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Enlightenment Bubbles, Romantic Worlds

While many critics have discussed the bubbles that make fleeting but memorable appearances in several well-known Romantic-era poems—most notably, Samuel Taylor Coleridge’s “The Eolian Harp” (1796), Anna Letitia Barbauld’s “Washing-Day” (1797), and George Gordon, Lord Byron’s *Don Juan* (1818-1824)—discussions of these appearances tend to take the bubble’s properties and associations for granted.¹ To do so is a mistake, because, from Isaac Newton’s *Opticks* (1704) to the South Sea Bubble (1720), from fashionable paintings of cherubic children playing with soap-bubbles to satirical depictions of Gottfried Leibniz’s vision of God likewise playing with worlds, the eighteenth century redefines what bubbles mean. To read the above poems in the light of these varied developments is to discover that analogies drawn therein between bubbles and poetry are not self-deprecating, as they are often read.² Rather, these poems harness the particular meanings that the bubble accrued in the eighteenth century in order to articulate a new idea of literature that defines the act of literary composition as a form of play that brings forth new worlds.

Just as Elizabeth Kraft persuasively argues that readings of Barbauld’s “Washing-Day” have been led astray by a “twentieth-century view of ballooning as mere recreation,”³ so I would argue that when recent critics ascribe meaning to soap-bubbles—whether good: “an ethereal, fairy-like imaginative setting,” or bad: “financial ruin, impractical plans, silly chimeras”—they insufficiently register a pervasive eighteenth-century discourse that constitutes soap-bubbles as richer and more capacious vessels of meaning.⁴ Late seventeenth- and eighteenth-century natural philosophy understood soap-bubbles’ iridescent colors as the product of light’s interplay with the

soap-film's two surfaces. Metaphorically speaking, recent criticism has insufficiently registered the soap-bubble's double-surfaced significance in eighteenth-century discourse.

One of the special qualities of the set of thin films to which the soap-bubble belongs is that they shift between transparency and opacity, a quality also associated figuratively with literary texts.⁵ The metaphor implies that one may either look at or look through a literary text in a surface/depth dynamic that has recently returned to prominence following the proposition of "surface reading" as an alternative to "symptomatic reading."⁶ One of the approaches to literature that Stephen Best and Sharon Marcus include under the heading of surface reading is a modest "practice of critical description" that reflects the belief that "what we think theory brings to texts ... is already present in them."⁷ It follows logically that such a critical practice would render unnecessary the critical metalanguage of "surface reading" itself. The eighteenth- and early-nineteenth-century literary texts examined here illustrate this point, rendering unnecessary surface reading as a critical intervention by virtue of their provision of a highly sophisticated account of their own operations in terms of surface/depth relations, an account that belies the desirability or possibility of privileging either "surface" or "symptomatic" reading but rather making the interplay between surface and depth (and between surfaces) integral to the reading process by finding that process to inhere precisely in shifting back and forth between looking through and looking at the literary text.⁸

To make this point, I will seem to work backward, beginning not with the eighteenth-century texts themselves but with late twentieth- and early twenty-first-century critical metalanguage, first, Bill Brown's essay "Thing Theory" (2001) and then, Peter Sloterdijk's book, *Bubbles: Microspherology* (1998). Brown's essay begins by alluding to the opening of A. S. Byatt's novel, *The Biographer's Tale* (2001), in which a frustrated graduate student sitting in a

literature seminar looks up at the “dirty window, shutting out the sun,” and thinks to myself, “I must have *things*.”⁹ Brown observes that “in Byatt’s novel, the interruption of the habit of looking *through* windows as transparencies enables the protagonist to look *at* a window itself in its opacity.”¹⁰ Attending to the window’s surface presents an alternative to the habit of literally looking through windows. But it also forms an alternative to the habit of *figuratively* looking through translucent surfaces. Indeed, in defining surface reading, Best and Marcus invoke precisely the same looking *at/seeing through* distinction as Brown.¹¹ Likewise, Byatt’s narrator characterizes his seminar’s approach to literary interpretation, in a deft parody of symptomatic reading, as just such an act of seeing through surfaces: “We found the same clefts and crevices, transgressions and disintegrations, lures and deceptions beneath, no matter what surface we were scrying.”¹² Byatt’s scene vividly juxtaposes figurative and literal instances of looking through and looking at, paralleling the act of looking at and / or through texts and at / or through “thin transparent bodies”—as Isaac Newton classifies the class of objects that includes both glass panes and bubbles.¹³ This parallel is one that eighteenth-century texts also highlight, and one that becomes particularly suggestive in a period that literally puts thin films under the microscope for the first time. Memorably, for example, *Tristram Shandy* presents the narrative he is writing as a corollary to the mythical Momus’s glass through which the soul’s motions might be observed.¹⁴

However, it is not the glass pane nor even the prism that emerges as the iconic transparent body in the wake of Newton’s *Opticks* but rather the soap-bubble. Ironically, it is Robert Hooke and Newton’s insistence on attending to soap-bubbles as things in themselves unmediated by human associations that allows the soap-bubble to emerge as a powerful mediating figure for literariness. For in addition to the readily apparent ways in which a bubble exemplifies appearance itself—now you see it, now you don’t—experimental philosophy reveals

the bubble to be an even more richly suggestive and even ennobling figure for literary representations than first appears. The qualities experimental philosophy reveals in the soap-bubble join the swirl of associations inherited in the early modern period from the classical allegorical figure of air bubbles on a water surface, as well as new associations—most particularly of play from children’s games to economic speculation—that became prominent as the image of the child blowing bubbles attains iconic status.

It is not only soap-bubbles’ flimsy quality but also their brief encapsulation of a distinct domain that made them useful in the eighteenth century for conceptualizing fictionality as spatially, temporally, and ontologically liminal. That is to say, fictional representations become defined in this period as occupants of an alternative realm, one that exists only for the duration of the reading or viewing experience, and that exists only provisionally. While critics have sometimes identified the Enlightenment with a phenomenology of “the substantial” against which a Romantic interest in the “insubstantial” emerges, here I emphasize the shared interest, in the eighteenth and early nineteenth centuries, in the phenomenological experience of what Sloterdijk calls the “spatio-ontological” category of the “between.”¹⁵ This category has recently acquired prominence within eighteenth-century studies following William Warner and Clifford Siskin’s definition of the Enlightenment as an “event in the history of mediation,” taking “mediation” to encompass “everything that . . . is simply in between.”¹⁶ The bubble’s liminal status, materially between water and air, spatially between ground and sky, temporally between inflation and bursting, parallels fiction’s own boundary-crossing nature, making the bubble uniquely suited to metaphorically rendering the temporary transport fiction provides.

The soap-bubble in my account becomes—in a conceit that admittedly sounds like something that Jonathan Swift might have satirically proposed—what Peter de Bolla calls a

“load-bearing” concept: one that allows for the conceptualization of other things, in this case, fictionality.¹⁷ It might seem that this argument freights the soap-bubble with more than it can conceptually bear. Yet bubbles are not mere child’s play as Sloterdijk reveals in *Bubbles: Microspherology*, the first in his provocative trilogy *Spheres* (1998, 1999, 2004). Sloterdijk’s argument that the Enlightenment entails humans’ construction of artificial spheres as compensation for the puncturing of the traditional view of the cosmos in which “the earth is enclosed by spherical forms” complements M.H. Abrams’ argument that the eighteenth century witnesses the displacement of theological concepts of worldmaking into the aesthetic realm.¹⁸ Sloterdijk’s intervention is to recast this human worldmaking as a process of bubble-blowing. While in Genesis God breathes life into Adam, in modernity humans become self-animating, self-inspiring—what Sloterdijk calls autogenous, that is, self-producing—vessels.¹⁹ Sloterdijk makes use of a broad historical canvas, but I will be arguing for the presence of an eighteenth-century discourse of bubbles that is broadly consistent with his theoretical claims. When first-person speakers in the poems discussed here imagine those poems as bubbles, they, at once producers and inhabitants of the bubbles they describe, enact the autogenous self-inspiration that Sloterdijk describes.²⁰ In what follows, I will first establish how bubbles become identified with worlds in general and with fictional worlds in particular.

