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Was fire, of all the elements, the most fundamental to the Victorian period, not only to its industrial economy but to the cultural imagination? The nine articles assembled here, whose themes range from theatre history to volcanoes, from ecology to painting, suggest that it was. When I knew that I would be writing an afterword to this issue I strayed across my bookshelves and randomly picked up Michael Faraday's The Chemical History of a Candle — a series of lectures given to children between 1848 and 1861 — and Gaston Bachelard's *The Psychoanalysis of Fire* (1938, translated 1964), hoping they might come in handy. Bachelard's book has always disappointed me. It is not nearly as searching as his work on dreams, reverie, or space. But he does write interestingly, at the beginning and at the end of the book, on the incendiary imagination and fire-induced images, and this helped me to think about the articles of Leo Costello, Kate Flint, Nancy Rose Marshall, Anne Sullivan, Nicholas Daly, and David Pyle. The poetics of fire in the work of Anna Henchman, Kate Neilsen, and Jesse Oak Taylor came into focus when I thought about Faraday.

Bachelard claims that he is accessing 'the unconscious of the scientific mind' (p. 10). In other words, empirical scientific theories of fire, combustion, and the action of heat are actually driven by deep needs and fantasies. In practice, the analyses are not very convincing, but his interest in alternative forms of imagining fire leads him to value reverie, images, the incendiary imagination, and fire's connection with the death wish:

The reverie in front of the fire, the gentle reverie [...] is the most naturally centered reverie. [...] One can hardly conceive of a philosophy of repose that would not include a reverie before a flaming log fire. Thus, in our opinion, to be deprived of a reverie before a burning fire is to lose the first use and the truly human use of fire. [...] It leads to a very special form of attention which has nothing in common with the attention involved in watching or observing. (pp. 14–15)

¹ Michael Faraday, *The Chemical History of a Candle* (Mineola: Dover, 2002); Gaston Bachelard, *The Psychoanalysis of Fire*, trans. by Alan C. M. Ross (Boston: Beacon Press, 1964).

This takes me immediately to Anne Sullivan's article on fire-gazing. She argues, in a complex and probing piece, that in the remediation of fire-gazing in the nineteenth century this practice is a precursor to mechanized moving-image technologies such as the magic lantern. The fire-gazer's imagery is a form of media literacy and, as with optical devices, the image is *produced*. She ranges over a number of texts from Leigh Hunt to Dickens, where Pepper's Ghost makes an entrance; but for me, her account of Lizzie Hexam's fire-gazing in *Our Mutual Friend* (1864–65) is the most fascinating. Just as the fire-gazer's 'archaic' form of cognition is modified by optical technology, so that technology reciprocally takes on the kinetic, aural, and tactile propensities of the gazer before the — in this case — coal fire. I wonder how Coleridge's fire-gazing in 'Frost at Midnight' could be theorized through new technologies — the 'thin blue flame' of his 'low burnt fire'.²

Bachelard continues his argument with an account of George Sand's fire-gazing *Dreamer's Story*. But here violence intervenes. Her gazer sees images of the eruptions of Mount Etna in the fire, its lava and flow, and implicitly the suicide of Empedocles. The gazer thinks of the moths that hurl themselves into a burning birch log with the 'transports of blind joy and of love's frenzy' (Bachelard, p. 17). Bachelard comments, 'love, death and fire are united at the same moment. Through its sacrifice in the heart of the flames, the mayfly gives us a lesson in eternity' (p. 17). Earlier he writes,

fire suggests the desire to change, to speed up the passage of time, to bring all of life to its conclusion, to its hereafter. [...] The reverie [...] links the small to the great, the hearth to the volcano, the life of a log to the life of a world. (p. 16)

So death decisively enters the poetics of fire.

As I read David Pyle's account of volcanology and volcano writing from James Hutton and Alexander von Humboldt to Mary Somerville and Edward Bulwer-Lytton, and his careful documentation of the gradual understanding that the volcano is *not* a fire mountain, I was struck by the language used by observers to convey the violence of the volcano. It is as if they relished Bachelard's 'love, death and fire', the desire to 'speed up the passage of time': 'vomit fire and smoke' (Mariana Starke); 'streams and cataracts of the red and radiant fire' (Shelley); 'flaming bowels' (Dickens).³

² Samuel Taylor Coleridge, 'Frost at Midnight', in *The Major Works*, ed. by H. J. Jackson (Oxford: Oxford University Press, 2008), pp. 87–89 (ll. 13, 14).

³ Mariana Starke, Letters from Italy Between the Years 1792 and 1798, Containing a View of the Revolutions in That Country, 2 vols (London: Phillips, 1800), 11, 132; Percy Bysshe Shelley to Thomas Love Peacock, 22 December 1818, in The Letters of Percy Bysshe Shelley, ed. by Roger Ingpen, 2 vols (London: Pitman, 1909), 11, 657; Charles Dickens to Thomas Mitton, 17 February 1845, in The Letters of Charles Dickens, ed. by Mamie Dickens and Georgina Hogarth, 2nd edn, 2 vols (London: Chapman and Hall, 1880), 1: 1833–1856, 136–41 (p. 139).

