

“The Teeth of All Rhyme and Reason”: Shakespeare's Dental Fixation¹

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For there was never yet philosopher
That could endure the toothache patiently
Much Ado About Nothing (4.2.35-6)

Much has been written about the breadth of knowledge that William Shakespeare displays in his work, allowing scholars to combine historical and biographical details to speculate on his impressive range of intellect. While numerous articles discuss the relationship between the Bard and the medical field,² comparatively less attention has been paid to his discussion of dentistry. This article aims to provide a holistic look at the various components of dental care that were on the audience's mind at the time: the numerous factors that negatively impacted the quality of one's teeth, leading to toothaches; attempts to clean teeth to stave off their removal; the persistence of halitosis; and the supernatural relevance ascribed to toothaches, natal teeth, and other dental abnormalities, such as harelips. Comparatively few scholars have discussed the expansive role and influence of dentistry in the early modern period in depth, and this article looks to compile the disparate research into a concise view of the problems plaguing Shakespeare's audience. Additionally, without speculating on how much personal experience Shakespeare had with the unsettling dentistry practices of the time, this article discusses how he reflects his audience's understanding of these issues throughout his canon.

Nearly every play³ mentions teeth in a variety of applications, and he ultimately draws a correlation between one's dental condition and social status: from the toothpicks used by the upper class, to the low opinion held of tooth-pullers, to the maliciousness ascribed to Richard III because of his natal teeth. Shakespeare's works reveal a communal dental experience that united audience members from the Queen to the peasants, yet still reaffirmed cultural differences in how they did—or did not—address their dental problems.

Since the Elizabethan era was rife with dental issues—tooth decay affected most early modern adults⁴—Shakespeare was acutely aware of the physical symptoms of the sufferers. Examining the overlap between the historical, dental realities of the time and how they are represented in Shakespeare's plays reveals a correlation between class, dental condition, and the tools available for rectifying dental issues. Many of Shakespeare's characters directly address dental problems as an indicator of class; the lower classes have limited access to dental tools, such as toothpicks, and are often equated with having poor dental hygiene. While higher-class members of the audience also struggled with dental concerns, their on-stage counterparts are often spared from similar pains. Even Richard III's natal teeth become a mythologized representation of his destined malevolence, one of many examples of teeth as a symbol for strength, whether literal or metaphorical. Tapping into existing superstitions and social stigmas concerning teeth, Shakespeare demonstrates an understanding of the spectrum of dental problems (and their equally dangerous solutions) to reflect a nuanced look at the performative overlap between class and dental hygiene.⁵

Toothaches

Much like his understanding of the human body and medicine, Shakespeare demonstrates a deft awareness of an array of dental issues, as dentistry was not yet a reliable stand-alone trade. Nicholas Culpeper's (1616-1654) posthumously published writings, particularly the section on treating ailments for the mouth, teeth, and gums, outline contemporary medical practices.⁶ Though he was born and practiced after Shakespeare's death, his compiled remedies reveal the extent to which doctors were diagnosing and

treating dental issues into the seventeenth century. In Elizabethan England, there were very few remedies for dental infections, which were both painful and dangerous. From 1583-1599, nearly two percent of the deaths reported by St. Botolph's parish—located near Shakespeare's Globe Theatre in London—were dental-related and these problems were the second largest cause of death in children under the age of one.⁷ In Shakespeare's works, toothaches are not fatal but are a source of physical discomfort with limited remedies. They were such a visible part of society that a change in tomb design in the early seventeenth century, from an “image of the deceased [...] lying on its back praying up to heaven” to one in which they “lie on [their] side gazing at onlookers and supporting the head on one hand” became known as the “toothache position.”⁸ When Iago tells Othello, “being troubled with a raging tooth, / I could not sleep,” it is a believable premise for overhearing the alleged sleep-talking Cassio (3.3.417-8).⁹ This correlation between dental discomfort and insomnia is also in *Cymbeline*. When Posthumus faces execution, the jailer philosophically acknowledges, “he that sleeps feels not the toothache” (5.5.142-3). In *Much Ado About Nothing*, Benedick explains away his moodiness with the excuse, “I have the toothache” (3.2.20). While he is not believed and instead taunted for being in love, the short conversation reveals much about the commonality and discomfort of toothaches at this time, as well as the suspected causes. When Don Pedro asks Benedick, “What? Sigh for a toothache?” Leonato adds, “Where is but a humor or a worm” (3.2.24-5). Shakespeare refers to the Elizabethans' belief that the primary cause of toothaches and decay was either an excess of phlegm—one of the four humors—or worms inside the teeth.¹⁰

Treatments for a toothache caused by an upset to the humors often included bloodletting¹¹ (or bleeding) of the gums and other body parts.¹² Depending on their suspected cause, toothaches were also treated with various mouth rinses, including vinegar. Although vinegar had been recognized as an acidic danger to teeth long before the Elizabethan era, killing a potential infection was worth the risk.¹³ Shakespeare uses this consumption of vinegar, also referred to as “eisell,” as an analogy in Sonnet 111, writing, “like a willing patient I will drink / Potions of eisell 'gainst my strong infection” (9-10). The common treatment for “toothworms” was burning henbane, a narcotic in the nightshade family, to smoke

out the worms, which no doubt alleviated pain “and the soporific effect probably helped blur the fact that seedbuds of henbane, when burned, leave an ash resembling worms,” seemingly confirming the toothworm theory.¹⁴ Though many had discounted this theory by the seventeenth century, other superstitious beliefs became associated with the cause. Benedick’s toothache, for example, is fitting since those in love were often thought to be afflicted with toothaches.¹⁵ However, this also carries negative implications, as toothaches were associated with cuckoldry, when “the metaphorical appearance of a cuckold’s horns on his head is compared to the process of an infant cutting their teeth.”¹⁶ The diagnosed causes were many, both physical and emotional, while accuracy and effective treatment were only sporadic. Regardless of the cause, many Elizabethans considered the manageable agony of toothaches preferable (and hopefully temporary) compared to the equally painful and dangerous tooth removal.

For most social classes, invasive dentistry was generally handled by either barbers or surgeons.¹⁷ One common remedy, which remained under the jurisdiction of barbers until the twentieth century, was pulling or “drawing” teeth. When Benedick mentions his toothache, Don Pedro’s immediate response is “Draw it” (3.1.21). After Benedick responds with “Hang it!,” Claudio jokes, “You must hang it first and draw it afterward” (3.1.22-3), a reference to the teeth that were removed and hung in windows to advertise dental services.¹⁸ However, the dental field was full of practitioners of various skill, ranging from those trying their best but limited by the technology of their time, to those who were “incompetent,” to quacks and charlatans preying on the vulnerable.¹⁹ Shakespeare’s sole overt reference to a “tooth-drawer” is an insult in *Love’s Labour’s Lost*. Holofernes’s face is, they mock, one that resembles St. George’s imprinted on a lead brooch “worn in the cap of a tooth-drawer” (5.2.688). This is a clear reference to the dress of the “tooth-drawers” of the time—the more affordable option for those who could not go to the barber-surgeon—who often wore such a hat, as well as a belt ornamented with teeth they had pulled.²⁰ Blacksmiths also pulled teeth for sufferers on a budget, though they did not dress the part. Shakespeare reinforces existing stereotypes that tooth-drawers were foppish, lower-ranking members of society who often relied on drawing attention

to themselves with their outlandish clothes.²¹ Antithetical to the typical aristocratic brooch-wearers, those who pulled teeth were hardly respected, not least because there was a booming market for snake oil salesmen to pitch dental remedies. In addition to the risk of damage to healthy teeth, gums, and jaw bones, having teeth pulled was incredibly painful, as referenced in *Sir Thomas More*.²² When Jack Falconer vows to avenge himself on his barber, he promises it will “be worse [...] than ten tooth-drawings” (9.258-9).