“Who first had the thought that the world is nothing but the soap bubble of an all-encompassing breath?” asks Sloterdijk.²¹ Francis Bacon was probably not the first to think this thought, but he did make the conceit that “The World’s a Bubble” famous in a much-cited poem.²² This conceit crystallizes a tendency in late seventeenth-century natural philosophy to see worlds as bubbles and bubbles as worlds. While later I will be distinguishing between soap-

bubbles, air bubbles in water, and air bubbles on a water surface, here I want merely to establish the ubiquity of the bubble as a formal unit for conceptualizing matter.

Shifting from the microscopic to the macroscopic, natural philosophers found bubbles everywhere, from the tiniest units of matter to the outer reaches of the cosmos. Leibniz's *Hypothesis Physica Nova* (1671) "argues that the pressure of the light against the earth results in the production of tiny bubbles ('bullae') of matter."²³ Leibniz speculates that the tiny bubbles into which matter is divided "contain smaller bubbles, 'worlds in worlds to infinity,'" language that prefigures the endless possible worlds he later hypothesizes in the *Theodicea* (1710).²⁴ The point is not merely that the bubble functions as a microcosm of the world but that in a globular universe the ubiquity of the bubble as a formal unit of matter emblemizes the very conception of nature as a perfectly interlocking "sphere of coexistence," in Charles Taylor's terms, from the tiniest particle to the all-encompassing whole.²⁵ Leibniz articulated this view most influentially, and, as Taylor discusses, it finds poetic expression in Alexander Pope's *Essay on Man* (1734), which harnesses the classical conceit of *homo bulla* (man is a bubble) to articulate a Leibnizian conception of the universe in which each individual element bends towards fulfilling its purpose within the whole: "(By turns we catch the vital breath, and die) / Like bubbles on the sea of Matter born, / They rise, they break, and to that Sea return."²⁶

Robert Hooke, Leibniz's contemporary, also saw worlds within worlds via the telescope and the microscope as described in his *Micrographia* (1665), arguing that "*every considerable improvement of Telescopes or Microscopes [is] producing new Worlds and Terra-Incognita's to our view.*"²⁷ He sometimes describes these new worlds as bubbles. Observation 18 in the *Micrographia* is famous for first observing the appearance of cells, a term that Hooke coins. However, the cell was only one of several spatial analogies Hooke used to describe what he

observed. He also describes there the quill of a feather as “a kind of hardned [sic] or solid froth, or a *congeries* of very small bubbles consolidated in that form, into a pretty stiff as well as tough concrete, and that each Cavern, Bubble, or Cell, is distinctly separate from any of the rest.”²⁸

The role of soap-bubbles in Newton’s account of color also attests to the bubble’s transferability as a formal unit. Applying the principle of “transduction” (the extension of scientific laws from observable to unobservable bodies), Newton argued that the color of bodies in general is produced “on the same grounds that thin Plates or Bubbles doe reflect or transmit those rays [of color].”²⁹ As the colors apparent in soap-bubbles were a “common Observation” from which a whole theory could be built, soap-bubbles had the potential to become iconic: in Simon Schaffer’s words, “bubbles were to be to optics what apples had allegedly been to gravitation.”³⁰

Indeed, eighteenth-century popular depictions of Newton frequently reinforced the appealing idea that the natural philosopher developed his theory of light and color through the childlike act of playing with soap-bubbles. In 1827, Bolognese artist Pelagio Palagi’s painting, “Newton discovers the Refraction of Light” (Figure 1) gave the idea definitive visual expression, iconographically blending the neoclassical cult of Newton with the Romantic apotheosis of the child by suggesting that inspiration strikes Newton as, sitting at his desk, he observes a child blowing soap-bubbles.³¹ I will return to the role of children playing with soap-bubbles in popular representations of the *Opticks* but for now I want to take note of the painting’s emphasis on the bubble as the world’s formal analogue: the vertical line of a corner wall divides the canvas, the child and a woman identified as Newton’s sister on the left, the contemplative Newton at his desk on the right, where a globe on the desk visually counterbalances the bubbles on the left.³²

The iconic image of the child blowing soap-bubbles that Palagi's painting incorporates has a complex history going back more than two hundred and fifty years earlier. Beginning in the late sixteenth century, Dutch Mannerist art depicted the putto, an allegorical figure of life's transience, blowing bubbles, and linked the image to the classical conceit of *homo bulla*, which invoked bubbles upon a water surface as a figure of life's vanity.³³ The image of the soap-bubble may have been suggested by depictions of the putto accompanied by a translucent sphere, variously said to represent the world or the human mind.³⁴ Seventeenth- and eighteenth-century paintings secularized and naturalized these allegorical emblems such that "the putto became an ordinary child blowing soap-bubbles" while retaining the resonances of transience and vanity.³⁵

The popularity of the subject of children blowing soap-bubbles may be partly attributable to seventeenth-century Dutch culture's valorization of children's play, evident in the new genre of compendia of children's games in which blowing bubbles is a standard part of the repertoire.³⁶ Within such compendia, bubble-blowing alone, Simon Schama suggests, denotes the "meaningless carefree playfulness" that will become the key feature of a historically later understanding of childhood.³⁷ While it was not until the nineteenth century that bubbles become, courtesy of the soap industry, emblematic of cleanliness, seventeenth-century Dutch culture's much-remarked upon devotion to washing home and laundry daily (rather than weekly, as "Washing-Day" records) surely contributed to bubble-blowing's ubiquity as a children's pastime.³⁸

At the same time that the bubble-world analogy was becoming prominent, so too was a fiction-world analogy via a strain of eighteenth-century criticism that conceived of literary composition as imaginative world-making, a model of art that challenged the mimetic model and which first comes to prominence in Addison's remarks on the "*fairie way of writing*" in his

famous *Spectator* series on “the pleasures of the imagination” (1712).³⁹ There, Addison declares that poetry “has not only the whole Circle of Nature for its Province, but makes new Worlds of its own.”⁴⁰ Writing in 1735, Alexander Baumgarten further develops the notion of fictional world-making by drawing upon the “possible world” ontology articulated in Leibniz’s *Theodicea*. In Leibniz’s account, God brought into existence the world in which we live as the best choice from out of the infinite number of possible worlds He had conceived.⁴¹ Some objected to Leibniz’s vision of God as inappropriately ludic, Johann Gottfried Herder protesting, “God does not play with worlds as children play with soap-bubbles, until one pleases him and he singles it out.”⁴²

Within this context in which bubble and world were aligned and so too were fiction and world, it is not surprising that bubble and fictional world were also identified. The soap-bubble’s perfectly spherical, fragile structure presented a formal analogue for fiction’s alternative world, conceived as at once complete unto itself and utterly evanescent.⁴³ The extraordinary rise and subsequent crash in 1720 of the price of stock in the South Sea Company and its simultaneous designation as a “bubble” encouraged the soap-bubble’s association with a speculative, fantastical heterocosm. The description of the South Sea Company financial crisis as a bubble was consistent with a cluster of meanings related to deception associated with the word bubble—which might denote a dupe, a deceptive show, or a “delusive commercial or financial scheme” (*OED*). The soap-bubble’s established associations of worldly vanity, transience, and childish play, as well as its visual representation of an entity that deceptively seems poised to expand indefinitely, made it the scheme’s perfect emblem. Soap-bubbles appear in several satirical treatments of the scheme, from broadsides to playing cards.⁴⁴

I detail the soap-bubble's association with the South Sea Company financial crisis here in order to distinguish the post-South Sea bubble historical moment of the literary works that concern me in which the soap-bubble figures not all-engulfing delusion, but rather what Catherine Gallagher calls a mood of cognitive provisionality that enjoys the soap-bubble in full acknowledgement of its imminent bursting, and that encourages the elicitation of this same mood in response to fictional worlds.⁴⁵ For example, Charles Lamb's first "Elia" essay, "The South-Sea House" (1820), uses the soap-bubble's qualities—metaphorically associated with the South Sea bubble—to define the literary as a discourse that also works through play and speculation, through the disillusioned investment in fantastic and insubstantial forms. The "blast of the breaking of that famous BUBBLE" sets the mood and also the form of the essay's self-representation as "fantastic shapes" that "rise up," and defines the narrator-narratee relationship as one of "playing," in which the author summons up "fantastic—insubstantial" names, the essay's disclosure of having "fooled the reader" disrupting its own fantastical representations.⁴⁶

