The Physics of Melting in Early Modern Love Poetry



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Abstract: Melting is a familiar trope in early modern erotic poetry, where it can signify the desire to transform the beloved from icy chastity through the warmth of the lover's passion. However, this Petrarchan convention can be defamiliarised by thinking about the experiences of freezing and melting in this period. Examining melting in the discourses of early modern meteorology, medicine, proverb, scientific experiments, and preservative technologies, as well as weather of the Little Ice Age and the exploration of frozen hinterlands, this essay shows that our understanding of seeming constants – whether they be the physical properties of water or the passions of love – can be modulated through attention to the specific histories of cognition and of embodiment.

Countless Renaissance poems represent love as a condition of antithesis between the coldness of the beloved and the fiery desire of the lover. In many lyric poems of the sixteenth and seventeenth centuries, a speaker consumed by burning love praises and chastises the beloved for her snowy skin, icy chastity, pitiless coldness and freezing looks. The icily monumental beloved rejects the vivifying heat of the lover; her coldness also isolates her from life. The beloved is an embodied paradox, inspiring a state of heat in which she does not share: as Petrarch puts it, from her 'beautiful, clear, shining, living ice comes the flame that kindles and melts me'. To

melt this icy beloved would be to transform her substantially through persuasive amorous language.

This essay examines the trope of melting in early modern lyric poetry, mostly written in English. Considered within the emerging field of the history of the emotions, melting could exemplify both cognitive psychological positivism (like the body, whose physical constitution and processes are not historically determined, the temperatures at which matter liquefies do not change over time) and social constructivism (melting is a trope which is historically constructed). Joanna Bourke describes emotions as Wittgensteinian 'language games', becoming visible to the historian through 'emotion-rules encoded in grammars of representation'.² But the trope of melting shows how emotions are also constructed by poetic language-games in which the 'rules' of medicine, ethics and aesthetics overlap. The scientists who sought to explain this physical process themselves play with figurative language, so that melting — a metaphor used by poetry — is itself only representable through metaphor.

Historians of emotions have proposed various bridging devices between positivism and constructivism, including practice theory³ or the notion of emotional communities,⁴ with the body as the key mediating site for the production, display, and containment or diffusion of emotions.⁵ Brian Cummings and Freya Sierhuis premise a recent collection of essays on the passions as 'what connect our minds to the world outside us' through the body.⁶ Daniel Juan Gil defines emotions as 'recurring somatic types' which structure and are shaped by social relations: they 'define a grammar of relationships at a physical, somatic level'.⁷ This interaction between bodies and communities allows historians to make claims for historical adjustments in how subjects experience their bodies, influenced not only by medical knowledge and practice, theology and ethics, but also by labour, gesture, fashion, custom and so forth. As Monique Scheer has written, 'The body ... cannot be

timeless; it contains history at multiple levels. This consists not only of the sedimentation of evolutionary time, but also the history of the society in which the organism is embedded, and its own history of constantly being moulded by the practices it executes'8.

This creates a paradoxical mixture of the knowable and the unknowable in histories of early modern bodies and passions. Representing one form of historical relativism, Ulinka Rublack asks, 'may it have been the case in the early modern period not only that bodily existence was conceived of differently from today, but also that this body actually behaved differently?" In this view, the bodily reality of early modern people may not be entirely recoverable: the symptoms to which contemporary accounts allude cannot be directly converted into modern diagnoses. Rublack focuses on what Barbara Rosenwein has described as an 'hydraulics' of emotions.¹⁰ Following Bakhtin, Rublack describes the body as a porous entity, 'constantly changing, absorbing and excreting, flowing, sweating, being bled, cupped, and purged'.11 Emotions were part of this 'flow', the regulation of which was essential to health: 'openness to exchange was a precondition of human life'. 12 In this sense, melting could offer a remedy for pathological stasis. However, this implies both a single norm for health - flow - and a single understanding of the body, based on the Galenic humours. As we will see, poetic references to melting recognise alternative explanations provided by corpuscular theory, experiments in physics, Arctic expeditions and the technologies of freezing. Melting can signify pity, sexual intercourse, pleasure, music, effeminacy or death. What this suggests is that within the 'emotional community' of lyric poets and their readers, melting could present different and indeed contradictory figurative and epistemological meanings at once. This forces us to diversify our interpretation not only of the trope, but also of the conditions of desire it represents.

In addition to its erotic signification, melting represents the response of bodies to rhetoric. In this way, it comments not only on the way the speaker wishes to transform the body of the beloved, but also on the intended effects of poetry on readers.¹³ Plutarch, in the translation of his *Moralia* by Philemon Holland from 1603, writes of the 'Sympathie' between poetry and youth (or 'the first heats of this age'):

The straunge fables and Theatricall fictions therein, by reason of the exceeding pleasure and singular delight that they yeeld in reading them, do spred and swell unmeasurably, readie to enter forcibly into our conceit so farre as to imprint therin some corrupt opinions: then let us beware, put foorth our hands before us, keepe them back and staie their course.¹⁴

These terms for the effect of reading on the body — spreading, swelling, penetration and corruption — are evidently sexual and reminiscent of the way erotic lyric employs the language of liquidity (the physics and technologies of melting and freezing). Looking more closely at the intellectual history of these images will demonstrate not so much an insurmountable epistemological divide between early modern and contemporary discourses, as the necessity of a thickened reading of even the most familiar metaphors for early modern passions. By analysing the way poets enlisted specific scientific and physiological characteristics of temperature in this seemingly outworn metaphor for arousal, I will argue that attention to the historical specificity of metaphor can reveal transformations in how readers and writers experienced poetic and sensual pleasure, and indeed their own bodies, in this period.

THE EARLY MODERN SCIENCE OF MELTING

This thickened description must start with a basic distinction between early modern and contemporary experience: the weather. In our climate, melting signifies an impending catastrophe rather than a triumph of erotic persuasion. By contrast, from

the early fourteenth century until the mid-eighteenth century, Europe experienced what is now described as a 'Little Ice Age'. Temperatures dropped, leading to changes in sea levels and snow lines, distributions of flora and fauna, and floods, famines, hailstorms, profound frosts and shifts in cultivation and settlement. In England, severe frosts were chronicled in 1608, 1621 and 1622, which, as John Chamberlain wrote to John Sir Dudley Carleton in February 1621, contorted the landscape into sublime forms that we might associate with the Gothic horrors of *Frankenstein*: 'the windes and high tides have so driven the yce on heapes in some places that yt les like rockes and mountains and hath a straunge and hideous aspect.' Frost fairs turned the river to a carnival ground where bears were baited, printing presses set up, oxen roasted and the citizens of London revelled.

