to be not only related to each other, but also each deeply resonant with twenty-first century and early modern ideas about literary forms. Some essays engage with the theatrical potential of both water and cognition, drawing on scholarship including Tribble's *Cognition at the Globe*, Helms's *Cognition, Mindreading, and Shakespeare's Characters*, and other works. Others consider fluid environments as poetic or lyric challenges, drawing on the blue humanities criticism of Brayton, Duckert, and other early modern scholars. Still other chapters think through the material features of dynamic environments and ecologies, exploring the physical and metaphorical shapes of thinking and water.

One key idea that many of our authors draw on is what Helms describes as "mindreading." This concept, drawn into literary studies from the philosophy of mind, enables a view into the development of dramatic character in ways that are not bounded by old-fashioned ideas of "the human" or even "realism" avant la lettre. Of particular interest in a watery context is Helms's reading of the Jailor's Daughter's incoherent speech in Shakespeare and Fletcher's *Two Noble Kinsmen*, which includes a vision of maritime crisis. When she displays her madness through the metaphor of a ship at sea—"Out with the main sail. Where's your whistle, master?" (4.1.146)—she presents herself through a form of symbolic disorder that Helms links to figures such as
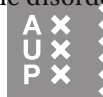
Hamlet and Cordelia, among others. The explosive gap of "nothing" in the opening of *King Lear* may gesture toward the flooded landscapes of act 4, as Mentz observed some time ago, but Helms's focus on fractured cognition suggests that linguistic coherence flows both toward salty metaphors and into dramatic structures that represent thought.[9] Water's dynamism, in this reading, models the dynamism of the human mind.

Several of the chapters in this collection explore theatrical techniques and stage practices. As Duckert observes in the opening of his book *For All Waters* (2017), to "make a wet entrance," as characters do in plays such as *Pericles*, *The Tempest*, and *Twelfth Night*, "is to enter into non/human alliances of uncertain catastrophes and joys" (xv). Water in Duckert's reading serves as a resistant, resilient element that both challenges and enables theatrical representation. The movement of water, both literally on the wet bodies of actors and by implication in the surrounding environment, serves as counterpart and subtext for the carefully controlled movements of an actor on stage. It may be that water represents one of the far limits of acting; the element may function as a nonhuman collaborator who, like the dog in *Two Gentlemen of Verona*, always threatens to steal every scene.

The chapters collected here engage with the affordances and limits of water as metaphor and material. Our introduction's title, "Watery Thinking," provides the master-metaphor that to some degree undergirds the entire project. (The slightly less fused title of the book, *Water and Cognition*, serves as a reminder that not all mixtures are complete.) In engaging with wet metaphors, we have also been mindful that, as shown in Hester Blum's influential statement in *PMLA*, "the sea is not a metaphor" (2010; 125.3).[10] Blum's salutary focus on the material reality of the ocean, from the mast-head to the polar regions, has greatly influenced the blue humanities scholarship that has emerged in and after the 2010s.[11] In an early modern literary context, however, most of the writers explored in this book were not, by contrast with nineteenth-century sea authors such as Melville or Conrad, themselves mariners. For most early modern authors, the sea always functions as both metaphor and material reality. In famous lyric examples such as Shakespeare's "hungry ocean" (Sonnet 64) and Spenser's about-to-be-erased strand (*Amoretti* 75), it is precisely the juxtaposition of the material impact of the sea on human structures and the metaphoric connections between the ocean and dissolution that animate the poems.

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9   See Mentz, *At the Bottom*, esp. 14–18.
10   Blum, "The Prospect of Oceanic Studies."
11   Blum, *The View from the Masthead*; Blum, *The News at the Ends of the Earth*.

The wet overlap between metaphor and materiality characterizes the heart of these poems. These two sonnets, like many of the literary works explored in this volume, include both real salt water and imaginative movements. When Florizel asks that his beloved Perdita dance like "A wave o'th' sea, that you might ever do / Nothing but that, move still, still so, / And own no other function" (*WT* 4.4.141–3), his lines beg the question, what are the formal features of an ocean wave? Shakespeare's verse asks us to combine our physical memories and experiences of salt water with the lover's desire to monumentalize and eternize his love.