Blackened Teeth

Even Queen Elizabeth I was not immune from dental problems, who was described in contemporary accounts as having yellow and missing teeth.²³ Other accounts confirm that she suffered from pyorrhea, or periodontitis, causing the blackening of her teeth, which lead to the loss of her front teeth, and her reliance on cloth to fill out her cheeks.²⁴ However, Elizabeth, the highest-ranked person in England, also set social trends, including her trademark pale complexion and red cheeks. Makeup used by women, including the Queen and actors playing women,²⁵ was made up of “Mercury, lead and arsenic-based compounds.”²⁶ While the white lead and mercury gave the applicant the desired physical appearance, there was a dangerous list of side effects, including receding gums and loose teeth that acquired a grey film.²⁷ As Morris Tilley reports from contemporary accounts of the time, there was equal difficulty in working to obtain white teeth and white skin.²⁸ In a time of limited dental remedies, the sufferers were often dependent on masking the problems instead of addressing them; hence, instead of treating them, blackened teeth eventually became fashionable,²⁹ reflecting one’s financial access to items like “sugarplum, coffee, and tobacco” that stained the teeth.³⁰ As such, Elizabethans would either intentionally let their teeth rot or blacken them with soot to mimic the aristocratic look. While tooth cleaning was available from barber-surgeons, their tools were limited to toothpicks, cloth, and a whitening solution made from citric acid; unsurprisingly, this ate away at the enamel and led to further tooth decay.³¹ Additionally, between the side effects of scurvy³² and the accessibility of refined sugars (for those who could afford to indulge), the rate of decaying teeth increased

exponentially in the 1600s.³³ Fortunately, after Elizabeth died in 1603, the blackened-teeth fad faded. In *Henry VIII* (c.1613), Chamberlain says of the Cardinal that there is “No doubt he’s noble— / He had a black mouth that said other of him” (1.3.57-8). While the meaning of “black mouth” here seems to imply one who lies, it could also be a coy remark to the strange fashion statement that determined nobility only twenty years earlier. It would have been those with a “black mouth” who ultimately determined who was or was not “noble.”

Additionally, Elizabethans suffered from a large outbreak of syphilis (or “pox,” a favorite topic of Shakespeare’s),³⁴ accounting for nearly half of all hospitalizations, with side effects that included the loss of cartilage from the nose and palate.³⁵ While some could afford to wear a false copper nose to address the former, artificial palates could assist but also exacerbated the loss of the roof of one’s mouth, and there was little cure for those who lost the ability to speak altogether.³⁶ The treatment for syphilis was *also* mercury: applied to the skin, taken orally, or used as a “fumigant” in “mercury vapor treatment,” where the patient would inhale the fumes from heated mercury,³⁷ not dissimilar from the fumigation process for driving out supposed toothworms. As many have noted, this led to the popular saying at the time, “A night with Venus, a lifetime with Mercury.”³⁸ Not surprisingly, the side effects of the mercury treatment also exacerbated problems with the mouth, including “sore mouth and throat, sometimes involving ulceration, [and] copious salivation.”³⁹ This is why Elizabethans would often “[equate...] loose teeth with loose morals.”⁴⁰ Also, various emetics were a common treatment for most medical maladies, which led to the “acidic erosion of the enamel.”⁴¹ Despite the ability to look the other way at the Queen’s bad teeth, Elizabethan society still recognized dental hygiene as an attractive physical attribute, as seen in *Love’s Labor’s Lost* when Boyet is described as having “teeth as white as whale’s bone” (5.2.331). Even in *The Winter’s Tale*, when Florizel describes Perdita’s hand as being “white as [... an] Ethiopian’s tooth” (4.4.366-7), Shakespeare uses black skin to establish a contrast to appealing white teeth.⁴² While historically dental issues were a social equalizer suffered by the rich and poor alike, there is a clearer social divide in Shakespeare’s plays. Characters like Coriolanus place a greater social emphasis on

hygiene, demanding that the citizens “wash their faces / And keep their teeth clean” (2.3.60-1) before they approach him to ask for his assistance. However, there were limited options for doing that.

Dental Hygiene

Since using a napkin or one’s fingers to clean one’s teeth was considered poor manners, the enduring dental hygiene aid at this time was the toothpick.⁴³ While rudimentary toothpicks have been used since the evolution of modern humans, by Shakespeare’s time they had become a luxury item of the upper class; made of fine metals or encrusted with jewels, they could be dowry items or worn around the neck on a chain.⁴⁴ Shakespeare refers to this in *All’s Well That Ends Well*, in Parolles’s comical aside on virginity, calling it “out of fashion, richly suited, but unsuitable, just like the brooch and the toothpick, which wear not now” (1.1.155-8). While scholars have used this line to point out that wearing a toothpick was perhaps already an outdated practice by the end of the sixteenth century,⁴⁵ it is difficult to discern because, later in the same play, Lavatch (or the Fool) has observed Bertram “pick his teeth” (3.2.7-8).⁴⁶ Similarly, in *The Winter’s Tale*, the Clown recognizes that Autolycus “seems to be the more noble in being fantastical: a great man, I’ll warrant; I know by the picking on’s teeth” (4.4.753-5). In these two plays, lower-class characters see higher-ranked characters using toothpicks and associate toothpicking with the upper classes. While the aristocracy had more access to dental resources, those of the working class often suffered from the materials related to their occupations. Potters suffered from lead poisoning and painters worked with “noxious substances” that affected their complexion and teeth.