I single out Lamb's essay because it is so explicitly concerned with the mood of a post-bubble historical moment. But, more broadly, late eighteenth-century meditations upon literary representations' capacity to sustain a reader's absorption invoke the soap-bubble as a figure for both illusion and disillusion. For example, discussing the representation of supernatural beings—the sorts of characters most strongly associated with the notion of fiction as an alternative world—Herder writes in 1787, "Beings of this sort cannot appear cautiously enough, and moreover only in the proper place and with decency and dignity; or else they dissolve like soap bubbles."⁴⁷ Although for Herder the soap-bubble's dissolution signifies a collapse of illusion that amounts to aesthetic failure, other works, like Lamb's essay, incorporate the experience of disillusionment—often figured as a bubble bursting—into the aesthetic experience. In the poems

to which I will now turn, bubbles represent the aesthetic space they inhabit. Accordingly, when such bubbles burst, they dramatize the collapse of the poem's own illusionistic space even as the very act of representing this collapse affirms, on the contrary, the aesthetic object's persistence. In this way, soap-bubbles are used to articulate a concept of aesthetic experience to which illusion and disillusion are equally integral.⁴⁸

I begin with Barbauld's, "Washing-Day," a blank verse meditation on the weekly clothes wash, in which, having observed the baleful mood washing day casts over the household, the poem shifts to the first-person to recall girlhood experiences of washing day, memories that involve blowing soap-bubbles, and which precipitate a final musing on the parallels between the "sports of children and the toils of men."⁴⁹ My reading—I will be discussing only on the poem's final 29 lines—suggests that Barbauld uses bubbles to reflect upon poetry's capacity to make "new Worlds of its own," in Addison's phrase, a capacity represented as consistent with scientific impulses to which Romantic poetry is often contrasted.⁵⁰

Barbauld's speaker recalls how washing-day deprived her as a girl of the "thrilling tale / Of ghost, or witch, or murder" because on washing-day the maids have no time to tell stories (l.65-66). As if in compensation for this lack, a fantastical literary mood infuses the lines that follow, which, in Terry Castle's evocative description, veer "off into pure fantasia."⁵¹ While the "slip-shod" (l.4) muse of comic domesticity overtly inspires "Washing-Day," at this moment, I would argue, the poem's speaker is re-inspired by what Elizabeth Montagu calls, in her essay upon Shakespeare, "the beldame tradition"; beldame is a term that might variously denote a grandmother or more ancient female ancestor, an aged woman, a nurse, or a witch (*OED*).⁵² Barbauld's speaker taps this source directly, noting that in the absence of the maids, "I went /

And shelter'd me beside the parlour fire," where resides her "dear grandmother, eldest of forms" (l.66-8).

The association between nurses or old women and supernatural tales was made commonly in the period.⁵³ Three years before publishing "Washing-Day," Barbauld remarked favorably upon Mark Akenside's treatment of this theme in her extensive critical commentary upon Akenside's 1744 poem "The Pleasures of Imagination," an immensely popular work inspired by Addison's "pleasures of the imagination" essay series.⁵⁴ Akenside dramatizes the essay concerning "the fairy way of writing" through the image of a "village-matron, round the blazing hearth" who "Suspends the infant-audience with her tales, / Breathing astonishment! Of witching rhymes, / And evil spirits ..." (l.257-9).⁵⁵ Barbauld's poem reverses the roles: it is "the little ones" (a group that here includes the speaker as a child) who possess—or are possessed by—the supernatural muse, playing tricks on their grandmother with "With elfin cunning" (l.69-71).

Akenside's poem and Barbauld's commentary help explain why the "space of reverie" established here, to cite Castle again, "culminates in the transformation of [the] child's soap bubble into the silken ball of the balloonist."⁵⁶ Both Akenside's poem and Barbauld's commentary literalize the inspiration that creates the "space of reverie." Barbauld comments that Akenside's description of the "infant-audience[']s" "shivering sighs" "very happily expresses the effect of that kind of terror" in which one feels "afraid, as it were, to draw a full inspiration."⁵⁷ Barbauld echoes Akenside's identification of breath as the medium that links the matron and her infant audience.⁵⁸ Note the ambiguity, in Akenside's lines, regarding who is "Breathing astonishment!", an ambiguity that leaves open its application to both parties, exhaled by the matron and inhaled by the audience. The language of literal inspiration identifies the matron with

the God of Genesis 2 and the infant audience with the Adamic clay vessel in to which He breathes life, and at the same time evokes the classical conceit of *homo bulla*, in which, in Lucian's words, "All men are bubbles, great or small, inflated with the breath of life."⁵⁹ Here we can begin to see why Barbauld's fantasia might culminate in blowing bubbles "thro' hollow bole" of what would have very likely have been a clay "pipe" (l.79-80).⁶⁰

While the ongoing work of washing-day noisily disrupts—graphically marked by a dash and line break—the fantasia, the disruption does not close the fantasy down but rather is incorporated into it as washing-day itself becomes the object of the speaker's dreamy speculation. Like the colors in the bubbles to which it gives rise, the speaker's fantasy is not "pure," as Castle suggests, but rather a "*Heterogeneous mixture*," in Newton's phrase, revealing a space of aesthetic play that emerges from the same impulses as scientific endeavor.⁶¹ As Kraft argues, the speaker's acts of pondering and imagining are not necessarily at odds with the kind of speculative thought that results in the scientific marvel of the hot-air balloon. If, in listening to the maids' tales, the girl is, in Kraft's words, "transported by their tales to worlds that do not exist," so too does scientific thought involve this same transport to alternative worlds, as Newton goes back and forth, in his *Queries* to the third book of *Opticks*, between a world in which light is corpuscular and a world in which light is a wave.⁶² Likewise, to "ponder much," as the speaker's younger self does, "Why washings were" is to imagine the possibility of a world in which it might be otherwise (l.78-79).

Such ponderings are implicitly figured by the "floating bubbles" that are "sent aloft" in the poem's next line (l.80). But both the bubbles and their meanings multiply, as they are wont to do, in the poem's final lines: "Earth, air, and sky, and ocean, hath its bubbles, / And verse is one of them—this most of all" (l.85-86). Critics have variously found these lines to be "insistently

self-deprecatory”⁶³ and “an act of female poetic self-affirmation.”⁶⁴ Kraft persuasively has it both ways by showing that to liken the poem to a bubble is to overtly degrade it but covertly to aggrandize it by way of a sly echo of *Macbeth* and its prophetic witches, also dismissed as “bubbles.”⁶⁵ Kraft reads the bubble as a figure for imagination but I want to read it, slightly differently, as a figure for the fictional world.

The final line of “Washing-Day” shifts perspective from attending to the bubbles contained within the poem to apprehending the poem itself as a bubble. This meta-fictional move could be said to dissolve the poem’s own bubble in the way that Herder describes by reminding the reader of its artifice. Yet for the poem to foreground its artifice in this way functions not as a failure of art, as Herder imagines it, but as an assertion of authorial autonomy; if the verse bubble is an autogenous, self-inspired vehicle, so too, this last line insists, will it be a self-bursting one. Moreover, even as the bubble metaphor ostensibly limits the poem, the spatial trajectory the final lines trace is one of unabated expansion. In imitation of the Montgolfier balloon’s own ascent “thro’ the clouds,” the poem moves from the domestic to the global, this movement tracked by the ever-grander spheres within the poem’s field of vision, from the soap-bubbles to the hot air balloon, to the penultimate line’s assumption of an extra-terrestrial perspective from which it envisages “earth, air, and sky, and ocean” all at once.⁶⁶ From here it might seem that the poem can zoom out no farther, but the last line performs this apparently impossible feat by inhabiting a perspective somehow beyond its own “verse” but also beyond the ‘verse, this word, in the context of the poem’s dizzying zoom beyond the terrestrial globe playing on universe, and suggesting the assumption of a point-of-view redolent of Akenside’s vision of God contemplating the “unnumber’d worlds” at his disposal (2.335).

