The Elements of Ecological Style: Poetic Contagion and Epidemiological Witches in *Macbeth*

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> "The widely acknowledged powers of witches to heal as well as harm inhabited an uneasy space between the natural and the demonic. A strong imagination could infect others with dangerous religious enthusiasms, perhaps even change the weather, but it did so by natural, not supernatural, means" (Haskell 5)
>
> "the witches and evil spirits in Macbeth are predominantly elemental—they command and sometimes even embody the weather" (Floyd-Wilson 136)
>
> "Foul is fair and fair is foul,
> Hover through the fog and filthy air" (Shakespeare 1.1.9-10)

The infamous lines delivered by the three witches in the opening scene of Shakespeare's *Macbeth* establish the atmosphere of the entire play, an atmosphere which may be literal or metaphorical. The witches prophesize the contagious air to come. They begin by confusing "fair," possibly related to eloquence or sound, with "foul," defined by the OED "as a disease, or person affected by disease; Loathsome. . . 'full of gross humors' (Johnson)," "tainted with disease," or in another early modern definition, a pathology "of the tongue" (OED). They then place themselves in the "filthy air," demonstrating their ability to move

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through a "foul" and "fair" environment both in the play and in the political landscape of Scotland, a connection suggested by the rhyming couplet. As they eventually "vanish into air," their prophecy circulates throughout the air, its unseen force manifested through Macbeth's ambitious actions. To read these lines eco-materially calls attention to the miasmic air of the play. These lines encapsulate one running theme of the play: the dualism of terms signifying morality and contagious air. The play's formal elements echo this theme of turning morality upside down as ecologically metaphorized by birds flipping in mid-flight and horses turning violent and cannibalistic after Duncan's murder "as they would / Make war with mankind" (2.4.17-18).[1]

In this essay, I return to a lingering concern that haunts early modern scholarship: how to interpret the roles of the witches and Lady Macbeth in the events of the play. While this question has been posed countless times, I add an eco-materialist reading of *Macbeth* along with early modern political and social understandings of witches' and witchcraft's connection to the bodies politic and natural. Drawing connections between the conception of ecology and political power in early modern medical representations of disease, Macbeth draws attention to the devastating and reactionary effects of tyrannical power on ecosystems, or as Macduff frames it, "Boundless intemperance/ In nature is a tyranny" (4.3.66-67). In Shakespeare's Macbeth, this power is tied to representations of contagion. I argue along the lines of Lucinda Cole, who refers to Macbeth as an "epidemiological horror" in her book *Imperfect Creatures,*[2] that language throughout the play suggests a relationship between witches, infection, and corporeal porousness where horror is poetically rendered as circulatory social contagion infecting bodies as a "sightless substance" (1.7.48) in the air. This corruption spreads as an airborne illness, knowing no division between human, animal, and plant and demonstrating the witches' traditional disruption of the Great Chain of Being.

A poetics of contagion invites the possibility of reading the fine lines between the literal and the metaphoric by analyzing the language of disease in the play. This essay engages with the discussion of the literality of the humoral language in Renaissance drama that Gail Kern Paster presents in *Humoring the Body* and further considers the communicability of diseases contained in

early modern poetic form.[3] While I definitely agree with Paster's claim that much of the medical language of drama identifies a literal anatomical understanding of the early modern Galenic frameworks of bodies, there are moments where I believe that the metaphoric and the literal coexist and are not binarily opposed, particularly in the effects of the witches' prophecy to Macbeth and Banquo, which invokes a formal language wrapped in the elemental and the epidemic, but which requires a relationship to metaphoric language in order to read the medical components of it.

From their bodies to their lines in the play, the witches consistently inhabit and relate to space differently than the other characters, a relationship signaled by their indistinct corporeality and their occult influences on the murderous events of the play. Frequently their lines are in trochaic tetrameter while Shakespeare's most frequent metric structure in the rest of the play is iambic pentameter or blank verse.[4] I attend to language and mediation in *Macbeth* by forming a theory on a poetics of contagion and reading formal particulars throughout in order to interpret Renaissance medical understandings of the body. This mode of poetics aims to concentrate on the formal elements of the play as well as the eco-materialist matters presented throughout, drawing largely from approaches in ecocriticism and from the reparative approach in new formalism. If the witches' lines create a turn in the play, influencing the bloody events that develop, then we can consider how all of the characters throughout relate to and alter their ecosystem through the construction of their words.

