MEMENTO MORDANT: ETCHING BUBBLES AND BITING TIME

RUTH EZRA
University of St. Andrews, Scotland, UK

The tercentenary of the 1720 South Sea Bubble saw a flurry of interest in *The Bubblers Medley* (fig. 1), a satirical trompe-l'oeil print published by Thomas Bowles II and sold at his London shop soon after the stock market collapsed.[1] Yet for all the attention paid to the medley's printed items—news clippings, illustrated verse, a playing card—one figure got short shrift: the naked boy blowing soap bubbles in the lower right-hand corner.[2]

SOURCE: NOTES IN THE HISTORY OF ART, VOLUME 41, NUMBER 3, SPRING 2022.
© 2022 BARD GRADUATE CENTER. ALL RIGHTS RESERVED. PUBLISHED BY THE UNIVERSITY OF CHICAGO PRESS FOR THE BARD GRADUATE CENTER, NEW YORK.
HTTPS://DOI.ORG/10.1086/720978

Figure 1. Thomas Bowles II (publisher), *The Bubblers Medley, or a Sketch of the Times Being Europes Memorial for the Year 1720*, 1721. Hand-colored etching and engraving, 13½ × 9⅞ in. (3.42 × 2.51 cm). British Museum, London. © The Trustees of the British Museum.

Perhaps the motif is transparent enough.[3] The bubbles hovering above the putto's wand literalize what by 1721 was a new metaphor for financial speculation.[4] As a memento mori, the bubble blower lends this particular memorial risible gravitas. Thin spheres of liquid will pop just as markets will crash and—*Homo bulla*—lives are snuffed out.[5]

Those who have described the work read the child's image as one among the many assembled prints, occupying the same plane as the ship riding the waves of the Pacific overhead.[6] But in contrast to the array of overlaid tabloids and illustrated verse, the piece of paper that ostensibly carries the putto lies flush with the corner of the overall trompe-l'oeil sheet. Upon closer examination, the child sits somewhat apart from the medley proper. He belongs less to the fictive collection of splayed papers than he does to the actual copper plate—the etched and engraved matrix—carrying their composite image.

The putto's status as a liminal figure gains credence from the position of the left-most bubble, whose contoured surface overlaps the lower-right border of the advertisement represented directly above it (fig. 2). The soapy sphere's ascent encourages a vertical reading of the print. Our visual attention rises along with the putto's gaze. We follow not only his bubbles but also the upward trajectory of his wand, angled like a telescope aimed at a constellation of words and images.

Yet as Maggie Cao has convincingly shown, composite prints such as *The Bubblers Medley* resist the upright format of comparable trompe-l'oeil paintings.[7] Conspicuously absent from the 1721 image are any tacks or ribbons to secure its individual sheets to a board or wall. Their lack implies the horizontal orientation of a desk—the very surface on which actual newspapers, poems, and indeed prints were read.[8]

But what if the bubbles inhabit acid and metal rather than air? By envisioning an alternative medium for their rise—by imagining the papers lying together not on a desk but on a matrix plunged into a mordant bath—we might yet retain the medley's relationship to gravity.[9] For if the printmaker cut certain of his lines either by submerging his substrate in a flat, horizontal tub of nitric acid or else by pouring

Figure 2. Detail of *The Bubblers Medley* (figure 1) showing child blowing bubbles.

spirits directly atop the metal, an exothermic reaction of copper with acid would release bubbles of nitrogen gas at points along the troughs in the plate.[10] These globules, once formed, would cling to the exposed metal matrix. Look again at how the putto's left-most bubble hovers over the lines of the contiguous advertisement's border.