That the poem's self-identification as a bubble takes it in two such radically different directions—at once dissolving its illusion and exulting in its ability to simulate an impossible perspective—performs the indeterminacy of its own status as a fictional world. The text's alternation between calling attention to its surface—its status as “verse”—and allowing that surface to transparently mediate its sublime vision, corresponds to contemporary understandings of how thin films produced iridescence by alternately reflecting and transmitting light. Although Hooke and Newton each understood this process differently (and both accounts would be supplanted by the principle of interference in the nineteenth century), both argued that light's interplay with the soap-bubble's two surfaces was responsible for iridescent effects, the two-surfaced nature of the soap-bubble's thin film distinguishing it from an air bubble within water.⁶⁷ “Washing-Day” presents, then, a poetics of the soap-bubble—as opposed to the more classically venerable bubble in water—in which aesthetic effects are produced by the bubble's simultaneous operation as, and resistance to operating as, a medium of transmission. This is a poetics authorized not by the conceit of *homo bulla* but by *Macbeth*'s weird sisters, who are identified with earthly rather than water bubbles: “the earth hath bubbles as the water has, / And these are of them.”⁶⁸

If the *homo bulla* conceit suggests that every man is a bubble unto himself, Barbauld's poetics of soap-bubbles is more inclusive. Both formally, in channeling Akenside (not to mention Shakespeare, Milton, and many others)⁶⁹ and thematically, in locating invention in the collective presence of the maids, the children, and the floating soap-bubbles—not to mention the weird sisters and the Montgolfier brothers—Barbauld's verse “bubble” includes both self and other; for Barbauld as for Sloterdijk, being “in the bubble” is always social.⁷⁰ That is to say, rather than the idea of aesthetic creation as worldmaking authorizing an idea of the artist as a

singular original genius, as it does in Abrams' account, the notion of worldmaking as bubble blowing suggests a model of creation that is always, at bottom, plural or "dyadic," in Sloterdijk's terms—"dialogic," in Bakhtin's sense.⁷¹

This dyadic model of creativity applies also to Coleridge's "conversation poem" "The Eolian Harp," both in itself and in its relationship to "Washing-Day." Although Barbauld's poem may have been written earlier, Coleridge's poem was published first, in 1796, originally with the title "Effusion XXXV," and it also concerns inspiration's pneumatics, emblemized by the eolian harp that is the poem's central image.⁷² The year following "Effusion XXXV"'s publication, when "Washing-Day" was published, Barbauld wrote a poem to Coleridge warning him, in Karina Williamson's words, "against neglecting mundane realities in pursuit of intellectual abstractions."⁷³ That Coleridge's poem contains within itself a similar rebuke attributed to the poem's silent "Sara," a rebuke that takes the form of the speaker's disavowal of his former thoughts as "Bubbles that glitter as they rise and break / On vain Philosophy's aye-babbling spring" is striking, as if Barbauld's voice finds its way into Coleridge's poem and her domestic soap-bubbles become his air bubbles on a water surface, a phenomenon associated with the conceit of *homo bulla* as a figure of human vanity as in Lucian's evocation of the bubbles that appear "at the foot of a waterfall."⁷⁴

Bubbles in both poems figure speculative thought. In Coleridge's poem this speculation takes the form, as A. Harris Fairbanks observes, of a "What if" question ("And what if all of animated nature / Be but organic harps diversely fram'd ...?" (l.36-37)), one that, like Barbauld's poem, imagines the speaker as animated by an outside force.⁷⁵ The speaker's question concerns the nature of inspiration, framed here in terms that ask us to recall inspiration's literal and theological senses, that is, its association with breath, whether mortal or divine. Coleridge's

image of the individual animated by the movement of an “intellectual breeze” evokes the conceit of *homo bulla*; but Coleridge’s speaker disavows his own airy progeny, dismissing his speculative thought-bubbles as “shapings of the unregenerate mind” (l.47).

Critics often argue that Sara’s rebuke precipitates the speaker’s retreat into “sober orthodoxy.”⁷⁶ And yet, as Michael O’Neill observes, “Coleridge’s violation of his own poem, his misrepresentation of it as ‘Bubbles ...’ has a kind of dialogic authenticity.”⁷⁷ That is to say, if philosophy’s “aye-babbling” spring is also solipsistic—“I babbling,” in a pun noted by Kathleen Wheeler—to burst its bubble enacts the dyadic model of inspiration that Coleridge’s speculation posits; he allows himself to become the instrument for Sara’s “intellectual breeze.”⁷⁸ So, if the poem, on the face of it, distances itself from its “bubbles,” in another way it might be said to enact the model of inspiration articulated in those bubbles even as it disavows them. The pun on babbling also speaks to the work’s generic status as “conversation poem” and hints that what is being characterized as bubbles might not be so much the content of the speaker’s ideas but rather their form as speech—inevitably ineffable and fleeting.⁷⁹

Coleridge returns to bubbles on a water surface as a figure for his own ideas in a letter written to John Thelwall in December 1796 that uses the image to articulate a subtly different model of the inspirational process.⁸⁰ The letter cites from “The Eolian Harp,” describing it as Coleridge’s “favourite” poem, and refers to his mind as “an idea-pot,” announcing, cryptically, that he is “hanging” Thelwall’s “mind as a looking-glass over” his mind, so as to “image on the said mind all the bubbles that boil in the said Idea-pot.”⁸¹ Coleridge’s image returns us to *Macbeth*’s witches and their bubbling cauldrons and with it to the sly poetics of the bubble that they authorize. Instead of the unidirectional flow implied by the image of a sweeping breeze or babbling stream, the scenario described in the letter to Thelwall envisages creativity as a

feedback loop in two distinct ways. Firstly, Coleridge states that the looking-glass will “image” the bubbles, in so doing potentially reflecting back the bubbles’ own reflected images in an infinite regress. At the same time, given that the bubbles emanate from a boiling pot, the looking-glass in Coleridge’s scenario presumably fogs up with condensation, thereby precipitating a water cycle but also preventing the mirror from acting as a reflective surface. Coleridge therefore rigs up an imaginary contraption that, like Barbauld’s poem, envisages the creative process as involving both the transmission and obstruction of images.

If we linger upon this image a little longer, the contrast between the source of the bubbles in “The Eolian Harp” and in the letter suggests a striking conceptual distinction. In the months following “Effusion XXXV”’s publication in April 1796, Coleridge became disillusioned with David Hartley’s associationist philosophy, which he had earlier espoused.⁸² The figure of the Eolian harp was tainted by association with Hartley’s deterministic and materialistic philosophy, and Coleridge turned away from wind imagery in general, choosing, for example, the frost “unhelped by any wind” as a figure for the imagination in 1798’s “Frost at Midnight.”⁸³ The image of the bubbling “idea-pot” is particularly interesting in this context; Coleridge has preserved, indeed, redeemed bubbles as a figure for his own ideas by re-locating them: instead of emanating from a Hartleyan “spring” of consciousness, the bubbles that rise from the self-contained pot represent a self-generated model of inspiration in which the mind produces its own ideas—becoming “autogenous,” or self-inspiring, in Sloterdijk’s terms.