The etymological roots of "contagion" are visible in the blood-soaked ecology of the play. The historical meaning of the word, according to the OED, is "touch" and "contagion" has social ties to the anxiety about contact[5] in the period as well as to wider ideas of community formation and destruction across time.[6] In *Macbeth*, contagion is directly related to the ecology between things in the play as seen in the effects of touch and the way an entire community is affected by the actions of one tyrannical leader. The effects of touch are seen in the ecological shifts and the destruction that occurs at the hands of Macbeth, both of which externally manifest in Lady Macbeth's blood-red hands. The witches' prophecy invites many speculations from scholars about how the witches influence

Macbeth in his ambition to be king of Scotland, and while the speculations feel ultimately unknowable in a direct cause-effect relationship, I suggest that by looking at the ways ecological relations suggest a "sacred contagion," to use Mary Douglas's term, the witches' influence may be explored by examining the moral code written into the play, where "members of a community manipulate each other."[7] What the representation of the witches ultimately demonstrates is the effect of a simple phrase spoken in Macbeth's ear on the environment. An understanding of the occult and contagion in the period is necessary to understanding the formal elements that contagiously communicate these effects from occult to human and finally into their surrounding environment. If we consider these formal dimensions as the *dis*-ease that drives Macbeth then what spurs Macbeth to murder Duncan is the witches' influential and contagious words.

Air, environment, and bodies blur and begin to infect and alter one another in *Macbeth*, beginning with the witches' prophecy. But beyond the culpability of who causes what in the play, a concern about how poetic language in the theater mediates contagion is the prime focus of this essay. By early modern and Galenic conceptions of bodies' relationship to their environments, the humors correlated with seasons as well as the internal temper of the individual.[9] Ecosystems affected the individual's bodily humors through the rising vapours of the earth, and the "geohumoral' effects of their surrounding environments.

I suggest that in the case of the witches, the relationship between the two flips—human bodies directly affect, alter, and *infect* their own ecosystems by their actions, particularly through forms of power and prophetic mediation in poetic utterance. The witches themselves blur the boundaries between bodies and environments through the effect of their words. Upon first encountering them, Banquo describes them as "not like the'inhabitants o'th' earth" (1.3.41) and this alien image aligns with gender confusion in the lines that follow: "You should be women, / And yet your beards forbid me to interpret / That you are so" (1.3..45-46). Banquo's confusion at encountering the witches leaves him unable to read their gender or the signs of their embodiment, or even their species. He attempts to describe them as water: "The earth has bubbles, as the water has, / And these are of them. whither are they vanished?" (1.3.79-80). When Macbeth answers Banquo, he also describes them as elemental: "Into the air; and what seemed corporal, / Melted, as breath into the wind" (1.3.81-83). Banquo and Macbeth render the witches as composed of or decomposing into water and air, and Banquo, while first

describing them as not of earth, can only interpret them as "bubbles" of the earth. Macbeth follows up by interpreting their vanishing as a melting "into the air." Based on Macbeth and Banquo's descriptions, the witches geohumorally blend into their environments. They are more than naturally shaped by it and are actually physically malleable and able to transform into parts of environment, porously breaching the boundaries of the body and becoming incorporated into the surrounding air as a lingering elemental influence on the ecosystem itself.

The witches render the dimensions of bodies and space through eco-poetic language in the play. They describe and mix features of human bodily entanglements with both human and non-human landscape:

2 Witch: I'll give thee a wind.

1 Withc: Th'art kind.

3 Witch: And I another.

1 Witch: I myself have all the other,
And the very ports they blow,
All the quarters they know,
I'th' shipman's card.
I'll drain him dry as hay:
Sleep shall neither night nor day
Hang upon his penthouse lid:
He shall live a man forbid.
Weary sev'nights nine times nine
Shall he dwindle, peak, and pine:
Though his bark cannot be lost,
Yet it shall be tempest-tossed.
Look what I have.

2 Witch: Show me, show me,

1 Witch: Here I have a pilot's thumb,
Wrecked as homeward he did come.

3 Witch: A drum, a drum:
Macbeth doth come.

All: The Weïrd sisters, hand in hand,
Posters of the sea and land,
Thus do go, about, about,
Thrice to thine, and thrice to mine,
And thrice again, to make up nine.
Peace, the charm's wound up (1.3.11-37).

By the end of their chant, "the charm's wound up," an idea the Arden edition explains as "perhaps a metaphor from the tightening

of strings on a musical instrument to make them ready to play" (140). Their spell does poetically summon up the potential for their target to be "tempest-tossed." While the pronoun "he" at the beginning does not have a specific referent, their charm at the end suggests their target as Macbeth. I do not claim here to have *solved* the questions around the witches' involvement in the murder plot, but simply to direct attention to how the witches configure their spell and what these points suggest about early modern notions of disease and its relation to contagion.

Witches in early modern thought were believed to be able to control the wind,[10] and here we see echoes of this in "I'll give thee a wind" and the reference to a sailor's thumb. The witches evoke the early modern fear of contagious disease spreading through evil "tainted" air,[11] as infectious plague was thought to spread via miasma.