Additionally, several plays also label toothpicks a foreign novelty, as in *King John*, when Philip (the Bastard) imagines a fictional conversation with a “traveller,” specifically noting “his toothpick” (1.1.189-90). In *Much Ado About Nothing*, Benedick demonstrates his loyalty to Don Pedro by performing ambitious tasks, including an offer to “fetch you a toothpicker now from the furthest inch of Asia” (2.1.251-2). Shakespeare’s plays contain potentially contradictory references to toothpicks: somehow both rare, foreign treasures and outdated trinkets of the upper class. But

Robert Collmer argues that the pervasive references to toothpicks in other contemporary writings, not least of all Ben Jonson, reinforce the belief that those of high quality remained tools of the aristocracy, a symbol of one's foreign travel or nationalistic identity, and a keepsake for those who had an "aspiration for gentility."⁴⁷ Just as the handkerchief was a "love-token" that also conveyed "social dignity and bodily hygiene," the same argument could be made for the standing of the toothpick in society.⁴⁸ Lacking access to higher-quality toothpicks, social aspirants relied on those of inferior quality, which Shakespeare's contemporaries recognized led to irritation and infection in the gums, having an inverse effect on one's health and hygiene.⁴⁹ Yet, as their usage became more widespread, they lost their "prestige" by the mid-seventeenth century and eventually became associated with criminality by the twentieth century.⁵⁰

Halitosis

Perhaps the most potent symptom of poor dental hygiene, after the discoloration and loss of teeth, was halitosis.⁵² It is worth noting that another side effect of mercury poisoning (whose rampant usage is discussed above) is bad breath; the same is true for syphilis.⁵³ Whatever the cause, Shakespeare's characters often associate the quality of one's breath with class. *Coriolanus* makes bad breath a running characteristic of the common people who have, per Brutus, "stinking breaths" (2.1.233); per Coriolanus, "breath I hate / As reek o'th' rotten fens" (3.3.119-20); and, per Menenius, "The breath of garlic-eaters" (4.6.99). Throughout the play, Coriolanus cannot disassociate discussing the tributes—"The tongues o'th' common mouth"—or the common people in dental terms, demanding to know from those in power, "You being their mouths, why rule you not their teeth?" (3.1.37). His dismissive attitude toward the people reduces them to being unhygienic and easily manipulated, unlike "the will of the nobility" (3.1.40).⁵⁴ Shakespeare also intrinsically links bad breath and the impoverished, not simply because of their hygiene but also their eating habits. For example, in *Measure for Measure*, Lucio says that Claudio "would mouth with a beggar, though she smelt brown bread and garlic" (3.1.446-7), signaling that it is not just potent foods but the low

quality of the bread which "rapidly turned musty and affected the breath."⁵⁵ Also, it was common for bread to be weighed down with stones to make loaves appear heavier, which damaged teeth when bitten into.⁵⁶ Once again, the references Shakespeare makes must be well-known enough to land with an audience that spanned the full socioeconomic strata. As Danielle Nagler recounts, smells in general "mirrored [one's] inner essence" and directly correlated with a perception of one's lifestyle.⁵⁷

Shakespeare specifies other foods that cause the offensive odor, as in Bottom's advice to the actors in *A Midsummer Night's Dream* to "eat no onions nor garlic, for we are to utter sweet breath" (4.2.38-9), or an aside in *2 Henry VI* that Jack Cade will speak "stinking law, for his breath stinks with eating toasted cheese" (4.7.9-10). This exchange continues, using a play on dental words. When Cade swears that his "mouth shall be the parliament of England," Nick quietly replies, "Then we are like to have biting statutes, unless his teeth be pulled out" (4.7.12-5). In both cases, Shakespeare mixes their metaphorical breath (language) of performers, or those who speak in public, with their bodily breath, implying that the latter can pollute the former. Compare this to Casca's recounting of the aftermath of Julius Caesar turning down the crown, where the plebians "uttered such a deal of stinking breath because Caesar refused the crown that it had almost choked Caesar" (1.2.246-8). Like Coriolanus, Casca associates bad breath, even if only metaphorically foul, with the common folk owing primarily to their encouragement of Caesar's crowning. This is taken a step further in *The Tempest*, when Prospero tells Sebastian that "to call [him] brother / Would even infect my mouth" (5.1.130-1). Here exchanging pleasantries with certain classes or individuals is so distasteful that it can bring about a metaphorical infection. Shakespeare's references to the corruption of words or audiences through the quality of the air is a humorous analogy that relies on an audience's awareness of pervasive bad breath, though he uses it primarily to describe contempt for lower-class characters.

While halitosis remains a derogatory association with the lower classes in Shakespeare, bad breath is also a source of power. Amy Kenny recounts that, in *Julius Caesar*, the stinking breath of the plebeians is a powerful force that enacts change; if bad smells were associated with disease,⁵⁸ their chants infect the body politic and

upend the social order.⁵⁹ Elizabethans were leery of bad smells in general, which they believed could infect them in close-knit public spaces (like the theatre), where they would be more susceptible to diseases, especially the plague.⁶⁰ However, as much as breath often signified rank, smells that permeated one's clothing (such as at a theatrical performance) "erase[d] class distinction; all playgoers emerge contaminated by the stench" of the on-stage blood and pyrotechnics.⁶¹ Specifically, as Bottom's advice above shows, actors were a class often associated with bad smells.⁶² While the scent of the theatre-going experience was a social equalizer, bad breath either signified disease or a lack of basic hygiene. Contemporary accounts specify the difference between bad breath caused by food stuck in one's teeth and a larger problem with humors settling in the mouth, stomach, or lungs.⁶³ Elizabethans utilized various types of "mouth-water," an early version of mouthwash, to address bad breath;⁶⁴ often made from a base of honey or white wine, they were boiled with items as varied as alum, rosemary leaves, flowers, cinnamon, and cumin seeds, depending on the diagnosed cause.⁶⁵ Yet, because of the sugar indulged in by the aristocracy (including in the polish applied to teeth, a useless precursor to toothpaste) and the dental procedures that exacerbated complications or resulted in the loss of teeth, dental issues remained a problem that everyone grappled with—the difference lay in the access to tools and irritants that fell along social lines.

Shakespeare recognizes that bad breath is particularly off-putting from a romantic standpoint, reflected in Sonnet 130: "in some perfumes is there more delight / Than in the breath that from my mistress reeks" (7-8). While "reek" may lack our contemporary meaning, it reinforces an existing comparison between good- and bad-smelling breath. Once again, in *Much Ado About Nothing*, the dental-versed Benedick observes that "if [Beatrice's] breath were as terrible as her terminations, / there were no living near her" (2.1.234-6). Characters (and, by extension, Elizabethans) were aware of the isolating effect of offending breath since Benedick recognizes that even "the North Pole" would not be far enough away from it (2.1.236).⁶⁶ As seen above, Shakespeare names garlic as a specific odorous offender, and it is used again to comical effect in *The Winter's Tale*, where Dorcas asks for "garlic to mend [Mopsa's] kissing with" (4.4.163-4), indicating that her breath

can only be improved by the smell.⁶⁷ Just as Shakespeare lists foods to avoid to preserve one's breath, he also reveals a remedy: "sweetmeats," or candy, which could be used as breath mints. In *Romeo and Juliet*, Mercutio's Queen Mab speech says that ladies whose "breath with sweetmeats tainted are" are "plague[d]" with "blisters" as punishment (1.4.75-6), since attempts to hide offensive breath were often associated with venereal disease.⁶⁸ Similarly, in *A Midsummer Night's Dream*, Egeus lists "sweetmeats" among other elements of "cunning" that Lysander has used to "[filch his] daughter's heart" (1.1.34-6). There is no escaping the pervasive references to bad breath, even poetically, as in *As You Like It*, when Amiens uses the dental analogy to describe the invisible yet powerful wind: "Thy tooth is not so keen, / Because thou art not seen, / Although thy breath be rude" (2.7.178-80).