The final example I will be discussing is a stanza from Byron’s *Don Juan* that, like the examples from Barbauld and Coleridge, suggests how the bubble allows for the articulation of a model of art that is at once ludic and heterocosmic; at once a child’s play thing, and a cosmic globe; at once given life by human breath and utterly detached. Bubbles, which feature in several

stanzas in *Don Juan*, frequently figure the ancient theme of the vanity and transience of human achievements but also figure the liminality that Byron attributes to life itself in lines like “Between two worlds life hovers.”⁸⁴ If this in between state is the nature of life, then perhaps this is what heterocosmic art highlights by moving the reader purposefully “between two worlds,” the real and the fictive. Bubbles’ physical nature—a combination of water and air that may move freely within both elements—lends them, as Daniel Gabelman argues, to articulating the reader’s transport between “this and another possible world.”⁸⁵ In *Don Juan*, as in Barbauld’s and Coleridge’s poems, bubbles figure verse’s speculative, world-conjuring qualities in terms that remind us that the phrase “to blow bubbles” can mean both “to devise baseless theories, or to amuse oneself in a childish manner” (*OED*). That is to say, Byron’s bubbles are at once glittering, abstract structures, and child’s play. For example, following one of the poem’s characteristic deviations from the plot, the narrator interrupts himself: “But what’s this to the purpose? You will say. / Gent. Reader, nothing; a mere speculation.” He continues, “This narrative is not meant for narration, / But a mere airy and fantastic basis.” Note the repetition of “mere” here, seeming to disavow the poem’s representations. The narrator goes on to compare poetry to range of insubstantial things, culminating with the declaration in the stanza’s final couplet, “And mine’s a bubble not blown up for praise, / But just to play with, as an infant plays” (Canto XIV, Stanza 8). In these lines, Byron moves away both from the bubble on a water surface as a symbol of *vanitas* and from connotations of puffery, embracing, instead, the soap-bubble as an emblem of verse’s sheer, ludic, joy.

All three poems use the bubble to disavow their own speculations as trivial yet in such a way as to back-handedly suggest the profundity of those same speculations. Such a rhetorical strategy overlays the bubble’s association with “silly chimeras” with the more sophisticated idea

that bubbles only *seem* like silly chimeras.⁸⁶ To characterize one's speculations as bubble-like is then only apparently to deprecate those ideas, while also leveraging the association that the apparently childish, playful, and trivial bubble contains profundities that the ignorant fail to appreciate. This association, I want to emphasize in conclusion, is one that Enlightenment natural philosophy and its popularizers help make prominent, from Hooke's contention that his "experiment" (which consists of simply observing a soap-bubble's transformations), "though at first thought it [the experiment] may seem one of the most trivial in nature," such phenomena being "often observed in those Bubbles which Children use to make with Soap-water,"⁸⁷ in fact is "one of the most instructive," to Newton's ready acknowledgement likewise that his own experiments concern "The Colours of Bubbles with which Children play."⁸⁸

Popularizing treatments of Newton emphasize the counter-intuitiveness of an object so apparently trivial as the soap-bubble becoming the object of serious scientific observation. Take for example, Henry Pemberton's 1728 popular commentary upon Newton, which, before proceeding "to shew the reason why bodies appear of different colours," pauses to observe, "My reader no doubt will be sufficiently surprized, when I inform him that the knowledge of this is deduced from that ludicrous experiment, with which children divert themselves in blowing bubbles of water made tenacious by the solution of soap."⁸⁹ Thomas Percival's conduct book for children first published in 1775 dramatizes and moralizes the reader response that Pemberton anticipates in a sketch illustrating "The folly of ridiculing that of which you are ignorant" in which a "pert youth" observes a gentleman "busily engaged in blowing bubbles of soap and water," and "attentively observing them as they expanded and burst in the sunshine." The youth guffaws at the gentleman's apparent "folly and insanity," but is upbraided by a passerby who points out that the gentleman he is observing is "the greatest Philosopher of the age, Sir Isaac

Newton, investigating the nature of light and colours by a series of experiments, no less curious than useful, though you deem them childish and insignificant.”⁹⁰

Hooke’s and Newton’s observations of soap-bubbles affirm the presence of the profound within apparently “childish and insignificant” pursuits.⁹¹ In so doing they suggest a relationship between Enlightenment optics and late eighteenth- and early nineteenth-century ideas about aesthetic experience that is less antagonistic than has sometimes been portrayed both by Romantic poets and in twentieth-century scholarship. Benjamin Haydon’s account of Wordsworth, Lamb, and Keats’s objection to Newton’s destruction of “all the poetry of the rainbow by reducing it to its prismatic colours” at the so-called “immortal dinner” still powerfully frames our view of the Romantic relationship to eighteenth-century optics.”⁹² Refracted through the soap bubble, a different picture emerges, one in which the scientific perspective is not reductive but generative. Instead of embodying a “meddling intellect” that “Mis-shapes the beauteous forms of things,” in Wordsworth’s famous lines, Hooke and Newton’s often rapt descriptions of soap-bubbles’ shifting colors (“... a very fair and lively scarlet, and soon after of a brighter colour, being very pure and brisk, and the best of all the reds. Then, after a lively orange, followed an intense, bright, and copious yellow ...”) and repeated assertions of the “strange” quality of the seemingly “trivial” fact of the soap-bubble’s transformations call to mind, rather, Coleridge’s statement that Wordsworth’s aim in the *Lyrical Ballads* (1798, 1800) was to “give the charm of novelty to things of every day.”⁹³ In 1830, the scientist John Herschel would bring out this alignment when he invoked the soap-bubble as emblematic of the point that “to the natural philosopher there is no natural object unimportant or trifling ... in circumstances where the uninformed and unenquiring eye perceives neither novelty nor beauty, he walks in the midst of wonders.”⁹⁴ In sum, attending to soap-bubbles allows us to

see how both Enlightenment natural philosophy and Romantic poetics cultivated a perspective that brought forth new worlds of wonder.

Notes

¹ On “The Eolian Harp”’s bubbles, see Michael O’Neill, *Romanticism and the Self-Conscious Poem* (Oxford: 1997), 86; Kathleen M. Wheeler, *The Creative Mind in Coleridge’s Poetry* (Cambridge: 1981), 84–6; A. Harris Fairbanks, “The Form of Coleridge’s Dejection Ode,” *PMLA* 90, no. 5 (1975): 874–84, 877. On “Washing-Day”’s bubbles, see Ann Messenger, *His and Hers: Essays in Restoration and Eighteenth-Century Literature* (Lexington: 1986), 193; Terry Castle, “Unruly and Unresigned,” *Times Literary Supplement*, 10–16 November 1989; Elizabeth Kraft, “Anna Letitia Barbauld’s ‘Washing-Day’ and the Montgolfier Balloon,” *Literature and History* 4, no. 2 (1995): 25–41; Karina Williamson, “The Tenth Muse: Women Poets and the Poetry of Common Life,” in *Early Romantics: Perspectives in British Poetry from Pope to Wordsworth*, ed. Thomas Woodman (Houndmills, Basingstoke: 1998), 185–99, 185–6; Haley Bordo, “Reinvoking the ‘Domestic Muse’: Anna Laetitia Barbauld and the Performance of Genre,” *European Romantic Review* 11, no. 2 (2000): 186–96, 193–4; Vassiliki Markidou, “‘Bubble[s]’ and Female Verse: A Reading of Anna Laetitia Barbauld’s ‘Washing Day’,” *Critical Survey* 19, no. 2 (2007): 19–33, especially 25–32; Susan Rosenbaum, “‘A Thing Unknown, without a Name’: Anna Laetitia Barbauld and the Illegible Signature,” *Studies in Romanticism* 40, no. 3 (2001): 369–99, 397–99; Jennifer Krusinger Martin, “Raising a Nation: Anna Letitia Barbauld as Artistic and Pedagogic Mother of the Romantic Citizen” (PhD diss., Northeastern University, 2010), 148–60. On *Don Juan*’s bubbles see Daniel Gabelman, “Bubbles, Butterflies and Bores: Play and Boredom in *Don Juan*,” *The Byron Journal* 38, no. 2 (2010): 145–56.

² O’Neill, *Romanticism and the Self-Conscious Poem*, 86; Kraft, “‘Washing-Day’ and the Montgolfier Balloon,” 36; Messenger, *His and Hers*, 193. Nor will I be reading these comparisons as, conversely, “defiant” or self-affirming. Williamson, “Tenth Muse,” 186; Markidou, “‘Bubble[s]’ and Female Verse,” 26.

³ Kraft, “‘Washing-Day’ and the Montgolfier Balloon,” 26.

⁴ Markidou, “‘Bubble[s]’ and Female Verse,” 25; Kraft, “‘Washing-Day’ and the Montgolfier Balloon,” 36.

⁵ On the shift in seventeenth-century Dutch mannerist art from portraying soap-bubbles as transparent to displaying their iridescences, see Michele Emmer, “Soap Bubbles in Art and Science: From the Past to the Future of Math Art,” in *The Visual Mind: Art and Mathematics*, ed. Michele Emmer (Cambridge, Mass.: 1993), 136.