Lucinda Cole directs scholarly attention to this point in "Of Mice and Moisture," where she claims that "Supernatural explanations of the plague vied with material analyses and especially with theories of 'bad air' that marked the corruption of a fallen, postlapsarian earth."[12] According to germs theories and bacteriology that emerged in the 19th and 20th centuries, infection can indeed travel and circulate through the air. Air transmits disease and infection from body to body, as we have learned in fields such as virology. Early modern scholars have discussed historical interpretations of the body under the Galenic medical model, as Floyd-Wilson's explores in her notion of geohumoral influences on individuals. In this conception, disease loosely emerges in two ways: external touch (the etymological roots for the word, "contagion") and internal humoral imbalance affected by external factors.[13] Following this understanding and reading the poetics of the play as more directly literal allows entry into the ecological components of Macbeth as a proto-outbreak narrative.[14]

The word "contagion" appears very few times in Shakespeare's body of work and even in early modern poetics more broadly, and when the word does appear it demands attention. In *Macbeth*, the surrounding physical environment affects the corrupt motivations of individuals in a manner that is linked to the human relationship with the divine. Hamlet addresses this autochthonous relationship between infection, religion, and the earth: "'Tis now the very

witching time of night, / When churchyards yawn and hell itself breathes out contagion to this world" (*Hamlet* 3.2.371-373). As Cole and Floyd-Wilson point out, "bad air" became associated with the decay of the earth as well as the will of humanity. The witches' opening dialogue addresses the association between the environment and moral corruption. When they speak the opening quote in this essay, "foul is fair and fair is foul," they create a direct correlative to the "filthy air" that surrounds all of the characters on the Renaissance stage as well as the imagined space in the play. In some historical understandings of the four elements, as in Hebrew, air bound the other three together and created causal relationships between them.[15] This raises questions about whether the metaphoric language of disease throughout the play can be seen as a literal interpretation of early modern notions of medicine and disease.

The contagious aspects of theater, poetics, and the body figured in *Macbeth* as—to return to Cole's description of the play—an "epidemiological horror,"[16] structure the relationship between the witches and disease,[17] and invite ecological relationships between poetic mediation and medical epidemic. In the play, the witches' prophecy to Macbeth and Banquo serves as an infection of the entire ecosystem, creating what Macduff refers to as "nation miserable! / With a untitled tyrant bloody-sceptred," and raising the question "When shalt thou see thy wholesome days again" (4.3.103-105). Once the seeds of ambition and power are planted, the country suffers, as Ross renders it in the same scene:

> Alas, poor country,
> Almost afraid to know itself. It cannot
> Be called our mother, but our grave. Where nothing,
> But who knows nothing, is once seen to smile;
> Where sighs, and groans, and shrieks that rend the air,
> Are made, not marked; where violent sorrow seems
> A modern ecstasy. The deadman's knell
> Is there scarce asked for who, and good men's lives
> Expire before the flowers in their caps,
> Dying or ere they sicken (4.3.164-173).

These lines attest to the effect of health on the nation, but the ever-present question is: do these feelings stem from the witches' prophecy?

In Macbeth's letter to Lady Macbeth, he outlines their prophecy to her and then states, "When I burned in desire to question them further, they made themselves air, into which they vanished" (1.5.3-5). Macbeth describes the witches' exit from the state as not just a vanishing act, but instead a dissolving *into* air, an extension beyond the boundedness of the body. Their corporeal transgressions between form mirror the structural design of their lines. The porosity in the geohumoral definition of the early modern human body left it vulnerable to corrupting agents that could permeate the barriers of bodies, including both the physical and moral of illness, and here I suggest a two-way influence where the witches' words influence the state of the environment. Lady Macbeth responds to Macbeth's letter by soliloquizing, "Thou wouldst be great, / Art not without ambition, but without / The illness should attend it" (1.5.18-20). Lady Macbeth demonstrates the metaphoric use of illness and disease in early modern conceptions of morality. To behave "badly" or in "ill" ways leaves the bodily humors out of balance.[18]

The close proximity between these two modes of contagion may be related to King James's views on the occult and illness in his treatise on witches, *Daemonologie*. Looking back to James I's writing on the themes Shakespeare presented him with during Jacobian performances of *Macbeth* will help better situate the themes of this essay. King James I was king of England when *Macbeth* was first performed in 1606. Prior to Shakespeare's play "witchcraft was not only a frightening danger; it was also a wonderful show."[19] Scholars have recently discovered that the lines Shakespeare's witches speak were most likely taken from Thomas Middleton's *The Witch,* and the lines themselves were believed to be real spells and incantations from the Middle Ages.[20] Through a more ecocritical approach, *Macbeth*'s representation of the interstice between witches and illness provides an entry point into considering the relationship between power and the environment.