In *The Two Gentlemen of Verona*, Speed and Lance (as two clowns) assess the virtues and vices of women. When the former offers, "she has a sweet mouth," the latter replies, "That makes amends for her sour breath" (3.1.319-20). This play on words is comical but revealing. "Sweet mouth" can be seen as a synonym for "sweet tooth," with a connection to the discussion of sugar above, but also as a reference to the sweetmeats that were used to compensate for bad breath.⁶⁹ Shakespeare makes several references to "sugared" words,⁷⁰ but in *The Merchant of Venice*, when Bassanio looks upon Portia's portrait, he recognizes her "severed lips / Parted with sugar breath" (3.2.118-9). Whether he is referring to Portia literally or not is unclear, but Shakespeare depicts sweet breath as captivating just as foul breath is unappealing. Just as bad breath (literal or figurative) can contaminate, he uses the opposite motif several times. In *Hamlet*, Ophelia returns the prince's "remembrances," recognizing that they were with "words of so sweet breath composed / As made the things more rich" (Q2 3.1.97-8). Here, she refers to the figurative breath, but there is a correlation between the idea of good/bad breath and the reception of the message. Since the "perfume [is] lost," she requests that Hamlet "Take [them back] again" (Q2 3.1.98-9). Similarly, in *Venus and Adonis*, Shakespeare writes, "For from the stillitory of thy face excelling / Comes breath perfumed that breedeth love by smelling" (443-4). Far from the negative examples above, here one's breath is the appeal that draws Venus in. Similarly, Adonis's

“speech,” comes from a “honey passage” (452) and in *Cymbeline*, Iachimo remarks of the sleeping Imogen, “Tis her breathing that / Perfumes the chamber” (2.2.18-9).⁷¹ Here, rather than needing an external perfume to mask it, her breath is so entrancing that it positively affects the physical space. Notably, these mortal characters with sweet breath are all *aristocratic* women, retaining the social divide that lower classes are associated with foul smells and higher classes with sweet smells.⁷²

Age and the Loss of Teeth

Shakespeare also speaks to an existing spectrum of romantic attractiveness that establishes a correlation between age, marriageability, and the number of teeth one has, which winds through the plays. Several characters use their limited teeth to self-identify as aged. The Nurse in *Romeo and Juliet* admits that she has “but four” (1.2.14) when expressing her disbelief that Juliet is already fourteen. Similarly, in *As You Like It*, Adam declares, “I have lost my teeth in your service” after being referred to as an “old dog” (1.1.78-9, 77). Whether other characters reference their age or not, these two lower-class servants associate age with dental status and see both as factors to be lamented as a point of sensitivity when speaking to their social superiors.⁷³ Shakespeare returns to the experience of equating aging with dental problems in a further analogy in *Much Ado About Nothing*. Benedick, while contemplating changing his mind on marriage, reflects, “A man loves the meat in his youth that he cannot endure in his age” (2.3.230-2), a reference to the dullness (or lack) of teeth as time progresses.⁷⁴ Shakespeare also uses toothlessness to mean lacking potency or threat,⁷⁵ and recognizes that it denotes a loss of personal respect.

Since Shakespeare’s audience is all too familiar with the frustrations of missing or dull teeth, it is not a leap for them to understand the analogies Shakespeare makes using teeth as the central focus, such as in *Pericles* when Cleon says, “So sharp are hunger’s teeth that man and wife / Draw lots who first shall die to lengthen life” (1.4.45). Additionally, the aged Lear laments “How sharper than a serpent’s tooth it is / To have a thankless child” (1.4.281-2), using the analogy “Sharp-toothed unkindness”

(2.2.330) to show how pained he is by his children’s treatment of him. A similar sentiment occurs in *All’s Well That Ends Well* when Lafeu offers the assessment, “I’ll like a maid the better whilst I have a tooth in my head” (2.3.41-2). While Suzanne Gossett and Helen Wilcox argue he means a “sweet tooth [or] a taste for pleasure,”⁷⁶ it also can be read as another commentary on the limitations of age. As in Benedick’s example, the “hunger” for a maiden may still be there, but the physical ability to enjoy her may have faded. In that case, being toothless is not merely about being weak or unthreatening, but impotent as well: all threats to Elizabethan masculinity and the quality of attractiveness.

As for marriageability in *The Taming of the Shrew*, Grumio displays the negative side of toothlessness when suggesting that Petruchio could be married off to “a puppet or an aglet-baby, or an old trot with ne’er a tooth in her head” (1.2.78-9). Yet, returning to the above conversation between Speed and Lance, their list of vices also includes a humorous reflection on the potential benefits of toothlessness:

Speed: Item: She hath no teeth.

Lance: I care not for that neither, because I love crusts.

Speed: Item: She is curst.

Lance: Well, the best is, she hath no teeth to bite. (3.1.331-4)

As with the quality of one’s breath, the condition and quantity of one’s teeth were noticeable traits that correlated with attractiveness as much as they were indicative of age. This is also seen later in *As You Like It*, in the closing line of Jacques’s “All the world’s a stage” speech; presenting yet another spectrum of the stages of life, the reflection on the “last scene” ends with one “sans teeth” among other afflictions (2.7.164, 167). Again, many of Shakespeare’s references correlate dental condition with social standing: bad breath or missing teeth are ascribed to the impoverished, aged, or unattractive characters, not the young, virile aristocrats. However, while teeth can be an impetus to one’s romantic relationship, this connection is complicated in *The Two Noble Kinsmen*. When the Daughter recites, “Friend, you must eat no white bread; if you do / Your teeth will bleed extremely” (3.5.81-2), it is a warning to not beget an illegitimate child (“white bread”) due to the ongoing superstitious belief that a man’s teeth ache when he gets a woman pregnant.⁷⁷ Shakespeare and his audience recognized an existing

mythos concerning teeth that extends beyond personal hygiene and connects to a larger superstition.