Nitrogen gas is not a benign byproduct of etching. Released randomly in the mordant bath, gases that adhere to copper hinder the biting process.[11] The emergence of bubbles on the medley's plate therefore carried risk—exactly the hazard that is satirized elsewhere in the image

in reference to rapidly increased asset prices. Etchers who worked with nitric acid had to pop the most clingy of these gaseous spheres with a feather.[12] Failure to do so resulted in a ghostly bubble structure that haunted hatched lines upon printing.[13]

Unlike the financiers caricatured in the medley, the etcher could take pride in his ability to handle bubbles. The putto's soapy play may be a mocking reminder of financial death, but to practitioner-viewers, it doubled as a humorous warning to keep track of procedural time—those crucial minutes that elapse when a print is bitten in a bath and bubbles must be burst quickly to preserve the integrity of incised contours. (Biting may be accelerated or prolonged by varying factors such as the temperature, means of application, and concentration of the acid solution.) In some sense, any etched line that makes it into the inked impression free of spherical artifacts is a memorial to bubbles past, to spheres of nitrogen gas that, promptly popped with feathers, suffered the same fate as once-inflated prices. Contrary to the bubble-bursting of investors, though, that of the etcher was a well-managed process, yielding a much less volatile product.

Given that *The Bubblers Medley* combines etching with engraving, one might hesitate to dwell on a procedural thematic pertaining to a single technique operative in the print's making. The iconography of the bubble-blowing putto is not unique to etching, having appeared in European art first in paint, then in engraved emblem books and medals, from the late sixteenth century onward.[14] Yet the child's play is surely polysemous enough to pun on the temporality and speculation of etching while also symbolizing the precipitous fall of inflated asset prices or, graver still, the inevitable extinguishing of all lives. Etching, too, has its duration, its conjectural anticipation.

A print from Stefano Della Bella's series *Ornamenti o Grottesche* (ca. 1653, fig. 3) offers a compelling precedent for the use of similar iconography to thematize biting time.[15] In the top half of the vertical panel, two putti blow soap from an oyster shell.[16] The relationship of bubbles to fictive air differs from that in the Bowles print, as here the transparent

Figure 3. Stefano Della Bella, *Two Winged Children with Bodies Turning into Ornament Blowing Bubbles*, ca. 1653. Etching, 6½ × 2½ in. (16.5 × 6.5 cm). The Metropolitan Museum of Art, New York, Gift of Mrs. William Greenough, 1937.

spheres seem to float downward rather than to rise. In further contrast to the medley, Della Bella's image holds gravity in abeyance as its aggregate elements do their best to resist downward force. At the bottom, two bundles of foliage hang suspended from floating ribbons; above these clipped branches, a bat beats its wings, hovering in flight. The putti, too, struggle to remain airborne while bearing the weight of the garland that droops limply, far below.

As with the implied horizontality of the medley, the insistent verticality of the ornament panel may accord with the orientation of its biting. Della Bella likely cut his lines not by means of a horizontal bath of nitric acid but rather a vertical pour of salts-in-vinegar solution.[17] In France or in Italy, where the *Ornamenti o Grottesche* series is thought to have been created at the Medici Court, he could have observed or heard of Jacques Callot's use of this alternative method and mordant.[18] Della Bella's probable choice to employ Callot's recipe and technique for applying it does not deny the reading advanced above, which suggests that etched *vanitas* bubbles are doubly metaphorical—triply, in the case of the medley—for their invocation of a distinct phase in the biting process. Salts-in-vinegar solutions, like nitric acid, released gas (hydrogen) when in contact with copper, if with far fewer bubbles adhering to the plate, a relative scarcity that proved less of a hindrance to the biting action.[19]

The plausible difference in choice of mordant and method inferred from the implied orientation of the two prints also plays out in the works' imagery. In the Della Bella print, the bubbles partake in a thematic of transience and protracted metamorphosis rather than one of risk, speculation, and bursting, as in the medley. The bat, a nocturnal creature, symbolizes the transition from day to night,[20] and the putti's wings turn to tendrils. Consider the rhyming forms of the ornamental leaves comprising the figures' lower bodies and the feathers fringing each of their slack wings. Plumage that morphs into foliage, bubbles that emerge only to pop—both analogize the intaglio plate's own shifting ground, its troughs coming into being as spirits drip down the copper

plate. Above the putto on the right, the contours of one soapy sphere have already begun to fade, leaving straight lines of hatching in their wake. It is as if the reaction of metal to mordant—gases and all—proceeds in slow motion before our eyes: the image hovers amid spirits as putti expel hydrogen gas. We might even imagine Della Bella popping emergent bubbles with a feather. Upon contact with the plate, his prudent action would have momentarily added a third wing to each child's plumage.