One structure that connects these essays is an interest in collaborations, between humans as actors and writers, and also between human actors and nonhuman environments. An important model for more-than-human collaborations appears in Hutchins's *Cognition in the Wild*, which treats the human and nonhuman assemblages working together to steer a U.S. Navy ship. Hutchins's portrait of the ship responding to crisis emphasizes plural forms working in concert: "No single individual on the bridge acting alone—neither the captain nor the navigator nor the quartermaster chief supervising the navigation crews—could have kept control of the ship and brought it safely to anchor. Many kinds of thinking were required to perform this task" (5). The multiple humans and machines of the Navy ship may, in some ways, resemble the multiple humans and machines that make theaters and poems work.

We have grouped the essays into four sections. The first, "Drowning on Stage," features theatrically-focused essays by McKenna Rose, Lianne Habinek, Tony Perrello, and Myra Wright. The next section, "Fluid Metaphors," contains chapters by Benjamin Bertram, Douglas Clark, and Jennifer Hamilton, which explore dramatic and poetic responses to water and cognition. The third section, "Forms of Water," features Lowell Duckert, Gwilym Jones, and William Kerwin engaging diverse materialities of water such as snow, rivers, and fog. Finally, in the last section, "Submersive Tendencies," Dyani Johns Taff, Benjamin VanWagoner, and Sandra Young engage with the radicalism of water, the ways in which it frustrates and exceeds its containing structures, and the consequences of watery thinking for early modern literary and cultural studies. An Afterword by Evelyn Tribble closes out the volume.

Drowning on Stage

The first section, "Drowning on Stage," features four essays on the staging of watery immersion and its consequences for plays, playwrights, and

audiences. Water in these essays functions as both spur and limit; it cannot be fully present on the early modern stage, but its partial presence always threatens to overflow. Two initial chapters, by Shakespearean McKenna Rose and cognitive studies scholar Lianne Habinek, both focus on *Hamlet*, a play full of images of water and thinking. Tony Perrello extends these essays' analyses of Shakespeare by building on the dream of drowning in *Richard III*. The last essay in this quartet, Myra Wright's "Stink or Swim," shifts the focus to Christopher Marlowe by providing a pungent exploration of stagnant water and filth in *Edward II*. In each of these essays, water enriches and complicates stagecraft.

Physical water represented a challenge for early modern theaters and theater-goers. Unlike twenty-first century stagings, in which a small swimming pool often functions as an eye-catching prop, as for example in a memorable *Much Ado About Nothing* at the National Theater in London in which Simon Russell Beale's Benedick hid himself by hopping into the water during the gulling scene, early modern productions wrestled with the challenges of preventing water from disrupting performances.[12] Especially in the Globe Theater, the early modern version of which, like its modern rebuilt version, was located just steps from the Thames, anxieties about an excess of physical water, including polluted water, would have been present both inside and adjacent to the theater. The pressure and presence of water, especially filthy water, onstage may perhaps under-gird the "something rotten" that haunts Hamlet's Denmark. The two chapters on *Hamlet* that open this section connect fluid environments with the play's fascination with the limit cases of cognitive abstractions and performative power. McKenna Rose's "Muddying the Waters" takes up the symbolic function of water in Hamlet, and in her analysis the relationship between cognition and watery flow becomes explicit. For Rose, the "toxic waterways" of London and Elsinore infiltrate many corners of the play and the theater-going experience, from the stench of the Globe during wet days to the fear of dissolution that underlies the first two of Hamlet's soliloquies. Her emphasis on both the environment and madness as political categories initiates a theme of "watery identity" that will permeate this collection, particularly in the work of Benjamin Bertram and Gwilym Jones.

Liane Habinek's "Ophelia with Spectator" turns to a narrower consideration of the place of water in *Hamlet* by exploring the heroine's offstage

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12   For a *Guardian* review that mentions the "marvelous moment" with the pool, see https://www.theguardian.com/stage/2007/dec/19/theatre.shakespeare. Accessed 22 September 2021.

death by drowning. She contextualizes this famous scene with sustained analysis of Lucretius's philosophical image of the "shipwreck with spectator," in which the spectator takes comfort that he, at least, is not on a sinking ship. For Habinek, Ophelia's ambiguous drowning represents a key locus of watery thinking in *Hamlet*. Habinek's emphasis on the muddied account of Ophelia's drowning anticipates later work in this collection on the forms of watery thinking, including Jennifer Mae Hamilton on storms and Lowell Duckert on snowflakes.