Many poems from this period refer specifically to the communal experience of a cold climate and its social consequences. John Taylor, 'The Water Poet', described the winter of 1621 in evocative terms as 'the time when men wore liquor'd bootes, / When rugged Winter, murdred hearbes & rootes', and the livelihoods of the ferryman were at risk. Severe frosts also meant hardship and danger for the country's poor, as Thomas Carew's 'To Saxham' demonstrates. Historians have linked the spread of the cult of the Madonna of the Snow to these climactic changes. They may have also influenced the development of the poetic *topos* of icy chastity.

Poetic representations of cold, freezing and melting draw not only on this communal experience of cold weather, but also on early modern meteorology, geography, and physics. In 1683, the year of another terrible frost which saw the Thames frozen solid for two months, experiments by the Florentine society the Accademia del Cimento were published in England which attempted to determine whether cold was something 'either in the Air, or Water, or Ice it self; or any other part of the Universe as its proper place, and Residence, where it has its Repository

and Treasury, [...] Or whether Cold is nothing else but a Total Privation, or driving away of Heat.' Already, the hypothesis — is cold an existent thing or merely a privation — recalls debates within Christianity about the nature of evil. The description of the experiments with melting ice develops the moral allegory through metaphor. Freezing is an 'admirable Power' to 'bind the slippery Waves, changing their fleeting Inconstancy into Solidity and hardness'. The action of freezing and melting are secret:

whereas Fire, when disingaged in swiftly winged sparks, by insinuating it self through the close Pores of Flinty and Metalline Bodies; opens, melts, and reduces them to a perfect Fluid: so Cold on the contrary (a much stranger thing) stops and consolidates the most Fluid Liquors, changing them into downy Snow, and glassie Ice; which upon the least Ray, or warm breath, break Prison, and steal away in their first fluidity again. And (which is yet more amazing) so violent a force of Cold in Freezing, is observed penetrating not onely Glass, but even the secret Pores of Metals. As in the Subterranean Caverns, and deep Mines, the Raging Flames impetuously divide, and in fury open all those dark Passages; so Cold in the Act of Freezing, cracks shut Vessels of thick and strong Glass; stretches, distends, and at last, tears those of pure Gold, and bursts asunder those of Cast Brass. (p. 69)

Heat can 'insinuate' itself through the pores of metal, and the process of melting returns to a more 'perfect' state of liquidity. Cold is a prison from which liquids attempt to break free at the slightest 'warm breath'. Cold is violent, capable of tearing gold or brass. Though freezing is an everyday occurrence, it is also 'secret and rare': many of the experiments dwell on the impossibility of seeing the precise moment when freezing begins ('with a swiftness indiscernable by the Eye, and therefore scarce to be conceived', p. 80). That this difficulty was proverbial is indicated by Herrick's poem 'Impossibilites to his friend', where 'If you can see the water grow / To cakes of Ice, or flakes of snow' (ll.5–6), then you 'may see / Her love me once, who now hates me' (ll.11–12);²¹ no man can know how, or why, women change into blocks of passionless ice. Such comparisons transform women's sexual

behaviour from an expression of will into an inscrutable natural process that, in the language of the Florentine academy, is both tyrannical and violent.

There were no mechanical means to achieve artificial freezing in this period; the refrigerator was not invented until the early nineteenth century, which is why Francis Bacon famously died after catching pneumonia when he tried to collect snow on Hampstead Heath to experiment with freezing a chicken. The Florentine scientists used ice and snow stored in ice-houses for their experiments. Cold storage places (in lakes, streams, wells, caves, or underneath houses) had been in use since ancient times, and ice- or snow-houses were common throughout Europe and the Levant, and observed by early modern travellers from Persia to Moscow.²² An English ice-house was commemorated by Edmund Waller in his poem 'On St James's Park (As Lately Improved by his Majesty)':

Yonder the harvest of cold months laid up,
Gives a fresh coolness to the royal cup,
There ice, like crystal, firm and never lost,
Tempers hot July with December's frost;
Winter's dark prison, whence he cannot fly,
Tho' the warm spring, his enemy draws nigh:
Strange! That extremes should thus preserve the snow,
High on the Alpes or in deep caves below. (Il. 49–56)²³

Waller celebrates the king's judicious preparedness, setting aside the 'harvest' of winter for 'hot July'. Ice in the ice-house is 'never lost': it becomes like crystal, which was believed to form when snow thawed and refroze again and again over many years. Waller represents the ice-house as a 'dark prison' where the extreme force of winter's cold is prevented from escaping from his 'enemy', spring. This king imprisons the radical force, keeping it in a place where it can be converted into utility and pleasure.²⁴

In Waller's royalist panegyric, the ice-house symbolises a technological and political mastery of extreme forces; but it was also invoked to represent the female body as an icy container whose interior is preserved from corruptive intimacy. In a translation by Antoine Le Grand published in 1694, Descartes refers to the ice-houses of Poland as examples of how the nature of cold 'consists in *Rest*, [and] doth restrain the motion of the parts, and consequently hinders their separation from each other: For the dissolution of parts is the ready inlet of Corruption, forasmuch as thereby the whole Texture of the Body is disorder'd'.25 Passivity, immobility, and constraint, which prevent the inlet of corruption, were also characteristics of the chaste female body. In Congreve's The Double-Dealer (1694), Lady Plyant defends herself against charges of adultery by comparing her body to an ice-house: 'Have I behaved my self with all the decorum, and nicety, befitting the Person of Sir Paul's Wife? Have I preserved my Honour as it were in a Snow-House for this three year past? Have I been white and unsulli'd even by Sir Paul himself?'26 'Honour' here is both a moral quality and a material good preserved in the body's interior. This simile reveals contradictions in the view of female chastity in this period: the cold of the ice-house could preserve dead flesh from corruption, but it was also an enclosure, or even a prison; its cold was immoderate, not healthful; cold was associated with binding and impenetrability, but also with stasis.

While the ice-houses kept a supply of winter's ice on hand in temperate climates, early modern readers were also familiar with lands of perpetual snow. Travellers' tales provided vivid descriptions of the coldest regions of the earth, where stranded sailors were chased by bears, eating beached whales, burning polar bear fat for their candles, and making hats of fox fur when their leather shoes froze hard as horn.²⁷ These extremities supply amorous poets with other hyperboles for their suffering. In Robert Herrick's 'To Sapho', the speaker would prefer 'to go / Where Northern winds do blow / Endlesse Ice, and endlesse Snow' (Il. 1–2) rather

than see coldness in her face, while 'The frozen Zone, or Julia disdainfull' imagines fleeing the heat of love by escaping to what were understood to be the sources of cold:

Whither? Say, whither shall I fly,
To slack these flames wherein I frie?
To the Treasures, shall I goe,
Of the Raine, Frost, Haile, and Snow? (ll. 1–4)

I have argued that comparing women's sexual behaviour to the natural process of freezing is a way of stripping them of an active will. Likewise, Herrick's imagery of panicked exile suggests that his desires cannot be changed through his own moral choice of restraint. The 'Treasures' is a citation of Job 38. 22, where God challenges Job's limited knowledge of, or power over, creation: 'Hast thou entered into the Treasures of the Snow, or hast thou seen the Treasures of the Hail?' Compared to these mysteries, 'under-ground', 'All the floods, and frozen seas', or even 'the deep, / Where eternall cold does keep', Julia's breast is colder still:

These may coole; but there's a Zone
Colder yet then any one:
That's my *Julia's* breast; where dwels
Such destructive Ysicles;
As that the Congelation will
Me sooner starve, then those can kill. (ll. 11–16)

Herrick's speaker will starve if he latches onto her cold breasts, which project 'destructive Ysicles' rather than nourishing milk. Herrick's poem explores Julia's body as an extreme and alien terrain comparable to the Arctic lands, the inhospitality of which was reported back by early modern travellers.