Bats were a symbol of the Medici family, so the appearance of a bat in this print, made in the Medici court circle, is unsurprising.[21] It bears noting, though, that the crepuscular creatures were also associated with melancholy, having once been thought to provide a cure for the condition when boiled.[22] More bubbles? And if Della Bella used a salts-in-vinegar solution as a mordant, he, too, would have had to boil the mixture in order to concentrate it: the stronger the mordant, the shorter the biting time.[23]

In both images, the putti's bubble-blowing can be interpreted as a self-reflexive action analogous to the release of gases upon the biting of a plate. The playful children pun not just on the fleeting existence of humankind (*Homo bulla*) or the folly of financial speculation (the South Sea Bubble) but on the temporality, risks, and ephemeral byproducts of etching itself.

NOTES

1. The print is one of two of identical title but different composition that were apparently sold together. Thomas Bowles II first published the pair in 1721, and Carrington Bowles, Thomas's nephew, reissued them later in the century. Thomas Bowles II was a printmaker, but it is unclear what role, if any, he had in designing the print. For the pendant prints in recent scholarship, see Thea Goldring, "The Greater Fool: Paper, Illusion, and Time in Representations of the South Sea Bubble," *Eighteenth-Century Studies* 54, no. 1 (Fall 2020): 53–75; Maggie M. Cao, "Trompe L'oeil and Financial Risk in the Age of Paper," *Grey Room* 78 (Winter 2020): 6–33; and Nina L. Dubin, "Welcome

to the Empire of the Imagination!," in *Meltdown! Picturing the World's First Bubble Economy*, ed. Nina L. Dubin, Meredith Martin, and Madeleine C. Viljoen (London: Harvey Miller Publishers, 2020), 22–24.

2. The figure is mentioned only in passing in David McNeil, "Collage and Social Theories: An Examination of the Bowles's 'Medley' Prints of the 1720 South Sea Bubble," *Word & Image* 20, no. 4 (2004): 292.
3. For bubbles in art and literature of the early eighteenth century, see Sarah Tindal Kareem, "Enlightenment Bubbles, Romantic Worlds," *The Eighteenth Century* 56, no. 1 (2015): 85–104.
4. For the change in connotation of the term *bubble* from hollowness (as in a gambling swindle) to transience (as in a stock market collapse) after the 1720 crash, see Goldring, "The Greater Fool," 56–57; and Kareem, "Enlightenment Bubbles."
5. Wolfgang Stechow traces the emergence of the bubble-blowing putto to late sixteenth-century Dutch mannerism and the revival of the ancient proverb "man is a bubble" to Erasmus. See Stechow, "Homo Bulla," *Art Bulletin* 20, no. 2 (1938): 227–28. For the iconography of *vanitas* connected to the vapors released during the etching process, see Madeleine C. Viljoen, "The Airs of Early Modern Ornament Prints," *Oxford Art Journal* 37, no. 2 (2014): 129.
6. See description in the British Museum Online catalogue: https://www.britishmuseum.org/collection/object/P_1880-1113-3953.
7. Cao, "Trompe L'oeil and Financial Risk," 11.
8. Ibid.
9. Nadine M. Orenstein and Ad Stijnman, "Bitten with Spirit: Etching Materials and Techniques in the Sixteenth Century," in *The Renaissance of Etching*, ed. Catherine Jenkins, exh. cat. (New York: The Metropolitan Museum of Art, 2019), 18; Ad Stijnman, *Engraving and Etching: A History of the Development of Manual Intaglio Printmaking Processes* (London: Archetype Publications, 2012), 199–202.
10. Any spirits poured would be held in a wax-walled pool covering only the section of the metal plate to be etched at a given time. Stijnman, *Engraving and Etching*, 204.
11. Orenstein and Stijnman, "Bitten with Spirit," 18.
12. Stijnman, *Engraving and Etching*, 200, 202. The instructions of Amsterdam printmaker Adriaan Schoonebeek, in his etching manual of 1698, included pouring a mixture of strong water (nitric acid) and rainwater over a plate and allowing it to bite for an hour or so. "Every two or three minutes," he added, "one has to brush off the little bubbles coming from the copper with