⁶ See Stephen Best and Sharon Marcus, “Surface Reading: An Introduction,” *Representations* 108, no. 1 (2009): 1–21.

⁷ Best and Marcus, “Surface Reading: An Introduction,” 11.

⁸ My thinking about this topic is indebted to the roundtable discussion, “Why We Argue About the Way We Read” at the 2012 annual meeting of the American Society for Eighteenth-Century Studies. On reading as interplay between surface and depth see Murray Smith, “On the Twofoldness of Character,” *New Literary History* 42, no. 2 (2011): 277–94, 279.

⁹ A.S. Byatt, *The Biographer’s Tale* (London: 2000), 2.

¹⁰ Bill Brown, “Thing Theory,” *Critical Inquiry* 28, no. 1 (2001): 1–22, 4.

¹¹ Best and Marcus, “Surface Reading: An Introduction,” 9. Best and Marcus do not cite Brown but invoke Margreta de Grazia and Peter Stallybrass’s use of the locution in a 1993 essay. See Best and Marcus, “Surface Reading: An Introduction,” 20n15.

¹² Byatt, *Biographer’s Tale*, 1. As Byatt’s narrator, hyper-aware that “a dirty window is an ancient, well-worn trope,” doubtless realizes, the figure of the grimy window recalls 1 Corinthians 13:12, “For now we see through a glass, darkly.” I thank Simon Schaffer for pointing out this echo.

¹³ Isaac Newton, *Opticks: Or, a Treatise of the Reflections, Refractions, Inflexions and Colours of Light*, 1718 ed. (Sussex: 2012), 168.
<http://www.newtonproject.sussex.ac.uk/view/texts/normalized/NATP00047>

¹⁴ See William C. Mottolose, “Tristram Cyborg and Toby Toolmaker: Body, Tools, and Hobbyhorse in Tristram Shandy,” *Studies in English Literature, 1500-1900* 47, no. 3 (2007): 679–97, 689–90. For sources for Sterne’s discussion of Momus’s glass, see James E. Evans, “Tristram as Critic: Momus’s Glass Vs. Hobby-Horse,” *PQ* 50, no. 4 (1971): 669–71.

¹⁵ Fredric V. Bogel, *Literature and Insubstantiality in Later Eighteenth-Century England* (Princeton, N.J.: 1984), 54; Peter Sloterdijk, *Neither Sun nor Death / Peter Sloterdijk with Hans-Jürgen Heinrichs*, trans. Steve Corcoran (Cambridge, Mass.: 2010), 245, 40.

¹⁶ Clifford Siskin and William Warner, “This Is Enlightenment: An Invitation in the Form of an Argument,” in *This Is Enlightenment*, ed. Clifford Siskin and William Warner (Chicago: 2010), 1–36, 5.

¹⁷ Peter De Bolla, “Mediation and the Division of Labor,” in *This Is Enlightenment*, ed. Clifford Siskin and William Warner (Chicago: 2010), 87–101, 89.

¹⁸ Peter Sloterdijk, *Bubbles: Microspherology*, trans. Wieland Hoban (Cambridge, Mass.: 2011), 23; M. H. Abrams, “From Addison to Kant: Modern Aesthetics and the Exemplary Art,” in *Doing Things with Texts: Essays in Criticism and Critical Theory*, ed. Michael Fisher (New York: 1989), 170.

¹⁹ Sloterdijk, *Bubbles*, 60.

²⁰ In the concept of bubble as autogenous vessel, “the content contains itself.” Sloterdijk, *Neither Sun nor Death*, 145.

²¹ Sloterdijk, *Bubbles*, 20.

²² Cited in Frederick Parkes Weber, *Aspects of Death and Correlated Aspects of Life in Art, Epigram, and Poetry. Contributions Towards an Anthology and an Iconography of the Subject. Illustrated Especially by Medals, Engraved Gems, Jewels, Ivories, Antique Pottery, &C.*, 3rd ed. (New York: 1918), 525.

²³ Daniel Garber, *Leibniz: Body, Substance, Monad* (Oxford: 2009), 18–19.

²⁴ Garber, *Leibniz: Body, Substance, Monad*, 29.

²⁵ Charles Taylor, *A Secular Age* (Cambridge: 2007), 181.

²⁶ Alexander Pope, *The Twickenham Edition of the Poems of Alexander Pope*, general ed. John Butt, volume III i, *An Essay on Man*, ed. Maynard Mack (New Haven: 1964), Epistle III, l.18-20. See also Epistle I, l.90 on God’s equalizing gaze, which observes “And now a bubble burst, and now a world.”

²⁷ Robert Hooke, preface to *Micrographia or Some Physiological Descriptions of Minute Bodies Made by Magnifying Glasses with Observations and Inquiries Thereupon* (New York: 1961).

²⁸ Hooke, *Micrographia*, 115–16. Others metaphors include “boxes or bladders of air.” Hooke, *Micrographia*, 114.

²⁹ Alan E. Shapiro, *Fits, Passions, and Paroxysms: Physics, Method, and Chemistry and Newton’s Theories of Colored Bodies and Fits of Easy Reflection* (Cambridge, England: 1993), citing Newton, Prop: 5, “Observations,” 1675, 117.

³⁰ Newton, *Opticks*, 187; Simon Schaffer, “A Science Whose Business Is Bursting: Soap Bubbles as Commodities in Classical Physics,” in *Things That Talk: Object Lessons from Art and Science*, ed. Lorraine Daston (New York: 2004), 147–92, 158.

³¹ On Palagi’s appeal to both neoclassical and Romantic ideals, see Luisa Bandera Gregori, “Filippo Pelagio Palagi: An Artist between Neo-Classicism and Romanticism,” *Apollo* n.s.97, no. 135 (1973): 500–09. On the painting’s domestication of Newton see Schaffer, “Soap Bubbles,” 158.

³² On the identification of the woman as Newton’s sister see Lorraine Daston and Peter Galison, *Objectivity* (Cambridge: 2007), 219; Schaffer, “Soap Bubbles,” 159.

³³ Wolfgang Stechow finds the earliest recorded example of this conceit in Varro, 36 BC and argues that Erasmus revives it in the early sixteenth century. Wolfgang Stechow, "Homo Bulla," *The Art Bulletin* 20, no. 2 (1938): 227–28, 27.

³⁴ Horst W. Janson, "The Putto with the Death's Head," *The Art Bulletin* 19, no. 3 (1937): 423–49, 447. On the translucent sphere see the commentary by Arthur K. Wheelock, Jr. and Ben Broos upon Vermeer's "The Allegory of Faith" (c.1671–1674) in *Johannes Vermeer*, ed. Arthur K. Wheelock, Jr., 190–195, Washington: National Gallery of Art, the Hague: Royal Cabinet of Paintings Mauritshuis (New Haven: 1995), 192. Also relevant is the iconography of "Lady World," often portrayed with a globe and holding a bubble. See Peter C. Sutton, *Masters of Seventeenth-Century Dutch Genre Painting* (Philadelphia: 1984), 263. On the new connotations the image of the glass globe took on in the light of seventeenth- and eighteenth-century pneumatic experiments, see Laura Baudot, "Joseph Wright's and Robert Boyle's Air Pump Narratives," *Eighteenth-Century Studies* 46, no. 1 (2012): 1–28.

³⁵ Janson, "Putto with the Death's Head," 447. For an overview of soap-bubbles in European art, see Emmer, "Soap Bubbles in Art and Science." On Jean-Baptiste Chardin's *The Soap Bubble* (ca. 1733), see Michael Fried, *Absorption and Theatricality: Painter and Beholder in the Age of Diderot* (Oxford: 1980), 50. On John Everett Millais's *Bubbles* (originally titled *A Child's World*) (1886) as exemplifying the nineteenth-century commodification of soap-bubbles, see Schaffer, "Soap Bubbles," 155–160. For a more speculative response to Millais's painting, see Sloterdijk, *Bubbles*, 17–20.

³⁶ Simon Schama, *The Embarrassment of Riches: An Interpretation of Dutch Culture in the Golden Age* (New York: 1987), 497–511.