As these examples have shown, poets writing in the sixteenth and seventeenth centuries regularly made reference to the science, technology and geography of temperature to convey the extremities and antitheses of love, while scientists also made use of figurative language to represent their experimental processes. Melting had a range of other colloquial meanings as well: it could refer to spending (money), and the counterfeiter's work to melt down metal and refashion it as coin is often invoked in poetic critiques of the unoriginality of other writers or the power of the poet to make and unmake the identity of the beloved. Slippery ice could symbolise deceit. The *New Dictionary of the Canting Crew* (1699) gives the relevant definitions:

- Melt, c. to spend Money. *Will you Melt a Bord*· c. Will you spend your Shilling? *The Cull Melted a couple of Decusses upon us*, c. the Gentleman spent ten Shillings upon us.
- Slippery Trick, or Fellow, deceitful, as having two properties of Ice, smooth and slippery.
- Break Ice in one place and it will Crack in more, or find out one slippery Trick, and suspect another. When the Ice is once broke, or when the Way is open others will Follow.²⁸

These associations of ice with duplicity, and melting with spending money — establishing and mediating social relations — also work against the icy maidens of Renaissance love lyric.

Throughout these poems, fiery lovers beg resistant women to melt in pity or grief for them, before the men die from love. Melting is associated with pleasure and mingling, but also with a dangerous dissolution of personal identity and of the body. Robert Heath, drawing on the association between passion and suffering, laments:

Passion o' me! why melt I thus with griefe For her whose frozen heart denies reliefe? (ll.1–2) Had I been struck blind, the speaker cries, 'I had stil been I' (l. 12); the only possible resolution now is for me to become a marble over which Clarastella melts with the tears of pity.²⁹ These negative connotations are demonstrated in the frequent metaphoric uses of melting in the King James Bible. While the word is used approximately nine times in the context of melting hearts, or the provocation of compassion famously echoed in Milton's invitation in 'Lycidas' to 'Look homeward Angel now, and melt with ruth',³⁰ it is used twelve times to refer to the obliteration of the universe by the wrath of God, and seven times to the obliteration of people. This association between melting and dissolution is echoed in Hamlet's wish that 'this too too solid flesh would melt, / Thaw, and resolve itself into a dew' (I.ii.129–30) — the frequent editorial emendation of solid to 'sullied' also suggesting a sublimation of the body as a cognate to the natural process of evaporation.

Likewise, Richard Lovelace imagines that 'quick Lightning of her Eye' has 'Melted my Soul ith' Scabberd, dead' (l.4), where melting signifies his loss of identity. But this image also conveys emasculation, in the liquefaction of the phallic soul no longer fit for heroic action, and the subsequent monumentalisation of the speaker. Parched by the departure of the soul, his dead spirit becomes entombed in his living body: 'In mine one Monument I lye, / And in my Self am buried' (ll. 1–2). Unless her smile can revive him, nothing will 'my frozen bosome warm' (l. 8).³¹ Lovelace uses the rhetoric of freezing and melting to imply a reversal of roles, where the female beloved is active and hot, while the male speaker is frozen, inert and feminised. This reversal, alluded to in his suggestion that he can be freed by those who 'a cross charm can countercharm' (l. 10), affirms the cultural perception of heterosexual attraction as weakening men, as well as the Galenic model of the one-sex body, as we shall see.

Another instance of melting as both obliteration and monumentalisation can be found in Margaret Cavendish's poem 'On a Melting Beauty'. Included in the 'register of mournfull verses' which is the penultimate section of her volume of *Poems and Fancies* (1653), this poem portrays a 'mourning Beauty' frozen by grief. 'Her knees on *Marble cold* were bow'd down low, / So firme were fix'd, as if *she there* did grow' (ll. 3–4).³² This frozen posture conveys a perversion of natural cycles of growth: in order to reproduce, women had to be open to the vital heats of hotter and drier men, but the mourner seems to grow from the cold stone. She begs the gods to 'strike me dead by this deare *Monument*: / And let our *Ashes* mixe both in this *Urne'* (ll. 28–9). The gods grant her prayer:

When I came neere, her *bloud* congeal'd to *Ice*,

And all her *Body* changed in a trice;

That *Ice* strait melted into *tears*, down run

Through *porous earth*: so got into the *Urne*. (ll. 33–6)

The mourning beauty thus undergoes a double transformation. First her blood congeals into ice (death being regarded as a loss of heat), as she literally solidifies into the 'marble cold' monument she resembled in the poem's opening. Then she melts, her ice becoming tears that can join her beloved in the buried urn. With that she disappears. While solidification (into a monument) signals permanence, liquefaction entails her anonymizing dissipation.

At first glance, this poem is a simple lyric fantasy of the effects of grief on a mourner, which perhaps nods to anxieties about the social status of widows and traditions of memorialisation and monumental sculpture. I want, however, to call attention to Cavendish's use in the poem of the scientifically specific term 'pores'. This term undermines the volume's generic categories. Cavendish separates her 'Poems' from her 'Fancies', giving her natural philosophical poetry prestige of place at the beginning of the volume, while the more fantastic poems for a female readership are presented at the end. The opening poems provide an extensive survey of physical phenomena explained by Lucretian atomism, including the penetration of

porous bodies by atoms of cold.³³ These poems also explore the properties of matter through personification, so that the earth complains of the cold as a 'tyrant' that fetters her in 'Chaines of Ice' and shuts 'my Porous doors' ('A Dialogue between Earth, and Cold', Il. 6, 8). In response, cold reproves the 'grieving' earth, describing himself as 'like a *Husband good*' (l. 32) who provides safety and nourishment:

My Ice are Locks, and Barrs, all safe to keepe;

From Busie Motion gives you quiet sleepe.

For heat is active, and doth you molest,

Doth make you worke, and never let you rest. (ll. 33-6)

This masculine personification of cold reverses the traditional gendering of temperature. Preventing the earth from becoming desiccated by excessive heat, the cold is part of a system of regulation in which the earth plays its own generative but passive role. Cavendish's imagery of tyranny, molestation, chains and overwork nonetheless challenges the notion of early modern inter-subjectivity as a process of equality, of 'exchange and interchange', 'awarenesses and attachments penetrating and (re)shaping one another's consciouness'. Instead, it allegorises those apparently neutral physical or natural processes such as melting and freezing, summer and winter, as forms of domination, reversing the erotic stereotype of the icy female as the agent of masculine heterosexual oppression.