Similarly, Tony Perrello's "Monsters of the Deep" takes up the celebrated speech in *Richard III* in which the royal brother George, Duke of Clarence, recounts his terrors of drowning in the deep sea. Dreams in Perrello's analysis represent a charged form of cognition, operating across the borders of rationality and poetic visionary truth. Framing Clarence's famous speech as a descent into physical and intellectual terrors, Perrello draws together oceanic and cognitive strains of responding to Shakespeare's history play. He provides close textual readings of Clarence's dream in *Richard III*, which links his chapter both to the opening pages of this introduction and to Bertram's chapter 5.

In the final chapter of this section, Myra Wright's analysis of water's function in Marlowe's *Edward II*, stagnant and odoriferous water represents the political and moral corruption at the heart of the play. She demonstrates how the final scenes of Marlowe's history, when the deposed king is imprisoned in "the cesspit of Berkeley Castle," treat filthy water as a culmination of the play's watery metaphorics. Together these chapters display the variety with which early modern dramatists responded to the intellectual and physical challenge of water on, or near, the stage.

Fluid Metaphors

The second section, "Fluid Metaphors," brings questions of cognition to the fore. These three essays explore how writers use the language of water to represent thinking and action on stage and beyond. Benjamin Bertram explores Richard of Gloucester's rhetorical presentation of "Water and Sovereignty" in Shakespeare's first tetralogy of English histories. Douglas Clark explores "The Sea of the Mind" in the lyric poetry of Arthur Warren. Jennifer Mae Hamilton extends her previous reading of *King Lear* by unfolding how rain and tears together undergird the play's representation of "Tears, Rain, and Shame." In these chapters, water and thought flow together, each influencing the other.

Benjamin Bertram's essay begins just prior to where Tony Perrello's leaves off, as Bertram explores the place of water in the metaphorical ecology of self-representation that Richard of Gloucester, who will go on to become King Richard III, articulates near the end of *Henry VI, Part 3*. Bertram digs into Richard's complex metaphorical language, in which the ambitious Duke understands himself as a sophisticated and powerful machine, fueled by a combination of fire and water. His presentation of himself as an elemental mechanism generates a powerful critique of familiar humanist notions of interiority and self-identity, a critique informed by cognitive literary approaches that emphasize the mind as embodied, enactive, embedded, and extended. This approach also appears in Tony Perello's chapter three and later in William Kerwin's chapter ten. The inhuman forces of water and machinery make the future King Richard III a powerful but disturbing figure of a human.

In a comparable way but through a much less canonical literary text, Douglas Clark explores the poetics of Arthur Warren's early seventeenth-century poem *A Poor Mans Passions* (1605) as a sophisticated representation of the mind as an ocean. In Clark's agile and far-ranging close reading, Warren's poem connects "liquid disturbances" to early modern ideas about "cognitive disorder and moral corruption." Bringing forward a less well-known writer such as Warren suggests that the habitual connection between water and cognition that the chapters of this book emphasize are not limited to elite dramatists such as Shakespeare and Marlowe. Writers like Warren demonstrate the extent to which thinking and water were habitually linked in early modern intellectual culture. These physical and metaphorical connections were not just poetic exercises constructed by elite dramatists, but instead represent crucial elements of the mental structures of early modern culture, as Clark shows in other poetic examples such as "My mind to me" as well as in *Hero and Leander*, which is also discussed by Myra Wright in chapter four.

The final chapter in this cluster, Jennifer Mae Hamliton's "Tears, Rain, and Shame: *King Lear*, Masculine Vulnerability, and Environmental Crisis," returns to Shakespeare and to the subject of Hamilton's 2017 monograph about eco-performance, *This Contentious Storm*. Her ecocritical extension of her previous feminist analysis locates King Lear's expression of shame in his feminized tears and the watery dependencies they enact and represent. Like the previous essays in this section, Hamilton's analysis shows how useful water could be to an early modern writer. Whether one wishes to represent power, in the case of Richard III, contemplation, in Warren's poem, or shame, in the figure of King Lear, the wet element appears to have been essential.