Superstitious Beliefs

Many of the dental issues discussed are theoretically things that the individual can control: their level of personal hygiene, what they eat, and what they put in and on their body. However, the same beliefs about causation are applied to birth defects, specifically those born with a cleft lip, also referred to as a “harelip.” As Kennedy recounts, it was a common belief that “if a pregnant woman were to see, be startled by or long for the taste of a hare, the child would surely be born with the mark of the hare, the cleft lip.”⁷⁸ While Shakespeare references “harelips,” he labels their cause as supernatural. Edgar in *King Lear*, when demonizing Gloucester’s appearance, labels him: “the foul fiend Flibbertigibbet,” who, in addition to “giv[ing] the web and the pin, squinies the eye,”⁷⁹ “makes the harelip” (3.4.114-7). Similarly, Oberon in *A Midsummer Night’s Dream* sings an ode to newlyweds, with a hope that “the blots of nature’s hand” do not affect them:

Never mole, hare-lip, nor scar
Nor mark prodigious, such as are
Despised in nativity,
Shall upon their children be
(5.1.405, 7-10)

However, unlike the stigma attached to those born with natal teeth (discussed below), none were attached to those born with cleft lips or their parents.⁸⁰ In a time when Elizabethans were leery of the dangers and limited success of surgery, the procedure for correcting cleft lips was considered easy, performed by both barber-surgeons and mountebanks; repairing cleft palates was a very different story.⁸¹ In discussing both examples, Kennedy points out that “Shakespeare is exceedingly unusual in that he is the only early-modern playwright to make reference to the cleft lip in a literary setting, and he does it twice.”⁸² While steering clear of labeling interactions with a “hare” as the cause, Shakespeare does engage with the idea that demonic or magical creatures have the ability to affect one’s dental condition, connecting them to superstitious beliefs held by his Elizabethan audience.⁸³

The most enduring example of the overlap between teeth and superstition is Richard III being “born with teeth” (3*H*6 5.6.75): the *presence* of teeth, rather than the loss, becomes the source of problems. Babies born with natal teeth,⁸⁴ about one in every 3,000 births, historically have been seen as demonic and were sometimes even killed for this irregularity.⁸⁵ As Kanner recounts, most civilizations viewed natal teeth similarly to other bodily abnormalities: an omen of the “inevitable fate” of “a disastrous life” and treated with “distrust and ill-treatment,”⁸⁶ even into the mid-twentieth century.⁸⁷ Richard III is no exception to this belief, as can be seen when the titular king at the end of 3 *Henry VI* accuses the murderous Richard: “Teeth hadst thou in thy head when thou wast born / To signify thou cam’st to bite the world” (5.6.53-54). Much like in the opening of *Richard III*, Richard accepts his supposed preordained fate and leans into playing the villain, proudly espousing his belief in the superstition after murdering the King:

The midwife wondered and the women cried,
 “O, Jesus bless us, he is born with teeth!”
 And so I was, which plainly signified
 That I should snarl, and bite and play the dog. (5.6.74-7)

Richard “appropriates” the “hearsay” concerning the circumstances of his birth, which he uses to craft a narrative to both “strengthen his political position” and “authorize his transgression of moral, familial, and generational bounds.”⁸⁸ Much like the other physical characteristics that Shakespeare endows Richard with, his teeth quickly become a defining feature. Even within an upper-class family, Richard’s teeth ostracize him and threaten to undercut his social standing. In *Richard III*, Queen Margaret also refers to him as a “hell-hound [...] that had his teeth before his eyes, / To worry lambs and lap their gentle blood” (4.4.48-50). Leo Kanner connects this imagery to biting and blood drinking, which evokes demonic and vampiric behavior.⁸⁹ Richard’s teeth make him not simply villainous but monstrous, giving his actions and influence over others a superstitious undercurrent.

Additionally, while Richard grapples with the arguably self-fulfilling prophecy of his destined villainy, his dental story (and its supposed ramification) has already passed into legend. The young Duke of York recounts, “they say my uncle grew so fast / That he

could gnaw a crust at two hours old" (2.4.27-8).⁹⁰ Shakespeare's characterization also helped solidify Richard's perception and legacy *outside* of the play, however historically inaccurate it was. Emily Huber concisely traces the origin of the story of Richard's natal teeth, which can ultimately be read as slanderous and revisionist, to an opportunistic biographer practicing "bumbling unreliability, mean-spiritedness, or ambitious cronyism" to curry favor with the Tudors.⁹¹ Shakespeare, through the Duchess of York, does acknowledge that all the details of Richard's birth are merely hearsay: when pressed, the Duke says that "Grandam, [Richard's] nurse," told him the story, to which the Duchess reminds him that "she was dead ere thou wast born" (2.4.29-34).⁹² Even diegetically, the story of Richard's ominous natal teeth is in question. Yet that does not stop characters from finding it prescient and accepting it as fact, including Richard himself. Queen Margaret, a perpetrator of the myth, even speaks of Richard in dental terminology. She warns Buckingham, "Look when [Richard] fawns, he bites; and when he bites, / His venom tooth will rankle to the death" (1.3.289-90). Later, she refers to the political turmoil going on in the country as "prosperity begin[ning] to mellow / And drop into the rotten mouth of death" (4.4.1-2). As much as Shakespeare relies on available dental references to connect to his audience across the socioeconomic strata, Richard III is an example of Shakespeare contributing his own enduring entry into existing dental folklore. Despite the skepticism of Shakespeare's characters and the questionable nature of the source, Richard III's natal teeth have become his most noted characteristic after his (also exaggerated) hunchback even though they are as historically inaccurate as Richard's sterility in the play.⁹³ Unlike lower-class characters whose identification with their dental conditions hampers them, the imagined dental peculiarities of Richard move him beyond mortal limitations.

Metaphorical Dentistry

Shakespeare's discussion of teeth extends beyond physical attributes and superstitions; teeth are often a stand-in for something intrinsic, such as personal character traits embodied by dental features. Teeth are such a precious commodity that characters use their willingness to sacrifice them to demonstrate

their commitment. For example, in *1 Henry VI*, Charles swears that the townsfolk would “rather with their teeth / The walls they’ll tear down than forsake the siege” (1.2.39-40). This is reflected later in the play when a Servingman says, “if we be forbidden stones, we’ll fall to it with our teeth” (3.1.89-90). While hyperbolic, the idea of potentially sacrificing one’s teeth for the greater good has real stakes in a time of limited options for tooth replacement. For those characters looking to keep their teeth intact, Shakespeare often relies on the phrase “set one’s teeth” as another way to express determination. Presumably, it means to grit one’s teeth in a show of resolve or bare one’s teeth in a show of strength. Certainly, that is how several characters use that phrase. Marc Antony tells Cleopatra, “I’ll set my teeth / And send to darkness all that stop me” (3.13.186-7); and an inspirational speech from Henry V calls on the men to “set the teeth and stretch the nostril wide, / Hold hard the breath and bend up every spirit / To his full height” (3.2.15-7).⁹⁴ Shakespeare shows that functional teeth can symbolize strength as much as missing or dull teeth can symbolize weakness. As often as he creates instances where characters reclaim dominance of a tenuous dental situation, there are examples where the teeth are in control over the character.