Even though the witches have a hand in the plot development of the play, as Greenblatt astutely points out, "though many of the demonic powers listed by the Scots [The King's Men] as the inventions of poets are alluded to in *Macbeth*, it is oddly difficult to determine what, if anything, the witches actually do in the play."[21] This enduring uncertainty about the witches guides key

concepts in this article. While the witches are materialized on the stage, early modern scholarship struggles with an ongoing conundrum about how to interpret them in relation to Macbeth's murderous and rebellious actions. Greenblatt acknowledges at the end of the chapter that, of course, the witches do have a part in the treasonous plot; however, "*Macbeth* leaves the weird sisters unpunished but manages to implicate them in a monstrous threat to the fabric of civilized life."[22] The sisters present many layers of confusion: their gender, their relationship to the environment, and the legitimacy of their own prophesizing. They consistently move between boundaries, exceeding possibilities and transforming their bodies as they go.

The dimensions of the bodies politic and natural are tied to the ways in which the witches' prophecy becomes a pathogenic actant that penetrates the boundaries of the material body and eventually affects the surrounding environments. Christian theology and epidemiology intersect in Jonathan Gil Harris's reading of early modern witches' utterances. By his reading, the witches radically alter the course of Macbeth's life through the animating language of illness.[23] The feminine mouth here acts a point of "access" where the devil can enter through an air of possession and circulate throughout the body. The containment of the tongue, mouth, and devil in the feminine body makes the ideal site of overlap between political ideology, contamination, and theology. Importantly, Harris makes a connection between language and materiality: "The witch's language was thus doubly physical. Not only did it intervene in and transform the material world; by resorting to 'unknowne' tongues, 'without understanding,' it privileged the materiality of utterance over the ineffability of reason, the carnality of the signifier over the spirt of the signified."[24] Harris asks where the source of moral corruption and infection emerges and how it is allowed to continue throughout the play without a cure. Lady Macbeth provides one answer to this as she takes the place of the witches and furthers the language and corporeal effects of infection in the developing murder plot against Duncan.

While ongoing debates persist about the function of witches' prophecy in relation to Macbeth's murderous ambitions, Harris's account of witches in early modern thought sees their utterance as reorienting the will and directions of Macbeth and Lady Macbeth.

One prime example of this is in Act 1, Scene 5 during and after Lady Macbeth's soliloquy:

> Come, you spirits
> That tend on mortal thoughts, unsex me here,
> And fill me, from the crown to the toe, top full
> Of direst cruelty! Make thick my blood,
> Stop up the access and passage to remorse,
> That no compunctious visitings of nature
> Shake my fell purpose, nor keep peace between
> The effect and it. Come to my woman's breasts
> And take my milk for gall, you murd'ring ministers,
> Wherever in your sightless substances
> You wait on nature's mischief! Come, thick night,
> And pall thee in the dunnest smoke of hell,
> That my keen knife see not the wound it makes,
> Nor heaven peep through the blanket of the dark,
> To cry, "Hold, hold" (1.5.36-52).

Peter Stallybrass's interpretation of this speech in "*Macbeth* and Witchcraft" situates Lady Macbeth as replacing the role of the witches through her unsexing invocation of the spirit.[25] After the witches have willed Macbeth toward power through deceit and murder, Lady Macbeth's spellbinding soliloquy emphasizes a porosity between the body and the environment. She apostrophizes in order to both unsex herself and take the milk from her breasts. Through her invocation, the boundary between the material and ethereal breaks down, eventually resulting in a "disease of the mind" when she perceives her hands as being permanently stained by blood. As Stallybrass insists, by entering the metaphysical dimension, Lady Macbeth implicitly "subverts patriarchal authority in a manner typically associated with witchcraft."[26] Her subversion of gender requires a look to the more ecological relationship to her surroundings. It is only through her call to the "thick night" that she accesses the spirit. The thick night air which Lady Macbeth invokes returns her from the supernatural to the natural. The entry point into the spirit comes through the opacity of the air, the "smoke of hell" and the "blanket of the dark." While Lady Macbeth and the witches arguably bend the will of Macbeth, their power relies on the geohumoral influences of the environment. When she calls upon the "murd'ring ministers" in "sightless substances," this alliterative spirit is defined in terms of the supernatural or the

air. The air, then, leads to "nature's mischief," echoing the inversion present in the witches' initial lines in the first act and scene: "foul is fair and fair is foul." The "agents" could be natural, physical agents that perform the requested stripping of milk from her material body. This is not a spiritual changing, but instead, an alteration of her material body.[27]

Infection consistently materializes in different forms throughout the play, so much so that a doctor is called to diagnose Macbeth and the current state of the body politic.[28] In Act 4, Scene 3, Banquo and Macduff discuss the fallen state of Scotland under Macbeth's reign. While they are expressing their discontent, a doctor enters on stage and diagnoses the king's state:

Malcolm: Well, anon. *(To Doctor)* Comes the king
Forth, I pray you?