Forms of Water

The third section takes up material "Forms of Water" in three distinct instantiations. Lowell Duckert's "Flake" engages with the deep mystery of snowflakes. Gwilym Jones's "No darkness but Ignorance" takes up that most English of water-forms, fog. William Kerwin engages with rivers, through Michael Drayton's river-poetry in *Poly-Olbion*. These non-oceanic forms of water connect to recent efforts by blue humanities scholars to move this discourse beyond salt water to engage with all the various forms that water takes on our planet.[13]

The snowflake fascinated early modern scientific thinkers, and some aspects of the complex geometry of these ice-crystals remain incompletely understood today. Duckert's essay ranges widely among early modern poetic and scientific treatments, including the works of Johannes Kepler and Olaus Magnus, many of which describe snowflakes as part of a system of cold as an action that presses on and against early modern minds and bodies. As Duckert shows, the intricate physicality of snowflakes fascinated and perplexed early modern scientists and artists. The systems they produced in order to explain how snowflakes formed and how they affect human bodies were both wildly inaccurate, in modern terms, and also deeply revealing of the early modern understanding of the intimate connections among bodies, water, and minds.

Jones's analysis of English fog in a variety of literary sources including Shakespeare, Spenser, and Thomas Nashe, also ranges across physical and metaphorical meanings. Jones notes that the material meaning of fog appears to have entered the English language near-simultaneously with the metaphorical sense of foggy thinking, and he, like Duckert, teases out connections and resonances across the physical / metaphorical divide. He concludes his analysis with a dazzling close reading of an urban pageant written by Thomas Middleton that uses the city's signature weather as both metaphor and setting for the investiture of a new Lord Mayor.

Turning from snow and fog to the sometimes-clear waters of Drayton's chorographic epic *Poly-Olbion* (1612) enables William Kerwin, in the final essay in this cluster, to explore the poet whom Todd Borlik has called England's first environmentalist writer. Kerwin demonstrates *Poly-Olbion* to be both a distinctly environmentalist text and also perhaps the fullest early modern English version of the classical genre of river poetry. Drayton, as Kerwin shows, fuses the political tradition of the river poem with emerging

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13   See Mentz, *An Introduction to the Blue Humanities*, esp. 1–16.

environmentalist concerns. By linking *Poly-Olbion* to the twenty-first century river poetry of Alice Oswald's *Dart* (2002), Kerwin positions Drayton in a long and ongoing literary tradition, one characterized in part by protest and complaint, as Dyani Johns Taff will further articulate in chapter eleven. Water's range of symbolic forms, from Duckert's snowflakes to Jones's fog to Kerwin's river, emphasizes the versatility of this element in the poetic and dramatic culture of early modern England.

Submersive Tendencies

The final section, "Submersive Tendencies," contains three essays that expand and summarize many of the preceding chapters while opening out toward wider global vistas. Dyani Johns Taff discovers unexpected global sympathies in the Royalist poet Hester Pulter's ventriloquizing of the river Thames's sadness at the imprisonment of King Charles I. Benjamin VanWagoner shifts our focus to the Pacific islands for an analysis of John Dryden's play *Amboyna* (1673), which comes to terms with the European imperial project in the Spice Islands. Sandra Young's "Thinking with the Ocean as Decolonial Strategy," written by a South African scholar from the perspective of the Southern hemisphere, traces a radical underwater anti-colonial response to the more familiar models of European mastery and colonial conquest. In submerging familiar visions of British maritime empire, these three essays reimagine how water works in early modern literary culture, opening up new ways to engage with literary history in the present.

In taking up the poetry of Hester Pulter, which has become newly prominent in early modern studies since the heroic editorial labors of The Pulter Project, Taff explores the political and global resonances of the seventeenth-century poet.[14] In "Estuarial Rage and Resistance in Pulter's 'The Complaint of Thames,'" Taff considers Pulter's conservative and monarchist principles as well as her expansive sympathies and imagined connections, contextualizing Pulter's work within heteropatriarchial colonialism and harkening back to Benjamin Bertram's and Jennifer Mae Hamilton's essays in the first section, "Fluid Metaphors." The water-voice of Pulter's Thames connects with global rivers from the Ganges to the Amazon. Taff's reading ties this global vision to the complex local, estuarial ecosystems of the Thames watershed. In explaining how Pulter's poem reads the riverine