As previously mentioned, the still-used phrase “sweet tooth” indicates that one has an inherent taste or desire for sugar, driven by the tooth’s implied control over the rest of the body. A similar analogy is present in *The Winter’s Tale* when Autolycus sings:

The white sheet bleaching on the hedge,
With heigh, the sweet birds, O how they sing!
Doth set my pugging tooth an edge,
For a quart of ale is a dish for a king.
(4.3.5-8)

As John Pitcher argues, a “pugging” or thieving tooth is similar to a “sweet tooth”: an inherent desire to steal, allegedly driven by the tooth. In context, he argues that the sight of the unguarded sheet drying drives his desire to steal it by “setting his tooth on edge.”⁹⁵ However, Pitcher also argues that the moment could be read sexually. Since both “hedge” and “pug” referred to prostitutes, this could mean that the sight of the bedsheet drives his physical desire.⁹⁶ This would be another instance of using a dental analogy as a stand-in for physical arousal, as with Lafue’s remark in *All’s Well*

That Ends Well discussed previously. In either case, the use of yet another phrase still spoken today reflects the idea that one's mental (or physical) status is reflected in the position of one's teeth—either set in determination or set on edge in disturbance—making the teeth a window into one's confidence and comfort. Losing one's teeth is a sign of weakness but willingly sacrificing them for a greater cause is a sign of strength that elevates a character above his or her station.

With an eye toward external factors, Shakespeare also endows actions and emotions with teeth to personify them to make connections for the audience. For example, in *Richard II*, Bolingbroke says, “Fell Sorrow’s tooth doth never rankle more / Than when he bites but lanceth not the sore” (1.3.302-3). Shakespeare leans into medical terminology to work through the analogy of being unable to release and move past pain. This extended metaphor fleshes out some of Shakespeare’s most potent imagery in a way that resonates with an audience sensitive to dental struggles. The same is true of Edgar in *King Lear*, who admits, “I know my name is lost, / By treason’s tooth bare-gnawn and canker-bit” (5.3.119-20). Shakespeare draws up two distinct dental images to consider: a name, like a mouth, that has been chewed and destroyed by sharp teeth. Shakespeare references “cankers” (a dental term still in use for mouth sores today) frequently, though with meanings that often refer to botanical pests—both weeds and caterpillars.⁹⁷ While it could connect to the toothworms discussed above, Shakespeare also uses this specific infection to discuss societal ills metaphorically.⁹⁸ In these cases, Shakespeare harkens back to an important issue for the Elizabethans: how to deal with dental issues that seem out of their control.

Just as Richard III uses the mythos of his teeth to redefine his destiny, many of Shakespeare’s characters attempt to exercise control over a precarious facet of their lives—the strength and sharpness, quality, and quantity of their teeth. As much as upper-class characters look to categorize poor hygiene and breath as symptomatic of lower-class characters and lifestyles, many of the lower-class try to break away from those stigmas, but with limited resources to address both issues. While using dentistry as a shared experience to connect to audience members across the socioeconomic spectrum, Shakespeare reveals much about the

ingrained classicism of teeth; from the preordained malevolence of King Richard III, to Coriolanus’s fixation on lower-class hygiene, to Benedick’s toothache, dental language pervades the plays as characters fixate on teeth in various ways. The greatest irony is that often the ways that Elizabethans looked to address their multitude of dental issues simply made them worse. While Shakespeare pokes fun at the array of dental issues that one could run across in Elizabethan England, he also uses those problems as a frame of reference to better understand issues of class and character. Shakespeare combines the poor Elizabethan dental problems with the biting perceptions of character studies to create works that speak to a continuing human tendency to see class differences through dentistry.

Notes

1. A quote from Falstaff in *The Merry Wives of Windsor* (5.5.124-5). All quotations are taken from *The Arden Shakespeare Third Series Complete Works*, though some commentary comes from the individual Arden editions cited below.

2. Usually focusing on the correlation between his usage of medical terminology and his daughter Susanna’s marriage to the physician John Hall.

3. Except for *A Midsummer Night’s Dream*, *Timon of Athens*, and *Twelfth Night*. However, the latter two use “fang” as a verb.

4. Emily Cockayne, *Hubbub: Filth, Noise and Stench in England, 1600–1770* (Ithaca: Yale University Press, 2007), 23.

5. See Ronald Paulson. “The Perfect Teeth: Dental Aesthetics and Morals,” *Critical Inquiry* 34 (Jan. 2008): S130–45. There continues to this day a tradition of equating the quality of one’s teeth with the quality of one’s character and morals, as Paulson outlines when discussing more recent works, as well as the film version of *Much Ado About Nothing*. As he writes, “Teeth become a synecdoche that replaces the whole body” (144).

6. Nicholas Culpeper, *Culpeper’s Last Legacy: Left and Bequeathed to His Dearest Wife for the Publike Good: Being the Choicest and Most Profitable of Those Secrets Which While He Lived Were Lockt up in His Breast and Resolved Never to Be Publisht till after His Death* (N. Brooke, 1657), 106-113. He begins the section on teeth by warning, “IF you will keep your teeth from rotting, or aking, wash your mouth continually every morning with juyce of Lemmons, and afterwards rub your teeth either with a Sage leafe, or else with a little Nutmeg in powder, also wash your mouth with a little faire water after meats, for the onely way to keep the teeth sound and free from paine, is to keep them cleare” (108-9).

7. Malvin E. Ring, “Shakespeare and Dentistry: Teeth and Oral Care in the Writings of the Bard,” *Journal of the California Dental Association* 24.4 (1996): 17-18.

8. See John Webster, *The Duchess of Malfi*, ed. Leah S. Marcus (London:

Bloomsbury Publishing, 2014). As referenced in *The Duchess of Malfi* (4.2.149-52) and contextualized by Leah S. Marcus (280).

9. In the following scene, Othello asks Desdemona for her handkerchief under the pretense of having “a salt and sullen rheum” (3.4.51), occasionally labeled a cause of toothaches. See Laura Kennedy, “‘Carry Not a Picke-Tooth in Your Mouth’: An Exploration of Oral Health in Early-Modern Writings,” (PhD Dissertation, Loughborough University, 2012), 46. If this is a belief held in the play, perhaps Othello has Iago’s toothache story in mind when confronting her.

10. Ring, “Shakespeare and Dentistry,” 18.

11. A medical treatment commonly in use. Though not in a dental context, Shakespeare mentions it in a metaphor in *Richard II*, when the titular king advises peace: “Let’s purge this choler without letting blood” (1.1.153).

12. Kennedy, “Carry Not,” 43.

13. Kennedy, “Carry Not,” 45.

14. James Wynbrandt, *The Excruciating History of Dentistry: Toothsome Tales & Oral Oddities from Babylon to Braces* (New York: St. Martin’s Press, 1998), 23.

15. Kennedy, “Carry Not,” 48.

16. Kennedy, “Carry Not,” 53.

17. Ring, “Shakespeare and Dentistry,” 17. Stemming from a 1540 charter granted to the Royal Guild of Barbers, legally dividing responsibilities between barbers and surgeons, but failing to limit dentistry to one (17). Shakespeare’s references to barbers are generally in the context of beard-shaving, and surgeons are usually called for when a character receives a serious bodily wound. Neither is mentioned by name as performing dental work.

18. Claire McEachern, editor of Arden’s *Much Ado About Nothing*, points out the double meaning here: “hanging and drawing (another term for disembowelment) was the punishment for traitors” (267). Additionally, tooth-drawers were not the only ones who resorted to macabre advertising. Barber-surgeons, who generally handled bloodletting and leeching, advertised by leaving out buckets of blood, despite ordinances preventing them from doing so (Wynbrandt, *Excruciating History*, 46).