Doctor: Ay, sir. There are a crew of wretched souls
That stay his cure. Their malady convinces
The great assay of art, but at his touch,
Such sancity hath heaven given his hand,
They presently amend.

Malcolm: I thank you, doctor
Exit DOCTOR

Macduff: What's the disease he means?

Malcolm: 'Tis called the Evil.
A most miraculous work in this good king,
Which often, since my here remain in England,
I have seen him do. How he solicits heaven,
Himself best knows. But strangely visited people,
All swol'n and ulcerous, pitiful to the eye,
The mere despair of surgery, he cures,
Hanging a golden stamp about their necks,
Put on with holy prayers. And 'tis spoken
To the succeeding royalty he leaves
The healing benediction. With this strange virtue
He hath a heavenly gift of prophecy,
And sundry blessings hang about his throne
That speak him full of grace" (4.3. 140-59).

Initially, when explaining his diagnosis, the doctor refers to "souls" inhibiting his recovery. As spirits animated all things in the Great Chain of Being, the early modern conception of the body leaves it vulnerable to infectious influence or corruption in the form of

"Evil." In the Arden Shakespeare edition of *Macbeth*, the footnotes define the "Evil" as the King's Evil otherwise known as scrofula. This disease is "a tubercular infection of the lymph nodes, swollen, or diseased glands of the neck."[29] According to the Arden footnotes, "'Touching' for the Kings Evil by the monarch, who was believed during the medieval period and up to the eighteenth century in England and France to possess miraculous powers of healing, was ascribed first to Edward the Confessor, and also practiced by King James."[30] The proposed tradition of a sovereign cure through touch, however, is impossible for Macbeth as the disease dwells within him.

Malcolm's lines point to the king's belief in his own, divinely influenced, ability to cure. However, Malcolm reaches an inconclusive end in his speech on the king's ability to cure. He praises the monarch as the cure, but since Macbeth is the infected, this leaves any cure impossible for the entire ecosystem of the play. The impossibility of curing the play's disease was predicted earlier by Lady Macbeth, who states, "Things without all remedy / Should be without regard: what's done is done" (3.2.12-13). By this logic, the king acts as a failed curing conduit between the human and the divine. Because of his actions, he cannot cure the infected body politic. Taking into consideration the Nietzschean social body as a model for sovereign power,[31] Scrofula's position in the lymph nodes on the neck becomes important. If we are to consider the head of the body as symbolic of the sovereign and the neck as that which connect the rest of the social body or his kingdom, scrofula is the metaphorical break or wound between Macbeth and Scotland.

The impossibility of a cure for an infected nation drives the final act of the play, or as Marjorie Garber claims:

> In the fifth act of the play the language of disease is everywhere. Macbeth asks the Scottish doctor to 'cast the water of my land' and 'purge it.' Lady Macbeth is ill, and her husband demands, impatiently, 'Canst thou not minister to a mind diseased…?' (*Macbeth* 5.3.42). But the 'king's evil' that afflicts Macbeth is not so easily cured, because he is himself the sickness in the state, the disease that must be purged.[32]

No scene in the play better encapsulates this realization of infection with no possible cure than Act 5, Scene 1 when the

doctor encounters Lady Macbeth sleepwalking and describing her stained hands that mark her disease: "Here's the smell of blood, still. All the perfumes / of Arabia will not sweeten this little hand. Oh, oh, oh!" (5.1.44-45). Returning to my earlier point on smell and bodily incorporation, Lady Macbeth smells her sins through her bodily sensations. Just as I argue that her physical space and porous body invite the spirit in the first act of the play, here Lady Macbeth has her moment of recognition through her senses and her body. As Garber points out about Macbeth's similar reaction to his stained hands in Act 2, Scene 2, "Rather than being cleansed, his bloody hand will infect and color the world." Garber explains their different directions in the play: "As Macbeth moves downward toward inhumanity and loss of affect, Lady Macbeth moves upward, toward feeling and horror."[34] Only at this moment in the play, now that this infection has spread, does Lady Macbeth have her moment of recognition. While Macbeth has his moment of recognition early in the play, he seems to not be affected by this manifestation of guilt like Lady Macbeth.

As Lady Macbeth's anxieties manifest through her sleepwalking and visions of stained hands, the question of the border between the spiritual and material comes into question. The doctor's attempted diagnosis and explanation to Macbeth further prove that the circulation of disease has festered in their bodies and the state over the course of the play and there is no hope for purgation. After Lady Macbeth leaves the doctor in Act 5, Scene 1, he hopelessly responds, "Foul whisperings are abroad. Unnatural deeds / Do breed unnatural troubles. Infected minds/ To their deaf pillows will discharge their secrets. / More needs she the divine than the physician" (5.1.63-66). After her overwhelming recognition that her hands, like Macbeth's, will be forever stained, the doctor diagnoses her illness as one that is spiritual.[35] Earlier when Lady Macbeth invokes the spirit, she begs for her body to physically transformed, and now this has happened within her mind. The only hope for both Macbeth and Lady Macbeth is the divine.