³⁷ Schama, *Embarrassment of Riches*, 512. See also Mary Frances Durantini, *The Child in Seventeenth-Century Dutch Painting* (Ann Arbor: 1983), 191–200; Wayne Franits, *Dutch Seventeenth-Century Genre Painting* (New Haven: 2004), 112–3, 233–4.

³⁸ Schama, *Embarrassment of Riches*, 376.

³⁹ Joseph Addison and Sir Richard Steele, *The Spectator*, ed. Donald F. Bond (Oxford 1965), 3:570. This is not to say that eighteenth-century criticism invents the idea of literary composition as worldmaking; Sir Philip Sidney's concept of the "golden" world, for example, couches poetic composition in such terms, although he suggests that the poet delivers, not a completely new world, but an improved version of our own. Philip Sidney, *An Apology for Poetry* (Manchester: 1973), 100. On other precedents in Renaissance criticism for eighteenth-century ideas about imaginative worldmaking, see Abrams, "From Addison to Kant," 172–3.

⁴⁰ Addison and Steele, *Spectator*, 3:570–73.

⁴¹ Abrams, "From Addison to Kant," 176–77.

⁴² Johann Gottfried Herder, *God, Some Conversations*, trans. Frederick H. Burkhardt (New York: 1940), 125. Herder uses the metaphor again on page 126.

⁴³ On fiction as world see Alexander Gottlieb Baumgarten, *Reflections on Poetry; Alexander Gottlieb Baumgarten's Meditationes Philosophicae De Nonnullis Ad Poema Pertinentibus* trans. Karl Aschenbrenner and William B. Holther (Berkeley: 1954), 63.

⁴⁴ See for example *The Bubblers Medley, or a Sketch of the Times Being Europes Memorial for the Year 1720, 1720*. On this print see David McNeil, "Collage and Social Theories: An Examination of Bowles's 'Medley' Prints of the 1720 South Sea Bubble," *Word & Image* 20, no. 2 (2004): 1–17.

⁴⁵ Catherine Gallagher, "The Rise of Fictionality," in *The Novel*, ed. Franco Moretti (Princeton: 2006), 347.

⁴⁶ Charles Lamb, *Elia; and, the Last Essays of Elia* (Oxford: 1987), 2, 7, 8.

⁴⁷ Johann Gottfried Herder, "On Image, Poetry, and Fable," in *Selected Writings on Aesthetics*, trans. and ed. by Gregory Moore (Princeton: 2006), 555–94, 372.

⁴⁸ For an example of how soap-bubbles were used to self-reflexively contemplate absorption in visual illusion see Fried's discussion of how the bubble's close-to-bursting appearance in Chardin's "The Soap Bubble" engages an absorption that mirrors the bubble-blower's. Fried, *Absorption and Theatricality*, 50, 51. The distended bubble, I would add, also disrupts absorption by inevitably drawing attention to the illusoriness of its depiction of imminent change since the bubble, unlike the viewer's gaze, is in fact fixed and unchanging.

⁴⁹ Anna Letitia Barbauld, "Washing-Day," in *The Poems of Anna Letitia Barbauld*, ed. William McCarthy and Elizabeth Kraft (Athens, Georgia: 1994), 133–35, line 84. Subsequent references are to line numbers from this edition and will be cited parenthetically.

⁵⁰ Of course, Barbauld's own identity as "Enlightenment" or "Romantic" author is vexed. See Robert Miles, *Romantic Misfits* (Houndmills, Basingstoke, Hampshire: 2008), 182–3.

⁵¹ Castle cited in Kraft, "'Washing-Day' and the Montgolfier Balloon," 26.

⁵² Elizabeth Montagu, *An Essay on the Writings and Genius of Shakespeare, Compared with the Greek and French Dramatic Poets. With Some Remarks Upon the Misrepresentations of Mons. De Voltaire. The Sixth Edition, Corrected. To Which Are Added, Three Dialogues of the Dead.*, 1810 ed. (London: 1769), 123.

⁵³ See for example Addison and Steele, *Spectator*, 1: 479–82.

⁵⁴ On the circumstances whereby Barbauld came to write the commentary, see William McCarthy, *Anna Letitia Barbauld: Voice of the Enlightenment* (Baltimore: 2008), 366–7. On

Leibniz's role in the poem, see Robin Dix, *The Literary Career of Mark Akenside, Including an Edition of His Non-Medical Prose* (Madison, New Jersey: 2006), 94, 99–100 and also the edition therein of Akenside's "The Principles of a Theory of the Immaterial World."

⁵⁵ Robin Dix, ed. *The Poetical Works of Mark Akenside* (Madison & London: 1996). All line numbers refer to this edition and will be cited parenthetically.

⁵⁶ Castle cited in Kraft, "'Washing-Day' and the Montgolfier Balloon," 26.

⁵⁷ Mark Akenside and Anna Letitia Barbauld, *The Pleasures of Imagination. By Mark Akenside, M.D. To Which Is Prefixed a Critical Essay on the Poem, by Mrs. Barbauld* (1794), 13, <http://find.galegroup.com/ecco/infomark.do?&source=gale&prodId=ECCO&userGroupName=uclosangeles&tabID=T001&docId=CW114766875&type=multipage&contentSet=ECCOArticles&version=1.0&docLevel=FASCIMILE>

⁵⁸ Barbauld also lays emphasis upon breath in her lecture "On the Classics" published in *A Legacy for Young Ladies* (1826), where she asserts that "words" "at first are only uttered breath." Cited in Rosenbaum, "Illegible Signature," 399.

⁵⁹ Lucian of Samosata, *The Works of Lucian of Samosata, Complete with Exceptions Specified in the Preface*, trans. H.W. Fowler and F.G. Fowler (Oxford: 1905), 1:180. On the broader links between pneumatology and pneumatics in the eighteenth century see Sara Landreth, "Breaking the Laws of Motion: Pneumatology and Belles Lettres in Eighteenth-Century Britain," *New Literary History* 43 (2012): 281–308.

⁶⁰ Paintings of the period suggest that bubbles were commonly produced using clay pipes. Barbauld's epigraph from Jaques' famous "All the world's a stage" speech in *As You Like It* introduces the idea of the aging adult's return to a "childish treble" that "pipes" once more (Act II, Scene 7), thereby invoking the pipe's musical sense and its association with poetic composition in pastoral poetry. See Markidou, "'Bubble[s]' and Female Verse," 27; Martin, "Raising a Nation," 148–49, 189. The lines add a dark tinge to the poem's sunny vision of bubbles and child's play by recalling the speech's reference to the soldier's vain pursuit of a "bubble reputation," one scene in Jaques' bleak vision of human existence as a life-long "play," a conceit that Wordsworth revisits in "Intimations of Immortality."

⁶¹ Isaac Newton, "A Letter of Mr. Isaac Newton ... Containing His New Theory About Light and Colors," in *Philosophical Transactions of the Royal Society*, ed. Rob Illife and Scott Mandelbrote (Sussex: 1671/2), 3075–87, 3079. <http://www.newtonproject.sussex.ac.uk/view/texts/normalized/NATP00006> On Barbauld's affirmation of the continuities between scientific impulse and imaginative reverie, see Rosenbaum, "Illegible Signature," 397–98.

⁶² Kraft, "'Washing-Day' and the Montgolfier Balloon," 34.

⁶³ Kraft, "'Washing-Day' and the Montgolfier Balloon," 36.

⁶⁴ Markidou, “‘Bubble[s]’ and Female Verse,” 26.

⁶⁵ Kraft, “‘Washing-Day’ and the Montgolfier Balloon,” 37; William Shakespeare, *Macbeth*, in *The Riverside Shakespeare*, ed. G. Blakemore Evans, Harry Levin, and Herschel Baker (Boston: 1974), 1307–42, 1.3.79–80.

⁶⁶ Barbauld’s poem “Written on a Marble” similarly uses a small spherical plaything—the titular marble—to obtain a cartographic perspective on the globe that it resembles. On this poem and on Barbauld’s use of the cartographic perspective more generally as well as in “Washing-Day” in particular, see Rosenbaum, “Illegible Signature,” 390–94, 97.