a feather." Frans A. Janssen, Huigen Leeflang, Adri Markus, and Ad Stijnman, "Adriaan Schoonebeck's Etching Manual (1698): Edition, Translation, Comments," *Quærendo* 40 (2010): 154, trans. Stijnman. Almost two centuries later, Adolphe Martial Potémont [Martial] used an image of a feather, etching needles, and a bottle of mordant as the frontispiece to his etching manual, *Nouveau traité de la gravure à l'eau-forte pour les peintres et les dessinateurs* (Paris, 1873). In the section on biting (*Morsure*, p. 32) he wrote, "L'action chemique produit un bouillonnement qu'il faut interrompre en passant la barbe d'une plume sur la gravure,—partout où il se prononce,—si on négligeait cette opération—le vernis se détacherait d'une taille à l'autre et tout serait endommagé."

13. See Frans Crabbe, *Esther before Ahasuerus*, etching, ca. 1525 (British Museum, London, 1842,0806.97). Stijnman, *Engraving and Etching*, 53–54, fig. 56; Orenstein and Stijnman, "Bitten with Spirit," 18, fig. 2.
14. Stechow cites as the earliest example a 1574 painting by Cornelis Ketel. For an engraved example see Hendrick Goltzius, *Homo bulla / Quis evadet?*, 1594 (Rijksmuseum, RP-P-OB-10.227).
15. For the series, see Andrew Patrizio and Fiona Griffith, *The Grotesque: Ornamental Prints from the British Museum*, exh. cat. (London: The South Bank Centre, 1995), 35; and for this print, Alexandre de Vesme and Phyllis Dearborn Massar, *Stefano Della Bella, Catalogue Raisonné* (New York: Collectors Edition, 1971), 155.1008. For earlier ornament prints that engage with seventeenth-century notions of air (aria), see Viljoen, "Airs of Early Modern Ornament Prints," 117–33, esp. discussion of bubbles, smoke, and the *vanitas* motif, 129, 131.
16. Read in tandem with the representation of death that appears at the top of De Vesme/Massar cat. no. 1014 (British Museum, 1862,1011.314), the image appears to be a memento mori.
17. For the introduction of salts-and-vinegar as an alternative to nitric acid and Callot's association with the new solution, as well as the recipe's dissemination in France and Italy, see Stijnman, *Engraving and Etching*, 202.
18. Patrizio and Griffith, *The Grotesque*, 35.
19. Stijnman, *Engraving and Etching*, 201–2.
20. Colin Eisler, *Dürer's Animals* (Washington, DC: Smithsonian, 1991), 98–99.
21. Marco Riccucci and Jens Rydell, "Bats in the Florentine Renaissance: From Darkness to Enlightenment," *Lynx* 48 (2017): 165–82.
22. Eisler, *Dürer's Animals*, 98.

23. Stijnman estimates that fresh nitric acid bites a line of copper in fifteen minutes, compared to two hours with boiled salts-in-vinegar; without boiling, the latter solution could take two weeks to a month to produce an intaglio matrix. Stijnman, *Engraving and Etching*, 201n632.