Cavendish's references to the temperatures of gender and of natural processes are not merely displays of scientific learning; they also defend the female poetic imagination. Elsewhere in the volume, Cavendish compares the brain to 'an *Oven*, hot, and dry, / Which bakes all sorts of *Fancies*, low, and high'. According to this well-worn trope, excessive thinking will make the brain grow 'too hot' and burn up; women who think too much start from a lower base temperature, but are perhaps more at risk of the dangers of excessive intellectual heat for that reason. Cavendish defends women poets in atomic terms a few pages earlier: 'it hath seemed hirtherto,

as if *Nature* hath compounded *Mens Braines* with more of the *Sharp Atomes*, which make the *hot*, and *dry Element*, and *Womens* with more of the *round Atomes*, which Figure makes the *cold*, and *moist Element*.'³⁶ Here, Cavendish displaces the conventional association between melting and masculine erotic or rhetorical success with a competing narrative of thermodynamics and the caloric regulation of the body, as she calls attention to her embodied authorship.

PHYSIOLOGY, TEMPERATURE AND GENDER

Temperature was an important physiological principle that ruled over the processes of digestion, reproduction and growth.³⁷ The corpuscular theory Cavendish invoked also provided new opportunities to imagine internal thermal processes in combination with traditional humoural theory. The physician John Peter explained the dangers of cold as a process by which 'Minute Keen *Particles* [...] close up the Pores of our Skins', preventing its respiration and invigorating 'our inward *Ferments*'.³⁸ The cold body is a chaste body closed to penetration, but also susceptible 'upon every little occasion to take Fire' in the form of fevers. It may seem still and monumental on the outside, but Peter argues that inside it is seething with fermentation and agitation:

For from what parts of our Bodies soever, the *Spirituous particles* shall be forc'd to with-draw themselves and make a *Retreat*, they will instantly be supplied with the nimble Particles of *Cold*, which will congeal our *fluid humours*; and if suffered to prevail, must certainly put the *Spirits* to a *rout*. (p. 8)

The bodily interior is a scene of power struggles, however placid and disciplined — or chaste — the exterior may seem. Like icy women striking their lovers dead, these 'nimble' particles, opportunistically invading where spirit retreats, have been known to kill men and beasts 'in *Russia, Greenland, Norway, &c.*' (p. 8). However, sudden

melting was also dangerous because it released the 'Atomes of Cold'. 'Unhing[ed] and 'unrivet[ed]' (p. 8), these atoms harm human bodies which cannot withstand the sudden transformations of state:

Can any *Extream* be *Friendly* to *Nature*? Can such sudden *Alteration* of the Weather prove otherwise, than mightily prejudicial to our *Healths*? Those Passages of our Bodies which were so long so closely lock'd up, will now be laid open, and become *laxe* and *penetrable*, liable to receive such *Exotick putrefactive Ferments* as the *Air* (being saturated with) shall present [...] (p. 9)

Peter's description recalls the thermal and liquid images of Plutarch's advice on guarding against the immoral effects of reading. It also moralises inadvertent bodily processes: sudden warming shocks the body, leaving it 'laxe and penetrable' to other poisonous influences from the air. These terms suggest that women who 'melt' with arousal would not only endanger their reputation, but also their physical health. Like the associations between melting and deceit or obliteration, such discourses work against erotic exhortations of readers to allow themselves to be transformed by the heat of rhetoric.

The implicit interconnection between physical and psychic or even moral characteristics in Peter's account reflects the holism of early modern medicine, for which temperature was immensely significant. Heat was believed to be produced by the heart, which was in turn cooled by the lungs; Aristotle's comparison of the heart to a hearth³⁹ was so influential that even after discovering the circulation of the blood, Harvey presumed that the blood was heated in the heart, cooled in the outer extremities, and then returned to the heart for further heating.⁴⁰ The vital spirits that were heated in the heart conveyed the natural heat and moisture of the blood around the body. Fevers were thermal evidence of a bodily imbalance. In Thomas Carew's poem 'Upon the sicknesse of (*E. S.*)', fever is regarded as a pathological heat which should be tempered by marriage and the moderating physical pleasures it permits:

let her rest secure

From chilling cold, or burning Calenture;

Vnlesse she freeze with yee of chast desires,

Or holy Hymen kindle nuptiall fires. (ll. 41–4)

For the female, the heat of sexual desire and of serious illness could be interchangeable. Extending itself across the sick female body, this poem advises that her only 'heat' should be the blessed 'nuptiall fires' which thaw her icy, chaste desires, not the heat of fever and deadly cold of its chills.

Heat was also significant in differentiating the genders. Men were regarded as hotter and drier than women. For Galen, this was part of man's perfection.⁴¹ Menstruation, lactation, tears, and even a surplus of urine made women, as Gail Kern Paster has written, 'leaky vessels'.42 This physical need for women to 'melt' for conception to take place contrasts with poetic conventions that label them frozen and icy. Reproductive functions were dependent on heat: the Hippocratic corpus described gestation as a cycle of heat exchange ('the warmth of its environment heats [the foetus], and it acquires cold breath from the mother's breathing'); sexual intercourse generated heat through friction.⁴³ Male semen is, in this tradition, a kind of foam generated by frictive heat; Galen asserted that women also generated semen that was 'scantier, colder and wetter', though 'not very far short of being perfectly warm'.44 This caloric differential was essential to heterosexual attraction. According to The Problemes of Aristotle: 'it is the nature of cold to desire, and draw', while 'the wombe and nature do draw the seed, as the Lodestone doth iron ... but she doth draw it for the perfection of hir selfe.'45 Making use of the language of heat and cold, erotic lyric also implicates the early modern medical understanding of the reproductive cycle.

The thermal interaction that constitutes heterosexual intercourse is commemorated in Carew's 'Hymeneall Dialogue' between a 'Bride and Groome'. 46 The groom asks if the bride has felt

A new infused spirit slide Into thy brest, whilst thine did melt? (ll. 3–4)

The bride agrees that she has, and the groom replies

Then I perceive, when from the flame Of love, my scorch'd soule did retire; Your frozen heart in her place came, And sweetly melted in that fire,

Bride.

'Tis true, for when that mutuall change
Of soules, was made with equall gaine;
I straight feele diffus'd a strange,
But gentle heat through every veine[.] (ll. 9–16)

The sensual pleasures of marriage have merged the bride and groom's bodies and spirits together. The flame of love retreats in the male, drawing the icy heart of the female into its place, diffusing a 'gentle heat' equally through both. The poem's libertine play depends on the interchangeability of bodily and affective imagery. Though Carew obviously was inconsistent in his support of marriage (witness 'A Rapture'), this poem reflects a widely shared assumption that the potentially lethal extremities of erotic desire or frigidity should be moderated through marriage, the only form in which concupiscence was allowed expression: for 'it is better to marry than to burn' (1 Corinthians 7. 9).