The spiritual affects the material throughout the play, but what if Lady Macbeth's illness could be relocated to the material body? The King's Evil, or scrofula, is a physical ailment that by early modern medical theory could only be cured by the divinely infused touch of the monarch. However, even as a historical misreading,

could Lady Macbeth's disease of the mind, instead be just that—a materialized illness that affects the social and physical landscape of the play? Lady Macbeth's body is marked and recognized throughout. This entanglement of religious and medical discourses creates a rich overlap, inviting a reading of her body that takes into account not only the spiritual but also the lasting material effects.

Macbeth's conversation with the doctor about Lady Macbeth's illness is about purgation and the early modern approach to healing, explained through the ecological images of landscape, water, and plants:

Macbeth: Cure her of that
Canst thou not minister to a mind diseased.
Pluck from the memory a rooted sorrow,
Raze out the written troubles of the brain
And with some sweet oblivious anecdote
Cleansed the stuffed bosom of that perilous stuff
Which weighs upon the heart

Doctor: Therein the patient
must minister to himself.

Macbeth: Throw physic to the dogs, I'll none of it.
(To Seyton) Come, put mine armor on, Give me
my staff.
Seyton, send out—Doctor, the thanes fly from me.
—(to Seyton) Come, sir, dispatch—if thou couldst,
doctor,
cast
The water of my land, find her disease
And purge it to a sound and pristine health,
I would applaud thee to the very echo.,
That should rhubarb, cyme, or what purgative drug,
Would scour these English hence? Hear'st thou of
them? (5.3.39-56).

In Macbeth's words before traveling to Birnam Wood where he meets his death at the vengeful hands of Macduff, Lady Macbeth must be cured of "thick coming fantasies" (5.3.38). His language throughout confuses Lady Macbeth's body and health with the material landscape of Scotland, particularly when he states, "Pluck from the memory a rooted sorrow" and "the water of my land, find her disease/ And purge it to a sound and pristine health." These three lines in particular use Lady Macbeth to show a blurred

boundary between the bodies natural and politic. After the caesura in the center of the line, the noun switches to "her" in order to diagnose her disease. This division in the line between the land and Lady Macbeth, may separate but it also makes them dependent on one another at the level of the sentence. If "water" does refer to "the analysis of urine,"[36] then in the end, Lady Macbeth's body is blurred with the landscape of Scotland. Macbeth's confusion is noted in this passage through his orders, which seem to be directed at Seyton, but which are ultimately unclear. When he lists plants used for purgation in the early modern medicinal practice, the oversaturation of medical diagnosis and cure in the sentence ends with the word "scour," meaning "to purge."

Macbeth functions as an outbreak narrative where the characters are excessively saturated with medical discourse from the beginning to the end of the play. The frequency of language on contagion increases as the play continues, so that by the fifth and final act, their words are as diseased as their spirits, minds, and bodies. The political state of Scotland itself becomes a site of infection through Macbeth and Lady Macbeth's treasonous plot. Looking at air and circulation along with the witches' relationship to their surrounding environment demonstrates the loose barriers between the corporeal body and the environment. The witches' prophecy given to Macbeth at the beginning of the play never fully leaves the play, but instead festers within Macbeth, infecting him and Lady Macbeth. The witches' relationship to their environmental surroundings is fluid and is based on historical beliefs about their ability to control the weather, ruin crops, and poison the environment. These concepts circulate through an infectious poetic language. There is a heightened sense of ecology throughout the play where human interaction with things, landscape, medicine, disease, and each other feels more palpable, and their relationships become incredibly porous. In some instances, the environment responds to violence before the human. In the lines immediately preceding Macduff's emergence to announce Duncan's murder, Lennox describes the unsettled landscape,

> The night has been unruly: where we lay
> Our chimneys were blown down and, as they say,
> Lamentings heard in the air, strange screams of death,

> and prophesying, with accents terrible,
> Of dire combustion, and confused events
> New hatched to th'woeful time. The obscure bird
> Clamoured the livelong night. Some say the earth
> Was feverish and did shake (2.3.54-61).

Lennox identifies the "feverish" earth during unruly—or disordered—night, pointing out that the environmental response to violence serves as a precursor to the characters' responses to Duncan's death. The "lamentings" and "strange screams of death" travel through the air much like the witches melting into air. These lines alone reassess the relationship between the human and the non-human, where words, things, and environments have agentic and contagious qualities. Prophecy, by this ecocritical account, takes Macbeth's lust for power as sovereign of Scotland to a different theoretical location where the environment of Scotland reacts to the power of tyranny that Macbeth begins to impose and this reactionary infection discursively and literally affects the entirety of the ecosystem of the play.