⁶⁷ Note, however, the significant differences between Hooke and Newton’s views; while Hooke advances a primitive form of the principle of interference, which occurs at the thin film’s first surface, Newton holds that reflection and transmission only occur at the film’s second surface. Shapiro, *Fits, Passions, and Paroxysms*, 51–52, 80–81.

⁶⁸ Shakespeare, *Macbeth*, 1.3. Erasmus defines a bubble as “that round swollen empty thing which we watch in water as it grows and vanishes in a moment of time.” Desiderius Erasmus, *The Adages of Erasmus* (Toronto: 2001), 171.

⁶⁹ On the poem’s allusions see Bordo, “Reinvoking the ‘Domestic Muse,’” 189; Messenger, *His and Hers*, 186–196.

⁷⁰ On how Barbauld’s epigraph signals a preference for a collective rather than a singular voice, see Bordo, “Reinvoking the ‘Domestic Muse,’” 189. I use this colloquial expression in the sense meaning “a place or position that is protected from danger or unpleasant reality,” which corresponds to Sloterdijk’s conception of bubbles as “immune systems.” New Oxford American Dictionary (Oxford: 2012); Sloterdijk, *Bubbles*, 66. Barbauld’s pneumatic and pluralistic conception of the self contrasts with the self-possessed “buffered” self that Charles Taylor identifies with the Romantic period. See Taylor, *Secular Age*: 37–41.

⁷¹ Abrams, “From Addison to Kant,” 170; Sloterdijk, *Bubbles*, 49. On dialogism, see Mikhail Bakhtin, *The Dialogic Imagination: Four Essays by M. M. Bakhtin*, ed. Michael Holquist (Austin: 2004), especially 275–300.

⁷² “The Eolian Harp”’s composition history is famously complex. See Paul Cheshire, “The Eolian Harp,” *Coleridge Bulletin* ns 17(2001): 1–22. I will be mainly concerned with the lines that introduce the bubble metaphor, which first appear in the second draft written before the poem’s publication as “Effusion xxxv” in 1796, and which appear in all subsequent versions of the poem.

⁷³ Williamson, “Tenth Muse,” 186.

⁷⁴ Samuel Taylor Coleridge, “Effusion xxxv,” in *Poems on Various Subjects* (1796), 96–100, 1.48–49. Subsequent references are to line numbers from this edition and will be cited parenthetically. See also Samosatá, *Works of Lucian*, 1:180.

⁷⁵ Fairbanks, “Form of Coleridge's Dejection Ode,” 877.

⁷⁶ Fairbanks, “Form of Coleridge's Dejection Ode,” 877.

⁷⁷ O’Neill, *Romanticism and the Self-Conscious Poem*, 86.

⁷⁸ Alison Hickey, “Coleridge, Southey, ‘and Co.’: Collaboration and Authority,” *Studies in Romanticism* 37, no. 3 (1998): 305–49, 321.

⁷⁹ Thanks to Elizabeth Eger for the suggestion that bubbles figure conversation. The graphic representation of speech as bubbles or balloons originates in eighteenth-century caricature. See Bill Blackbeard and Martin Williams, *The Smithsonian Collection of Newspaper Comics* (Washington: 1977), 11. An example is the satirical print *The Bubblers Medley* cited in note 48.

⁸⁰ For a discussion of this letter’s image of the “idea-pot” in the context of Coleridge’s views about collaboration, see Hickey, “Coleridge, Southey, ‘and Co.’,” 321.

⁸¹ Ernest Hartley Coleridge, ed. *Letters of Samuel Taylor Coleridge* (Boston and New York: 1895), 1:210. Coleridge also uses the phrase “idea-pot” (an expression that first comes into use, the *OED* suggests, in the mid-eighteenth century in reference to literary inspiration) in another letter the same year in which he writes, “I verily believe no poor fellow’s idea-pot ever bubbled up so vehemently with fears, doubts and difficulties, as mine does at present. Heaven grant it may not boil over, and put out the fire!” Cited in Joseph Cottle, *Early Recollections Chiefly Relating to the Late Samuel Taylor Coleridge During His Long Residence in Bristol* (London: 1837), 1:171 [probably written in January 1796].

⁸² For the notebook entries that suggest Coleridge’s shift away from associationist thinking in November and December of 1796, see Wheeler, *Creative Mind*, 5.

⁸³ Samuel Taylor Coleridge, “Frost at Midnight,” in *The Norton Anthology of English Literature: The Romantic Period*, ed. Jack Stillinger and Deidre Shauna Lynch (New York & London: 2006), 464–66, 1.2. Robert Miles, “Romanticism, Enlightenment, and Mediation: The Case of the Inner Stranger,” in *This Is Enlightenment*, ed. Clifford Siskin and William Warner (Chicago: 2010), 173–88, 180.

⁸⁴ T. G. Steffan and W. W. Pratt, eds., *Byron’s Don Juan a Variorum Edition*, vol. 3 *Cantos VI–XVII* (Austin, Texas: 1957), Canto XV, Stanza 99. All subsequent references to *Don Juan* will be to this edition and cited parenthetically with canto and stanza numbers. On bubbles as a figure of vanity and transience, see the poem’s description of a fountain gushing “Its little

torrent in a thousand bubbles, / Like man's vain glory, and his vainer troubles" (Canto XIII, Stanza 65).

⁸⁵ Gabelman, "Bubbles, Butterflies and Bores," 152.

⁸⁶ Kraft, "'Washing-Day' and the Montgolfier Balloon," 36.

⁸⁷ Hooke, *Micrographia*, 50–51.

⁸⁸ Robert Hooke, "Observation Upon a Bubble of Water and Soap," in *The History of the Royal Society*, ed. Thomas Birch (1757), 29; Newton, *Opticks*: Experiment IV, 103.

⁸⁹ Henry Pemberton, *A View of Sir Isaac Newton's Philosophy* (London: 1728), 344. "Ludicrous" here means playful. The *OED*'s earliest example of ludicrous being used in its current, pejorative sense is from the 1780s.

⁹⁰ Thomas Percival, *A Father's Instructions to His Children: Consisting of Tales, Fables, and Reflections; Designed to Promote the Love of Virtue, a Taste for Knowledge, and an Early Acquaintance with the Works of Nature* (London: 1776), 41–42.

⁹¹ My emphasis here echoes that of Catherine Wilson, who observes that "the charm of what Hooke calls the 'real, the mechanical, the experimental philosophy' lies in its similarity to child's play." Catherine Wilson, *The Invisible World: Early Modern Philosophy and the Invention of the Microscope* (Princeton: 1995), 22–23.

⁹² Cited in John Keats, *Complete Poems* (Cambridge, Mass.: 1982), 476. For critical accounts that invoke the dinner, see Marjorie Hope Nicolson, *Newton Demands the Muse: Newton's Opticks and the Eighteenth Century Poets* (Princeton: 1946), 1–3; Richard Dawkins, *Unweaving the Rainbow: Science, Delusion and the Appetite for Wonder* (Boston: 1998), 38–41; Philip Fisher, *Wonder, the Rainbow, and the Aesthetics of Rare Experiences* (Cambridge: 1998), 88–99; Richard Holmes, *The Age of Wonder: How the Romantic Generation Discovered the Beauty and Terror of Science* (New York: 2008), 318–19. All of these studies recognize the varied and complex nature of the Romantic relationship to science; my point is that the myth of the immortal dinner and the iconography of the rainbow often frame critical discussions.

⁹³ William Wordsworth, "The Tables Turned," in *The Norton Anthology of English Literature: The Romantic Period*, ed. Jack Stillerling and Deirdre Shauna Lynch (New York and London: 2006), 251–52, 1.26–28. Newton, *Opticks*, 190. Hooke, *Micrographia*, 50–51; Samuel Taylor Coleridge, "Biographia Literaria," in *The Norton Anthology of English Literature*, ed. Jack Stillerling and Deidre Shauna Lynch (New York & London: 2006), 475–85, 478.

⁹⁴ John F. W. Herschel, *A Preliminary Discourse on the Study of Natural Philosophy* (Chicago: 1987), 14–15.