The physician was also obliged to regulate the caloric economy of the body in order to achieve a balanced level of heat appropriate to the age, gender and temperament of the individual. Insufficient heat in men could cause infertility, low libido, poor circulation, scant urine, melancholia, lactation, menstruation and premature ejaculation. Excess heat in women might lead to nymphomania; curly, dark and plentiful hair; or amenorrhea. Midwives were instructed to cure women of their coldness with calorific drugs and sexual stimulation including brisk rubbing of the loins and lascivious talk.⁴⁷ Ambrose Paré recommended 'fomenting her secret parts with a decoction of hot herbes made with muscadine, or boiled in other good wine'.⁴⁸ Such advice was widespread in medical literature of this period, suggesting that poets who compose lascivious verse could claim — Carew does in 'Upon the sicknesse of (E. S.)' — to be fulfilling a medical function. However, if frigidity was dangerous, love melancholy (in which the lover succumbed to a burning and drying heat) was regarded as potentially fatal.⁴⁹ Erotic lyric also risked stoking the fires of love in readers, and so presented a moral as well as a physical danger to unwary readers.

The different temperatures of the sexes also resulted in different moral qualities. The dry heat of men was associated with potency and valour, and women's cold wetness with falsity and cowardliness. Thomas Laquer has argued that the Galenic schema proposed a 'one-sex' body, in which the continuum of gender was calibrated by heat, and men were always at risk of becoming 'more imperfect' (more wet, more cold, and more female). Men are therefore regularly advised not to allow their heart to melt with feminine pity or under the influence of literary romance. This suggests that melting, or succumbing to erotic or rhetorical persuasion, was not only an ethical risk for male readers, but also a danger to their physical health and their social status as men. Why then do the love lyrics of this period constantly confront readers with melting men?

PETRARCHAN ICE AND FIRE

To address this question, we must examine the ubiquity of metaphors of melting and freezing in Petrarchan poetry. Petrarch uses the verbs 'ardere' (to burn or glow) and 'struggersi' (to melt or languish) repeatedly in the *Rime Sparse*. Heat is sometimes emitted from Laura, and sometimes an internal condition of the poetic speaker; she is also cold. In the sestina 'Giovene donna sotto un verde lauro' (*Rime Sparse* 30), Laura is colder than snow, untouched by the sun for many years. The snowy whiteness of her chastity modulates through the elapsing time of the poem into the whiteness of the speaker's hair, which belies his inward fire. While he is transformed outwardly over time, his love is as unyielding as her temperament. Snow becomes a figure of both constancy and change: her constant chastity, his constancy in love as he changes outwardly with age, and the potential for transformative mercy.

The power of these Petrarchan conventions of the ice-cold beloved and fiery lover is evident in the way they were mocked. In Book III of the *Faerie Queene*, Spenser reveals a false Florimell constructed out of snow:

The substance, whereof she the bodie made,
Was purest snow in massy mould congeald,
[...] The same she tempred with fine Mercury,
And virgin wex, that neuer yet was seald,
And mingled them with perfect vermily,
That like a liuely sanguine it seem'd to the eye. (III. 8. 6, ll. 1–9)⁵⁰

With her 'two burning lampes' (III. 8. 7, 1. 1) for eyes and 'golden wyre' (III. 8. 7, 1. 6) for hair, this automaton mocks Petrarchan conceits. Made of snow, 'fine Mercury' and 'virgin wax' she will melt into sexual receptivity easily, and is one of the many female figurations of dangerous mutability in the poem.

These tropes of fire and ice are also manifestations of the archaic principle of opposition. In his adaptations of Petrarch, Thomas Wyatt returns again and again to the lover as the embodiment of the *coincidentia oppositorum*. Torn between extremes, his love 'spurs with fire, and bridleth eke with yse'.⁵¹ Displaying early modern perceptions of love as an emotional state in which the lover 'swings erratically between love and hate, fear and hope' as the body alternately burns and freezes,⁵² in this same poem Wyatt reveals a speaker in an emergency:

In such extremitie thus is he brought:

Frosen now cold, and now he standes in flame:

Twixt wo and wealth: betwixt earnest and game:

With seldome glad, and many a divers thought. (ll. 9–12)

The lover is in a state of physical, social, and even financial extremity which he knows to be 'fruitless' but which he cannot escape. The intemperance of his passion fixes him at the centre of the conflicting physical forces which typify a Heraclitan cosmology. Translating *Rime Sparse* 134, Wyatt again situates the lover within the war of contraries: 'I finde no peace, and all my warre is done: / I feare and hope: I burne, and frees like yse' (fol. 21^v, ll.1–2). As in his translation of Petrarch's *Rime Sparse* 30, 'the snow shall be black and scalding [...] ere that I in this find peace or quietness' (fol. 36^r, ll. 5, 9), love is an impossible condition, in which opposing forces which should annihilate each other instead suspend the speaker in a constant and exquisite passion. Using snow and fire to signify an impossible state, the speaker magnifies his suffering *and* contrasts it with his careful poetic artifice. That is to say, while the lover in these poems is at the mercy of passionate extremes of hot and cold, the poet can contain these mutually destructive forces in a display of rhetorical balance.

MELTING / WRITING

I have argued throughout this essay that the thermal imagery used in lyric poetry not only draws on scientific and popular accounts of early modern bodies and natural processes, but also gives expression to the desire of poets to affect their readers bodily and ethically. To conclude, I will examine a few instances where melting and freezing are applied specifically to the work of writing. Spenser makes use of these images several times to depict the heroic activity of writing. At the opening of Book III of *The Faerie Queene*, he overcomes the impossibility of composing an adequate epideictic to the sovereign by enlisting Ralegh's liquid poem 'Ocean to Cynthia':

... if in liuing colours, and right hew,

Your selfe you couet to see pictured,

Who can it doe more liuely, or more trew,

Then that sweet verse, with Nectar sprinckeled,

In which a gracious seruant pictured

His Cynthia, his heauens fairest light?

That with his melting sweetnesse rauished,

And with the wonder of her beames bright,

My senses lulled are in slomber of delight. (III, Proem, 4.1–9, p. 390)

Ralegh's 'sweet verse' depicts Cynthia/Elizabeth in a poem whose sensual aesthetic qualities 'lull' Spenser, its reader, to sleep. Though slumber and wetness are associated throughout the *Faerie Queene* with failures of ethical fortitude, Spenser here attributes a delightfully hypnotic effect to the combination of power and poetry. Cynthia's heavenly light melts Ralegh, Ralegh's melting music ravishes Spenser. However, Spenser would undoubtedly also recall Plato's admonition in the *Republic* (606d) that

in regards to the emotions of sex and anger, and all the appetites and pains and pleasures of the soul which we say accompany all our actions, the effect of the poetic imitation is the same. For it waters and fosters these feelings when what we ought to do is dry them up.⁵³

Just at the moment when he is challenged to represent his monarch in the most magically sensual terms, Spenser takes on the somnolescent and liquefied form of one of his own knights. Mixing sensuality with admiration in this way, the poem fosters a set of disruptive passions that diminish the capacity for rigorous and active obedience.