19. Wynbrandt, *Excruciating History*, 32.

20. Wynbrandt, *Excruciating History*, 33.

21. Ring, “Shakespeare and Dentistry,” 19.

22. A play of mixed authorship, this section admittedly comes from the unidentified Hand C, not explicitly from Shakespeare. However, it reinforces the shared unpleasantness of tooth removal in Elizabethan England.

23. Ring, “Shakespeare and Dentistry,” 17.

24. Wynbrandt, *Excruciating History*, 48.

25. Hamlet to Ophelia: “I have heard of your paintings well enough. God hath given you one face and you make yourselves another” (*Q2* 3.1.141-3). Also, “Now get you to my lady’s chamber and tell her, let her paint an inch thick” (*F* 5.1.192-3).

26. Kathryn Harkup, *Death by Shakespeare: Snakebites, Stabbings and Broken Hearts* (London: Bloomsbury Publishing, 2020), 238.

27. Harkup, *Death by Shakespeare*, 238.

28. Morris P. Tilley, “The ‘White Hand’ of Shakespeare’s Heroines,” *The*

Sewanee Review 19.2 (Apr. 1911): 211.

29. Harkup, *Death by Shakespeare*, 239.

30. Cockayne, *Hubbub*, 23.

31. Wynbrandt, *Excruciating History*, 49.

32. Stemming from a lack of vitamin C, scurvy is mentioned several times in Shakespeare. However, he uses the term as an insult and does not discuss the disease. For example, in *Othello*, Emilia deduces, “The Moor’s abused by some most villainous knave, / Some base notorious knave, some scurvy fellow” (4.2.141-2).

33. Wynbrandt, *Excruciating History*, 45-6.

34. As with scurvy, Shakespeare’s usage of “pox” is often a curse directed at characters, rather than an overt discussion of the disease. For example, Doll’s remark to Falstaff in *2 Henry IV*: “A pox damn you, you muddy rascal!” (2.4.40).

35. As Kennedy recounts, words like “‘snuffle’, meaning ‘To speak through the nose’ are often used in literature of this period to refer to those whose palates have been rotted away by venereal disease” (64). A conversation between Moth and Armado in *Love’s Labour’s Lost* may reference this: while discussing ways Armado can win Jaquenetta, Moth suggests singing a song “sometimes through the throat as if you swallowed love with singing love, sometimes *through the nose* as if you *snuffed* up love by smelling love” (3.1.13-5, emphasis added).

36. Harkup, *Death by Shakespeare*, 231; Wynbrandt, *Excruciating History*, 154.

37. Harkup, *Death by Shakespeare*, 238. Referred to as “the powdering-tub of infamy” in *Henry V* (2.1.75) and, per Kathryn Harkup, in Sonnet 153: “a seething bath, which yet men prove / Against strange maladies a sovereign cure” (Harkup, *Death by Shakespeare*, 238). Mercury, or “quick-silver” is mentioned by both Falstaff (2*H6* 2.4.226) and the Ghost of Hamlet’s father (*F* 1.5.66) as an analogy for speed.

38. Harkup, *Death by Shakespeare*, 234.

39. Harkup, *Death by Shakespeare*, 238.

40. Cockayne, *Hubbub*, 31.

41. Cockayne, *Hubbub*, 23.

42. Pitcher, *Winter’s Tale*, 282.

43. Farah Karim-Cooper, *The Hand on the Shakespearean Stage Gesture, Touch and the Spectacle of Dismemberment* (London: Bloomsbury Publishing, 2016), 45-6.

44. Wynbrandt, *Excruciating History*, 210; Ring, “Shakespeare and Dentistry,” 21.

45. Kanner, *Folklore*, 90; Ring, “Shakespeare and Dentistry,” 21.

46. A variation of this phrase, with a very different meaning, is seen in *King Lear*: when Edgar fights with Oswald, he taunts, “Ch’ill pick your teeth” (4.6.240). R. A. Foakes points out that this was a proverbial phrase meaning to “be more than a match for you,” though also cites other scholars who say that Edgar may use this phrase while wielding Oswald’s knife to use against him, metaphorically “picking his teeth” by inflicting a fatal blow (Foakes, *King Lear*, 346).

47. Robert G. Collmer, “A Collection of Toothpicks from *The Winter’s Tale* to

Leviathan,” *Connotations* 31(1993): 13-4, 17.

48. Karim-Cooper, *The Hand*, 47-8.

49. Collmer, “Collection of Toothpicks,” 21.

50. Collmer, “Collection of Toothpicks,” 22.

51. Cockayne, *Hubbub*, 30.

52. Before the popularity of dentures later in the 1600s (Wynbrandt, *Excruciating History*, 150).

53. Wynbrandt, *Excruciating History*, 181.

54. Contrary to Coriolanus’s characterization of the common people as teeth in the mouth of those that control them, Philip (the Bastard) of *King John* uses the analogy of teeth for weaponry, heralding “The swords of soldiers are his teeth, his fangs, / And now he feasts, mousing the flesh of men” (2.1.353-4).

55. Braunmuller and Watson, *Measure for Measure*, 282.

56. Cockayne, *Hubbub*, 91.

57. Danielle Nagler, “Towards the Smell of Mortality: Shakespeare and Ideas of Smell 1588-1625,” *The Cambridge Quarterly* 26.1 (1997): 42-3. See Nagler’s article in its totality for a discussion of the smells (good, bad, and neutral) that permeated Elizabethan society and how the importance of the olfactory senses is reflected in the plays of the time.

58. A larger concern that extended into other elements of Elizabethan life, especially privies. See Dolly Jørgensen for attempts to address the issues related to both smell and logistics of waste removal. Dolly Jørgensen, “*The Metamorphosis of Ajax*, Jakes, and Early Modern Urban Sanitation,” *Early English Studies* 3 (2010).

59. Amy Kenny, “‘A Deal of Stinking Breath’: The Smell of Contagion in the Early Modern Playhouse,” in *Contagion and the Shakespearean Stage*, eds. Darryl Chalk and Mary Floyd-Wilson (London: Palgrave Macmillan, 2019), 51.

60. Kenny, “Stinking Breath,” 49. See Nichole DeWall, “The Smell of Dover: Shakespeare, Stink, and the Inspired Poet,” *Pennsylvania Literary Journal* 14.3 (Sept. 2022): 101–25. As DeWall recounts, whenever there was an “outbreak” of the plague, “a mass exodus occurred: the rich would flee the diseased air of London for the clearer air of the country, drawing accusations of indifference from those they left behind” (103). While their instinct to avoid bad air correctly anticipated a later understanding of germs, this approach further entrenched class differences, though there was no escaping the other pandemics: syphilis and dental decay.