Notes

1. All quotes from Shakespeare are from *The Norton Shakespeare,* ed. Stephen Greenblatt (New York: Norton, 2015).

2. Lucinda Cole, *Imperfect Creatures: Vermin, Literature, and the Sciences of Life, 1600-1740* (Ann Arbor: University of Michigan Press, 2016).

3. Gail Kern Paster, *Humoring the Body: Emotions and the Shakespearean Stage* (Chicago: The University of Chicago Press, 2004).

4. The reason for this difference has been argued extensively. Authorship and print history are uncertain because of the included song with Hecate in the 1623 folio edition, now been believed to have been written by Thomas Middleton because of its appearance in his play *The Witch.* I do read the play with this historical debate in mind, but also read the formal differences between the witches and other characters as largely significant for their unique ecology.

5. See Margaret Healy, "Anxious and Fatal Contacts: Taming the Contagious Touch," *in Sensible Flesh: On Touch in Early Modern Culture,* ed. Elizabeth D. Harvey (Pennsylvania: University of Pennsylvania Press, 2002) for concepts of epidemics and disease transmissions: "Intimately implicated in the transmission from body to body of material, supernatural and moral 'evil qualities' circa 1600, 'touch' was undoubtedly experienced as the most hazardous of the senses and was the source of considerable individual and collective anxiety. Indeed, intense fear about harmful contagious bodies and their effects was rife in the early modern period, producing its own epidemic of discursive speculation about where harmful 'venoms' originated, how they were 'caught,' and how best to avoid them" (22).

6. See Priscilla Wald, *Contagious: Cultures, Carriers, and the Outbreak Narrative* (North Carolina: Duke University Press, 2007), where Wald describes contagion's role in narrative by saying that "disease emergence dramatizes the dilemma that inspires the most basic human narratives: the necessity and danger of human contact" (2).

7. See Mary Douglas, *Natural Symbols: Explorations in Cosmology* (New York: Routledge, 1996) which defines sacred contagion as "a moral theory of connections and causes" (xv).

8. For more on affect and contagion, see Mary Floyd-Wilson, *Occult Knowledge, Science, and Gender on the Shakespearean Stage* (Cambridge: Cambridge University Press, 2013); for histories of science and magic during the Middle Ages and Renaissance across Europe, see Gary Waite, *Heresy, Magic, and Witchcraft in Early Modern Europe* (New York: Palgrave Macmillan, 2003) and Keith Thomas, *Religion and the Decline of Magic* (London: Penguin Books, 2003).

9. Mary Floyd-Wilson, "English Epicures and Scottish Witches," *Shakespeare Quarterly* 57.2 (2006) helps clarify the different ethnic and geohumoral concepts of the effects of the environment on the individual, particularly the differences between Scottish and English environments on the individual: "as the health manuals and medical treatises of the period repeatedly state, temperance was achieved by properly managing the non-naturals: air, diet, sleep and waking, rest and activity, excretion and retention, and the passions [. . .] moreover the non-naturals functioned interdependently" (134).

10. See Thomas Nashe's *Summer's Last Will and Testament* (London, 1600).

11. Margaret Healy, "Body Regimens and Fear of the Beast," in *At the Borders of the Human*, ed. Erica Fudge, Ruth Gilbert, and Susan Wiseman (New York: St. Martin's Press, 1999): "if the body is insufficiently disciplined through proper regimen, it is possible to catch disastrous moral contagion (which can lead to domination) in the same manner as a cold or plague—through 'evil,' tainted air" (62).

12. Lucinda Cole, "Of Mice and Moisture: Rats, Witches, Miasma, and Early Modern Theories of Contagion," *Journal of Early Modern Cultural Studies* 2.10 (2010): 66. Additionally, witches were often compared to Eve as the causes of disease in the world as Harris discusses. Jonathan Gil Harris, *Foreign Bodies and the Body Politic* (New York: Cambridge University Press, 1998), (118).

13. The exogenous and endogenous models for disease emerge during this period, both attempting to explain the high rates of infection due to the plague and disease outbreaks primarily occurring in the south of London, the same location as the theaters. For more information on this, see Harris's *Foreign Bodies and the Body Politic.*

14. Wald defines outbreak narratives as "follow[ing] a formulaic plot that begins with the identification of an emerging infection, includes discussion of the global networks throughout which it travels, and chronicles the epidemiological work that ends in its containment" (2). In much the same way that Wald describes the 20th century anxieties around infection and disease with the rise of bacteriology and the identification of how diseases emerge and infect, the rhetoric around the early modern theater often utilizes these metaphors of illness to evoke what Susan Sontag's foundational essay calls "Illness as Metaphor," particularly in critiques of the theatres such as Stephen Gosson's *The School of Abuse* (1579) and

Plays Confuted in Five Actions (1582). Susan Sontag, *Illness as Metaphor and AIDS and Its Metaphors* (Picador, 2001).