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14   See Hall, "Hester Pulter's Brave New Worlds," and Hutton, "Hester Pulter (c. 1596–1678). A Woman Poet and the New Astronomy," for examples of recent Pulter scholarship.
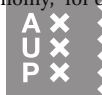
waterscape as an allegory of revolutionary politics, Taff demonstrates
how water has always been central to the self-conceptions of the city of
London. Employing the motifs of pastoral poetry, in which the deposed
King Charles represents an ideal shepherd alienated from his watery flock,
Pulter understands England's capital city as a mixture of water and land.
She also, as Taff emphasizes, places the English Thames among her global
counterpoints, from the "stately" Nile to the "silver" Ganges. What Taff
calls a "sisterhood of global rivers" gestures toward a broad and capacious
understanding of water as connecting substrate, both a representation of
monarchy and in some ways its globalized antithesis.

Early modern colonial ventures also explored global connections, often in
less utopian terms than Pulter's. In Benjamin VanWagoner's chapter, "Juris-
diction: Oceanic Erasure and Indigenous Subjection in Dryden's *Amboyna*,"
both setting and subject matter shift thousands of kilometers to the east,
to consider a play set during the Anglo-Dutch conflict in the Spice Islands.
While admitting that *Amboyna* is not an excellent play, VanWagoner finds
in it compelling ideas of "jurisdiction" that emerge from its colonial setting.
These influential legal and philosophical conceptions of empire were coming
into focus during this period through imaginative thinking about oceanic
space, an emphasis on oceanic cognition that echoes Tony Perello's chapter
three. Reading Dryden in dialogue with Caribbean theoretical works by
Ếduoard Glissant and Kamau Brathwaite, as well as with Hugo Grotius's brief
for Dutch naval independence, *Mare Liberum* (1609), VanWagoner uncovers
in this obscure play a resonant clash between what he calls archipelagic
and imperialist habits of thought. This conflict would shape British global
cultures from the seventeenth century through to the present.

The final chapter in our collection, Sandra Young's "Thinking with the
Ocean as Decolonial Strategy: Memory, Loss, and the Underwater Archive in
Shakespeare's *The Tempest*" turns with VanWagoner and elements of Taff's
reading of Pulter to the global ocean as a colonialist stage. Young, who like
VanWagoner draws on Brathwaite's idea of "tidalectics," reads the "oceanic
imaginary" as a counter-challenge to colonial legal and political structures.
"Thinking with the ocean," she writes, can become a "decolonial strategy."
By reading the arts of maritime orientation, including the influential *Art of
Navigation* written by the Spanish cosmographer Martín Cortés de Alcabar,
and translated into English by Richard Eden in 1561, Young demonstrates the
value of the oceanic archive. Navigation for a sailor represents a struggle for
conceptual control of unfamiliar fluid spaces. Young connects that desire
for control with literary forms of cognition and the struggle for "narra-
tive coherence" in a written text or performed play. Her essay powerfully

reconsiders the role of literary form in making sense of watery spaces and embodied cognition. This counter-narrative to empire showcases one of the key elements of watery thinking, its capacity to turn back against itself and critique its own origins.

Afterword

The book concludes with an Afterword by Evelyn Tribble, one of the most distinguished Shakespeareans working with cognitive and ecological materials today. Tribble frames the preceding analyses of "water" and "cognition" on a wider speculative level, while engaging directly with the insights of the individual chapters in the book. Beginning with the observation that combining water and cognition seems "paradoxical," Tribble goes on to demonstrate how the affordances of water resonate with the active forces of cognition. Returning to Hutchins's classic text, *Cognition in the Wild*, she demonstrates how the essays in this volume advance key ideas in both cognitive and ecological scholarship. Her Afterword, like the book as a whole, brings once-disparate ways of thinking together, and in doing so produces new ideas and possibilities for early modern studies.

This collection addresses itself to scholars and students in two separate discourses, while also providing insights and new ideas by bringing these critical modes together. It contributes speculative and cognitive richness to the material worlds of blue ecocriticism. It also adds poetic structures and fluid dynamism to purely cognitive inquiries. Together the book endeavors to generate new and hybrid modes of engaging with both familiar and unfamiliar texts.

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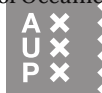
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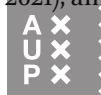
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