61. Kenny, “Stinking Breath,” 52.

62. DeWall, “Smell of Dover,” 108

63. Kennedy, “Carry Not,” 29.

64. Also referred to as “sweet water,” which is mentioned in *Titus Andronicus* (2.3.6) and *Romeo and Juliet* (5.5.14), to improve the smell of Lavinia’s hands (mockingly, as she has none) and Juliet’s tomb respectively. “Rose-water,” also used for breath freshening, is mentioned in *The Taming of the Shrew*, also for the cleaning of hands (Intro.1.55)

65. Kennedy, “Carry Not,” 28-9. Culpeper recommends these mixtures to treat bad breath caused by gastrointestinal issues (130-1, 157). His other suggestion is to “Take the juice of Rue, and black Mints, (I think he means Horse-mints) and snuffe it up the Nolstrils” (Culpeper, 106), seemingly assisting those affected olfactorily rather than the patient with the halitosis.

66. Beatrice, as always, proves to be Benedick's equal in verbal jousting concerning the quality of one's breath. When she demands to know “what hath passed between [Benedick] and Claudio,” and he replies, “Only foul words - and thereupon I will kiss thee,” she reflects, “Foul words is but foul wind, and foul wind is but foul breath, and foul breath is noisome, therefore I will depart unknissed” (5.2.47-52).

67. Pitcher, *Winter's Tale*, 270.

68. Weis, *Romeo and Juliet*, 163. In *Othello*, Cassio refers to Bianca as a “perfumed [...] fitchew” (4.1.145), reinforcing the characterization of her as a prostitute and someone who is trying to smell better than her social status. The idea of hiding one's breath (or any bad smell) to change one's social opportunities is also seen in *The Two Noble Kinsmen*, when Arcite reassures Palamon that they have, among other things, “Perfumes to kill the smell o'th' prison” (3.1.86).

69. In this conversation, Speed mentions that the woman in question “is not to be kissed fasting in respect of her breath” (3.1.315), indicating yet another belief that the stomach affected one's breath. In this case, Lance says that the problem “may be mended with a breakfast” (3.1.316), before moving on to the discussion of her sweet mouth.

70. For example, the King to Suffolk in *2 Henry VI*: “Hide not thy poison with such sugared words” (3.2.45).

71. Another example is in *The Taming of the Shrew*, when Lucentio remarks of Bianca that “with her breath she did perfume the air” (1.1.174).

72. DeWall takes it a step farther by arguing, using some of these examples, that those who smelled good (particularly their breath) were equated with godliness, “the heavens and, thus, to salvation” (DeWall, “Smell of Dover,” 115). Similarly, Holly Dugan argues that the early modern stage utilized smell to denote power, class, and sexuality in the female characters, especially when portrayed by youthful men, tapping into an existing understanding of “‘invisible’ social differences” (230). Dugan, “Scent of a Woman: Performing the Politics of Smell in Late Medieval and Early Modern England,” *Journal of Medieval and Early Modern Studies* 38.2 (2008).

73. Though they are closer to social equals, Claudio, in *Much Ado About Nothing*, refers to Leonato and Antonio as “two old men without teeth” (5.1.116).

74. Ring, “Shakespeare and Dentistry,” 20.

75. In *2 Henry IV*, the King assures his audience that he has taken actions to safeguard the Prince against threats by ensuring his “friends [...] Have but their stings and teeth newly ta'en out” (5.1.334-5).

76. Gossett and Wilcox, *As You Like It*, 197.

77. Potter, *Two Noble Kinsmen*, 276. The image of bleeding teeth here, seemingly for metaphysical reasons, is very different from the threat of violence seen from Cleopatra when she threatens to give the Chairman “bloody teeth” for praising Caesar (1.5.73).

78. Kennedy, “Carry Not,” 82.

79. Note references to cataracts (Foakes, *King Lear*, 280).

80. Kennedy, “Carry Not,” 81.

81. Kennedy, “Carry Not,” 89-90, 93.

82. Kennedy, “Carry Not,” 100.

83. The hare is not entirely detrimental to one's dental condition. Culpeper recommends "Take the brains of a Hare, or the brains of a Hen, and rub the child's Gums with them once or twice a day, and it will make the Teeth cut without pain" (111).

84. Also referred to as "embryonal," "milk," or "deciduous teeth" (Kanner, *Folklore*, 13, 26). Though sometimes referred to interchangeably as "neonatal teeth," natal teeth refer to teeth that are present, or have erupted, at birth; neonatal teeth present themselves within the first month after birth.

85. Wynbrandt, *Excruciating History*, 227. Contrast this with the imaginary (presumably "normal") baby with "boneless gums" that Lady Macbeth imagines killing to prove her resolve to her husband (1.7.57).

86. Leo Kanner, *Folklore of the Teeth* (New York: The Macmillan Company, 1928), 10.

87. Emyr Wyn Jones, "Richard III's Disfigurement: A Medical Postscript," *Folklore* 91.2 (1980): 219.

88. Bethany Packard, "Richard III's Baby Teeth," *Renaissance Drama* 41.12 (2013): 108, 118.

89. Kanner, *Folklore*, 11.

90. The usage of "gnaw" as a term for chewing is generally reserved for animals or something more serious like the "poisonous mineral" of mental imagery on Iago's insides in *Othello* (2.3.295). It is applied to the animalistic Richard III twice in the play, here and later: "The King is angry. See, he gnaws his lip" (4.2.27). Desdemona, before she is killed, asks Othello "why gnaw you so your nether lip?" perhaps revealing he has also lost his humanity by this point in the play (5.2.43).

91. Emily Rebekah Huber, "Ricardus Tertius Dentatus: Textual History and the King's Teeth," *Philological Quarterly* 94.4 (2015): 322.

92. Details of Richard's birth conveyed at this time included how he was born "an undigested and deformed lump," or "with [his] legs forward (3H6 5.6.51, 71), not to mention the larger signs in nature (3H6 5.6.44-48).

93. Huber, "Ricardus Tertius Dentatus," 326.

94. Additionally, the phrase is used in *Coriolanus*, when Valeria describes Virgilia's son as going from playing with a butterfly to, when "his fall enraged him, [...] he did so set his teeth and tear it" (1.3.65-6). Also in *2 Henry VI*, Suffolk says he wishes he could deliver fatal curses "strongly through my fixed teeth" (3.3.313). Another version of this phrase comes from Claudius, in an aside, when he admits that we are "compelled / Even to the teeth and forehead of our faults / To give in evidence" (Q2 3.3.63-4).

95. The same phrase is used in *1 Henry VI* by Hotspur, to insult the sound of the "metre balad-mongers"; he argues he would "rather hear a brazen canstick turned / Or a dry wheel grate on the axle-tree, / And that would set my teeth nothing on edge, / Nothing so much as mincing poetry" (3.1.127-30).

96. Pitcher, *Winter's Tale*, 250-1.

97. Shakespeare, *Complete Works*, 1472

98. Pitcher, *Winter's Tale*, 251. Hamlet asks Horatio, regarding the actions of Claudius, if "is't not to be damned / To let this canker of our nature come / In further evil?" (F 68-70); Falstaff lists off a collection of "the cankers of a calm world and a long peace" in *1 Henry IV* (4.2.29-30).