15. Gary Waite, *Heresy, Magic, and Witchcraft in Early Modern Europe.* (New York: Palgrave Macmillan, 2003).

16. Cole, "Of Mice and Moisture," 72.

17. Francis Dolan, D*angerous Familiars: Representations of Domestic Crime, 1550-1700* (New York: Cornell University Press, 1994) analogizes the relationship between witches and disease: "Like our conception of the virus, alien but inside, hostile but included, the construction of the witch attempted to describe a threat perceived as not precisely locatable, a consequence of the unfixed boundary between self and other. This conception of witches as invading and undermining their victims' bodies corresponds to the cultural of witches as inside (well-known members of the community and near neighbors) and outside (perceived enemies and sources of threat). The fear of intimacy crucial to representations of spousal and master-servant conflict here extends outside the household and beyond the skin" (184).

18. Noga Arikha, *Passions and Tempers: A History of the Humours* (New York: Harper Perennial, 2008).

19. Stephen Greenblatt, *Will in the World: How Shakespeare Became Shakespeare* (New York: Norton, 2016), 348.

20. Stephen Greenblatt dedicates a chapter, "Bewitching the King," to looking at Shakespeare's sources and inspiration for *Macbeth*. Drawing from King James's own three-part dialogue *Daemonologie* and the famous witchcraft manual, the *Malleus maleficarum,* Shakespeare tapped into the fears and anxieties of King James himself through "Ambiguous and deceptive prophecies; seductive pleasures; airy, insubstantial illusions—these are among the devices witches employ, James thought, when they set out to destroy someone." Greenblatt's identification of the "airy" illusions with "deceptive prophecies" will guide the direction of this paper. Greenblatt, *Will in the World,* 346.

21. Ibid, 354.

22. Ibid, 355.

23. Harris, *Foreign Bodies and the Body Politic,* 118. Harris analyzes witches' materiality and language in relation to prophecy and anti-Christian philosophy. Harris points to the mouth and tongue as two specific physical parts of witches' feminized bodies in order to interpret their contagious aspects. Early moderns regarded the feminine tongue as poisonous: "From the author of *The Anatomy,* the medicinal property of the woman's tongue is, in a certain sense no different from its poisonous one." Harris' second major point about the mouth applies to the witches in *Macbeth:* "The witch's mouth was frequently regarded as a dangerous point of access through which the devil could poisonously infiltrate bodies natural and politic" (118).

24. Ibid, 120.

25. Peter Stallybrass, "*Macbeth* and Witchcraft" in *Focus on Macbeth,* ed. John Russel Brown (Boston: Routledge, 1992): 197.

26. Ibid, 197.

27. Heather Love has read in "Milk" specifically as a queering of Lady Macbeth's body. Heather Love, "Milk," in *Shakesqueer: A Queer Companion to the Complete Works of Shakespeare,* ed. Madhavi Menon (Durham and London:

Duke University Press, 2011). Marjorie Garber describes the distinction between the physical and the metaphysical spirit of Lady Macbeth as "physically a woman but, as she claims, mentally and spiritually a man." Marjorie Garber. "*Macbeth*." *Shakespeare After All.* (New York: Anchor, 2012): 713.

28. Shakespeare and other playwrights often make humorous use of doctors and physicians in the period, making sure to emphasize their uselessness and even their exploitative features as in Jonson's *Volpone*. While this satirical rendering of doctors is common, I wonder about how a satire of a doctor in a tragedy reads differently in metaphoric and literal readings.

29. Frank Barlow, "The King's Evil," *English Historical Review* 95 (1980): 3.

30. William Shakespeare, *Macbeth* (New York: Bloomsbury Arden Shakespeare, 2015): 262.

31. Sara Ahmed, *Willful Subjects* (North Carolina: Duke University Press, 26, 102-103).

32. Garber. *Shakespeare After All,* 718.

33. Ibid, 717.

34. Ibid, 712.

35. In the Arden *Macbeth*, the notes clarify the line "more needs she the divine than the physician," which points out the limitations of the physician. This interpretation comes from the commonly known phrase "where the Philosopher ends, the Physician begins; and he ends (they say) where the divine begins" from the 1619 *Purchas his Pilgrim*. While the doctor's diagnosis is clear and the exegetical reading provides an excellent historical referent to the limitations of the human in relation to the divine, where does the material body fit into this schema?

36. The purgation of "water" is defined as "urine" in the Yale and Arden editions of the play, but then in the same line, water is specifically connected to the land (282).