Freezing and melting are terms that resonate not only with bodily or passionate states, but also with the language (spoken, written and printed) in which those states are represented. Fluidity in the beloved signals receptivity. Likewise, ink must be fluid in order to be used for writing. Desiccated ink is useless; ink frozen in print is immovably fixed. John Davies makes the connection between pity and writing, melting hearts and melting ink in an address to 'all passionate Poets':

Ye Poets, that in Passion, melt to Inke,
Wherewith, Melpomen drawes her saddest Lines,
So melt; that so my thirstie Pen may drinke
Of you, made Liquid for the sadd'st Designes ... (ll. 1–4)⁵⁴

When other elegists 'melt to ink', pouring out their passions in liquid lines, they are transformed into ink themselves, to be used by Davies's tragic muse. This instrumentalisation is redoubled, with Davies inviting them again to melt when his 'thirstie Pen' takes the place of Melpomene's. Just as in the example of Cavendish's 'mourning beauty', liquidity signals an anonymising loss of identity for these other poets.

This capacity to melt ink so that it can re-circulate implies that print and writing, usually considered (following Horace) to be timeless monuments, are

actually ephemeral. In Charles Goodall's poem 'To Idera, Writing her Name in Snow', Idera's fluid name becomes an inversion of permanence attributed to a name engraved in glass in Donne's 'Valediction of My Name in the Window'.

Your Name on fallen Snow I seal'd;

The melting drops to Ice congeal'd:

In Crystal Prints the Letters shine,

And their material white refine.

[...] But as by Images of Wax

The Witch a real Body racks;

So as my Heart within consumes,

Ice Snow, Snow Water, reassumes.

My Flames do all your Cold withdraw,

Till we resolve on better Law,

That you shall never freeze, to thaw.

For thus well arm'd, you can defie

A thousand Deaths at once let flie,

Laugh to see Duserastes die.

With your Temptations, millions strong,

To do me right, you do me wrong.

Nay—ev'n with Chymical Experiments entice:

Your very Name can make a Burning-glass of Ice. (ll.1-4, 9-22)⁵⁵

In Goodall's conceit, the name is 'seal'd' on 'fallen Snow'. A premonition of the fate of this engraving is signalled by this oxymoron — the purity of the driven snow is also 'fallen' from its heavenly state, and quick to sully. The heat of the writing finger 'melts' the drops of the snow, which then 'to Ice congeal'd', a more solid and durable 'crystal': the text is seared on its white material in a process analogous to printing. That name becomes both a 'looking-glass' and an hourglass, constantly regarded by the passing speaker who sees 'the picture of my Face' combined with the name. This embrace between the desired object and the desiring self is only transitory, however;

the melting snow becomes the melting wax used in witchcraft to inflict pain, and the name decays from ice to snow to water. This melting process is provoked by the speaker's own 'flames', but is also attributed to the beloved's icy imperviousness. Paul Hammond has shown that Duserastes (from $\delta v \sigma \epsilon \rho \alpha \sigma \tau \sigma \zeta$, unfavourable or dangerous to love) is the beautiful youth depicted in three love poems by Goodall, published in 1688, that were omitted from his 1689 collection. When Goodall republished these poems in his *Poems and Translations*, he feminised the beloved, and renamed one poem 'To Idera'. Idera in this poem is a miracle of science, who can 'with Chymical Experiments entice: / Your very Name can make a Burning-glass of Ice', and a name which replaces the obliterated (melted) name of the male object of desire. The poem's transformation from a daring expression of homoerotic desire to a heteronormative Petrarchan infatuation is perhaps also encoded in this burning-glass of ice, an experimental receptacle through which light can pass which is hot enough to ignite a fire but which remains cold and transparent itself.

Goodall's poem may also allude to an ancient tradition of frozen words. Antiphanes described how words spoken in a city during a bitterly cold winter froze so that they could not be understood until they melted the following spring. This story was invoked in a critique of Plato, whose precepts could not be understood by young men (only melting into comprehensibility when they grew older).⁵⁷ Antiphanes' story of frozen words was imitated by Castiglione, Calcagnini, Peter Heylyn, Sir John Mandeville (who declares that the harsh sounds of the Dutch language 'wanted more time than ours to melt and become audible'),⁵⁸ and most famously Rabelais, where Pantagruel and Panurge hear 'various Sounds and Voices of Men, Women, Children, Horses etc.' which turn out to be the thawing aural residue of a battle which 'froze in the Air; And now the rigour of the Winter being over by the succeeding serenity and warmth of the Weather, they melt and are heard.'⁵⁹ Pantagruel plucks a handful of still-frozen words from the air,

which seem'd to us like your rough Sugar-Plumbs, of many colours, like those us'd in Heraldry, some Words *Gules* (This means also Jests and merry sayings] some *Vert*, some *Azur*, some *Black*, some *Or*, [This means also fair words;] and when we had somewhat warm'd them between our Hands, they melted like Snow, and we really heard them, but cou'd not understand them, for it was Barbarous Gibberish. (p. 652)

Playing (as Terence Cave has shown) with the continuities between *verba* and *res*, Rabelais attributes to words a materiality of colours, textures and weight: 'we also saw some terrible words, and some others not very pleasant to the Eye.' This materiality of words also reflects their existence as printed artefacts, words as frozen ink.

Pantagruel prevents an attempt to save 'some merry odd words, and have preserv'd them in Oyl, as Ice and Snow are kept, and between clean Straw', suggesting that words are not to be hoarded because they are always in supply: 'odd, quaint, merry and fat words of *Gules* never being scarce among all good and jovial *Pantagruelists*' (p. 653). Judith Anderson has compared this storage of language to its fixture in commonplace books, arguing that Rabelais satirises the desire to remove words from their practical uses into the frozen stasis of *sententiae* and learned discourses.⁶⁰ At the same time, Rabelais' anecdote takes pleasure in the possibility of words being reserved for future times — they can melt and become mobile again in the maturity of the individual, or through the passage of time and encounter with new audiences. This is a very different image of melting in writing, which reflects a positive view of poetic influence as commerce rather than the perils of losing personal and gender identity by succumbing to the persuasive force of others.

CONCLUSION

Many Renaissance writers held that pleasure depends on its contrary. As Castiglione writes in *The Courtier*, 'we see no pleasure can delite vs at anye time if sorrow goeth not beefore'.⁶¹ In its simplest terms, the pleasures of love depend in part on the difficulty of winning it; the colder the beloved, the more intense will be the sweetness of her yielding. Melting marks the transition from resistance to pleasure, from the monumental solidity of chastity to the liquidity of bodily exchange. Poetry was a space where two excessive subjects could meet, moderated by the balance of the couplet or the containment of the sonnet. Like music, which is often referred to as a melting genre, the delights of poetry are dependent on contrast and modulation, as stress gives way to unstress, words to rhyme, and sound to the pause at the end of the poetic line. In place of the ice-house body of the resistant beloved which cannot be opened, the poet controls the volume of the poem where he stokes and modulates the fiery heat of erotic desire.

The contraries which are held in balance in these poems could also be regarded as a product of what Rosalie Colie has described as an 'epidemic' of paradoxes in the early modern period. Written for amusement and to test the limits of rhetorical ability and the audience's tolerance for absurdity, the paradox is designed to elicit admiration. But the reader is expected to retain their scepticism. Similarly, readers had many reasons to be wary of these poems of melting love, not only because they offered immoral excitations, but also because the proverbial use and scientific accounts of melting associated it with duplicity, dissipation and violence. The reader's scepticism in this sense begins to resemble the beloved's, which makes any instance of persuasion even more of a social achievement, particularly when it depends on what was, in this period, a set of tedious clichés.

While the objects of erotic poetry are critiqued for their coldness, they are also justified in forcing the lover to restrain himself. And if they melt, they do so not so much through an act of will but through passive submission to an irresistible natural force. Corpuscular theory provided an image of cold penetrating other substances through its pores, breaking open the vessels intended to contain it with considerable violence. It was dangerous to health because it confined, agitated and 'fermented' the spirits. But it was also a binding force, which closes up the pores to prevent the entry of corruption. Melting made the body 'laxe and penetrable', liable to corruption. While she remains chaste, the beloved is preserved from the corruption of sexual desire; but she has also withdrawn from life. Yet the argument is not simply between vitalist sexuality and Platonic frigidity. The lover is also isolated by his own intemperate eros and excessive heat. To melt her, to persuade her into a radical bodily and spiritual transformation through the power of language or the force of words, would be to open her up to a (sexual) receptivity in which the two spirits or bodies could mingle and lose their separate identities. This operation of power is not only targeted at the female beloved, but also at male readers who will experience their own pleasurable 'melting' or arousal through the poet's rhetoric.

Melting is an anti-hierarchical metaphor for the mixture of two bodies. Signalling pleasure, receptivity, fluidity and yielding, it overcomes the antagonisms that are inherent to such irreconcilable contraries as fire and ice. Yet it can also signal the triumph of one (discursive or physical) force over another. As the natural philosopher Robert Basset wrote in 1637 about extremes of hot and cold, 'contraries doe contend for supereminence, and predominance of power and force'. Disempowered by the beloved's extreme coldness, the poet can assert predominance rhetorically instead through the arousal of readers.

Notes

- ¹ Francesco Petrarch, *Rime Sparse* 202, in *Petrarch's Lyric Poems: The Rime Sparse and Other Lyrics*, trans. by Robert M. Durling (Cambridge, MA: Harvard University Press, 1976), p. 348.
- ² Joanna Bourke, 'Fear and Anxiety: Writing about Emotion in Modern History', *History Workshop Journal*, 55 (2003), 111–33 (p. 113).
- ³ Monique Scheer, 'Are emotions a kind of practice (and is this what makes them have a history)? A Bourdieuian approach to the understanding of emotion', *History and Theory*, 51.2 (2012), 193–220.
- ⁴ Barbara H. Rosenwein, 'Worrying about Emotions in History', *American Historical Review*, 107.3 (2002), 821–45 (p. 842).
- ⁵ The literature on embodiment and emotion in the early modern period are vast: see for example Francis Barker, *The Tremulous Private Body: Essays on Subjection* (London: Methuen, 1984); *The Body in Parts: Fantasies of Corporeality in Early Modern Europe*, ed. by Carla Mazzio and David Hillman (New York and London: Routledge, 1997); *Reading the Early Modern Passions: Essays in the Cultural History of Emotion*, ed. by Gail Kern Paster, Katherine Rowe, and Mary Floyd-Wilson (Philadelphia: University of Pennsylvania Press, 2004); *Sensible Flesh: On Touch in Early Modern Culture*, ed. Elizabeth D. Harvey (Philadelphia: University of Pennsylvania Press, 2003); Michael C. Schoenfeldt, *Bodies and Selves in Early Modern England: Physiology and Inwardness in Spenser, Shakespeare, Herbert and Milton* (Cambridge: Cambridge University Press, 1999) and Gail Kern Paster, *Humoring the Body: Emotions and the Shakespearean Stage* (Chicago: University of Chicago Press, 2004).
- ⁶ Passions and Subjectivity in Early Modern Culture, ed. by Brian Cummings and Freya Sierhuis (Farnham: Ashgate, 2013), p. 7.
- ⁷ Daniel Juan Gil, 'Before Intimacy: Modernity and Emotion in the Early Modern Discourse of Sexuality', *ELH*, 69.4 (2002), 861–87 (pp. 870–71).
- ⁸ Scheer, p. 201.
- ⁹ Ulinka Rublack, 'Fluxes: The Early Modern Body and the Emotions', trans. by Pamela Selwyn, *History Workshop Journal*, 53 (2002), 1–16 (p. 2).
- 10 Rosenwein, p. 834
- ¹¹ Rublack, p. 2.
- ¹² Rublack, p. 3.
- ¹³ For the effects of reading on the emotions and bodies of readers, see Katharine A. Craik, *Reading Sensations in Early Modern England* (Basingstoke: Palgrave Macmillan, 2007) and Adrian Johns, 'The Physiology of Reading', in *The Nature of the Book* (Chicago: University of Chicago Press, 1998), pp. 380–443.
- ¹⁴ Plutarch, *The Philosophie, commonlie called, the Morals,* trans. Philemon Holland (London, 1603), sigs B3^r and B4^r, cited in Craik, p. 3.
- ¹⁵ Joseph P. Ward, 'The Taming of the Thames: Reading the River in the Seventeenth Century,' *HLQ*, 71.1 (2008), 55–75 (pp. 59–60).
- ¹⁶ John Taylor, *The Cold Tearme: Or the Frozen Age* (London, 1621), n.p., ll. 1–2.
- ¹⁷ Thomas Carew, 'To Saxham', in Poems, With a Maske (London, 1651), pp. 34–36, esp. ll. 11–12. All

further references to Carew's poems are taken from this edition.

- ¹⁸ T. Dean, 'Natural Encounters: Climate, Weather and the Italian Renaissance', *European Review of History*, 18.4 (2011), 545–61 (p. 546).
- ¹⁹ Accademia del Cimento, *Essayes of Natural Experiments*, trans. Richard Waller (London, 1684), p. 70. All further references to this work are taken from this edition.
- ²⁰ Essayes of Natural Experiments, p. 69.
- ²¹ Robert Herrick, *Hesperides* (London, 1648), p. 88. All further references to Herrick's poetry are taken from this edition.
- ²² See for example, Richard Lassels, *The Voyage of Italy* (London, 1670), on the ice house in the Boboli Gardens in Florence; Jean de Thévenot, *The Travels of Monsieur de Thevenot into the Levant* (1687), on the ice houses in Persia; and Adam Olearius, *The Voyages and Travells of the Ambassadors Sent by Frederick, Duke of Holstein, to the Great Duke of Muscovy and the King of Persia*, trans. John Davies (1669) on the ice houses in Moscow.
- ²³ Edmund Waller, *Poems Written upon Several Occasions* (London, 1686), pp. 161–62.
- ²⁴ For a discussion of this point, see Joshua Scodel, *Excess and the Mean in Early Modern English Literature* (Princeton: Princeton University Press, 2002), p. 135.
- ²⁵ Antoine Le Grand, *An Entire Body of Philosophy According to the Principles of the Famous Renate Des Cartes* (London, 1694), part II, chap. IV, p. 28.
- ²⁶ William Congreve, The Double-Dealer (London, 1694), p. 20, II. ii.
- ²⁷ B. B. Memorable Accidents, and Unheard of Transactions Containing an Account of Several Strange Events (Brussels, 1691), pp. 81–99.
- ²⁸ B. E., A new dictionary of the canting crew in its several tribes of gypsies, beggers, thieves, cheats &c. (London, [1699]), sig. H3^r.
- ²⁹ Robert Heath, 'The Farewel to Clarastella', Clarastella (London, 1650), p. 52.
- ³⁰ Could Milton have borrowed this line from William Barkstead?: 'that blinde archer, that doth wound all hearts / Had now quite ouercome the God of artes, / For he did dote vpon this louely youth, / Whose heart was all composde of melting ruth'. 'Apollo Hiacinth', *Mirrha the Mother of Adonis: or, Lustes Prodegies* (1607), sig. E5^v.
- ³¹ Richard Lovelace, 'Song', Lucasta (London, 1659), p. 28.
- ³² Margaret Cavendish, Duchess of Newcastle, 'On a Melting Beauty', *Poems and Fancies* (London, 1653), pp. 192–93. All further references to Cavendish's works are taken from this edition.
- ³³ Cavendish, pp. 34–35.
- ³⁴ Christopher Tilmouth, 'Passion and Intersubjectivity in Early Modern Literature', in *Passions and Subjectivity in Early Modern Culture*, pp. 13–32 (p. 17).
- ³⁵ Cavendish, 'Nature's Oven', ll. 1–2.
- ³⁶ Cavendish, 'To Poets', p. 122.
- ³⁷ Everett Mendelsohn, *Heat and Life: The Development of the Theory of Animal Heat* (Cambridge, MA: Harvard University Press, 1964), p. 17.

- ³⁸ John Peter, A Philosophical Account of This Hard Frost (London, 1684), p. 5.
- ³⁹ De partibus animalium 170a23; cited in Mendelsohn, p. 11.
- ⁴⁰ Gabriel Harvey, *Movement of the Heart and Blood in Animals*, trans. by Kenneth J. Franklin (London, 1963), p. 59.
- ⁴¹ On the Usefulness of the Parts of the Body, trans. by Margaret Tallmadge May, 2 vols (Ithaca, NY: Cornell University Press, 1968), II, p. 630.
- ⁴² Gail Kern Paster, *The Body Embarrassed: Drama and the Disciplines of Shame in Early Modern England* (Ithaca, NY: Cornell University Press, 1993), p. 25.
- ⁴³ 'On Generation', in *The Hippocratic Treatises "On Generation"*, "On the Nature of the Child", "Diseases IV", trans. by Iain M. Lonie (Berlin and New York: Walter de Gruyter, 1981) 1.1 (p. 1), 4.1 (p. 2).
- ⁴⁴ On the Usefulness of the Parts of the Body, II, pp. 631, 630. Cited in Thomas Laquer, Making Sex: Body and Gender from the Greeks to Freud (Cambridge, MA: Harvard University Press, 1990), p. 100.
- ⁴⁵ Pseudo-Aristotle, *The Problemes* (1597), sigs B8v, E4r.
- 46 Carew, *Poems* pp. 88–89.
- ⁴⁷ Laquer, pp. 100–2.
- ⁴⁸ 'Of the Generation of Man', in *The Workes of the Famous Chirugion*, trans. by Thomas Johnson (London, 1634), Book 24, pp. 889–90.
- ⁴⁹ See Lesel Dawson, *Lovesickness and Gender in Early Modern English Literature* (Oxford: Oxford University Press, 2008), esp. pp. 12–45.
- ⁵⁰ Edmund Spenser, *The Faerie Queene* (London, 1590).
- 51 Songs and Sonettes, written by the right honourable Lorde Henry Howard late Earle of Surrey, and other [Tottel's Miscellany] ([London], 1557), fol. 22^v , l.8.
- ⁵² Dawson, p. 21.
- ⁵³ Cited in Joseph Campana, *The Pain of Reformation: Spenser, Vulnerability, and the Ethics of Masculinity* (New York: Fordham University Press, 2012), p. 133.
- ⁵⁴ John Davies, 'To All Passionate Poets', The Holy Roode (London, [1609]), p. 3.
- ⁵⁵ Charles Goodall, *Poems and Translations* (London, 1689), pp. 109–10.
- ⁵⁶ Paul Hammond, *Figuring Sex Between Men from Shakespeare to Rochester* (Oxford: Oxford University Press, 2002), pp. 54–55.
- ⁵⁷ Eugene S. McCartney, 'Antiphanes' Cold-Weather Story and Its Elaboration', *Classical Philology*, 48.3 (1953), 169–172 (pp. 169–70).
- ⁵⁸ Tatler (21–23 November 1710), ed. Joseph Addison, cited in McCartney, p. 170.
- ⁵⁹ François Rabelais, *Gargantua and Pantagruel*, trans. by Sir Thomas Urquhart (1653), ed. by Terence Cave (London: Everyman, 1994), pp. 651–52. All further references to this work are taken from this edition.
- ⁶⁰ Judith H. Anderson, *Words that Matter: Linguistic Perception in Renaissance English* (Stanford: Stanford University Press, 1996), p. 20.
- 61 Baldassare Castiglione, The Courtyer, trans. Thomas Hoby (London, 1561), Book II, sig. L2^r.



⁶² Rosalie Colie, *Paradoxia Epidemica: The Renaissance Tradition of Paradox* (Princeton: Princeton University Press, 1966), passim.

⁶³ Robert Basset, Curiosities: or the Cabinet of Nature (London, 1637), p. 231.