The same thrill is present in Nicholas Daly's wonderfully vivid account of conflagrations in the Victorian theatre, whether fires theatrically produced on stage or accidents of combustion in the theatre itself, which at that time was a fire trap. (I realized that the fire in the theatre in Charlotte Brontë's *Villette* (1853) is a realistic event, though it partakes of the stage melodrama.) Daly's account of the special effects of fire as offshoots of revolutionary and military spectacle, the chemistry of red and blue fire, limelight, the habitual use of inferno-like endings, often using Vesuvius as the ur-conflagration — the adaptation of *Frankenstein*, in which the monster throws himself into Etna, is a wild example of the volcano — is constantly illuminating. I had never met his terms for the structure of melodrama before — 'tmesis', 'hypostrophe' — terms that draw attention to the way sensation scenes break up action. It is as if their 'death and fire' remind one of the possibility of holocaust in ordinary life.

Death is at the centre of Nancy Rose Marshall's exploration of Frank Dicksee's Funeral of a Viking (1893). This is an extremely wide-ranging article, in which she reminds us that the Victorians invented the Viking, down to Bayreuth's Wagner festival of 1876, which came up with what we now see as the iconic helmet. She is interested in the way the relatively conservative painter nevertheless raised contested issues of pagan burial that challenged Christian orthodoxies. The way he cautiously accommodated to the looser brushwork of Impressionism to convey the indeterminacy of the body through atmospheric effects while clearly asserting the traditional painterly values of the Academy, is typical of his procedures. In this project the form-lessness of fire is crucial, for its metamorphic possibilities in the process of cremation challenge conventional accounts of burial and raise questions of resurrection and the spiritual life by posing a materialist heathen literalism against a Christian spirituality.

The Bachelardian paradigm of creativity and destruction is particularly appropriate to Leo Costello's reading of J. M. W. Turner's painting of fire. He points to Turner's genre paintings of cottage life, domesticity, and the comfort of fire, but shows how Turner moves from the representation of fire to actually painting fire itself: an important distinction. In this process the violence of fire becomes more and more powerful. The politics of fire, too, become more intense as a critique of power and violence becomes indivisible from the painting of it. Costello shows how earlier paintings of conflagration — the burning of the 1834 Houses of Parliament, the burning of the Pantheon (probably through arson) — convey fire and light with sensory exactitude. The presence of onlookers produces a social dimension. These were achievements enough, but as Turner, in later work, learned from Rembrandt and the way the painter conveyed multiple light sources, so the intensity and complexity of his pictorial rendering of violence increases. *The Battle of Trafalgar* (1806–08) and *The Field of Waterloo* (1818)

are examples. But it is with the painting of *Shadrach*, *Meshach and Abednego in the Burning Fiery Furnace* (1832), a little discussed picture, that Costello sees the genius of Turner at work. Not only did he paint fire, but in the relation of the central figures to the onlooking crowd his reading of power and surveillance had deepened: he was able to express through painterly relationships a politics of violence.

Kate Flint is the acknowledged virtuoso of critics who bring together art history, material contexts, cultural history, aesthetics, and texts. In this magisterial and meticulous article she embarks on this multiple project again. At the centre of her discussion is James McNeill Whistler's Nocturne in Black and Gold (1875) and its representation of fireworks, where the Bachelardian incendiary imagination, its thrill and visual intensity, is at the heart of the painting. The portrayal of fireworks, and the dependence on the persistence of vision to render their aura, is one of her themes. She moves through the affect of the picture and the techniques of the painting, exploring its emotions through the line, colour, and texture of the paint. In the course of this discussion she ranges through not only the technicalities of Whistler's paint composition but the trial in which Whistler defended his aesthetic against Ruskin's accusations. (Is this the only trial ever that had aesthetics at its centre? The Lady Chatterley trial was about morality.) She looks closely at the visual effects of fire in the painting and then makes a very interesting move. She shows that the different galleries where the painting was displayed - the Dudley, with a predominantly middle-class ethos, and the Grosvenor, which was associated with the Aesthetic Movement — created different kinds of perception of the painting. In the Grosvenor, for instance, it was the surface of the canvas, not the things portrayed in it, that mattered. But she goes further than this in demonstrating that different contexts virtually created different paintings on the same canvas: she invokes the representation of fireworks in popular print culture and shows that Whistler and these popular prints have in common the portrayal of the firework through discrete marks rather than through continuous flow. She argues that both call up the epistemology of the persistence of vision, and that therefore the popular displays of the Cremorne Gardens and the aesthete painter Whistler are working with the same cognitive effects. The effect of this argument is greatly to enlarge the radius of influence of Whistler's painting, so that he belongs both to the Aesthetic Movement and to popular spectatorship.

At one point in this rich article Flint brings up Theodor Adorno's model of the work of art as the firework: ephemeral, incandescent, but in that very ephemerality a testimony to aesthetic experience. Evenhanded, she quotes the sceptical demythologizing Joseph Margolis on fireworks as a simple phenomenon of technology. Adorno's position is very paradoxical. He argues that the firework is at once a product of the brute material mechanisms of empirical reality (explosive powder, fire) and also

a phenomenon that paradoxically brings into the world something that 'does not exist'. It does not exist because its evanescence guarantees its disappearance and our perception of this disappearance, but this very fact is a kind of miracle: its non-existence brings into the world a form of non-material being to which we can testify. Art brings into the world something we cognize, what is over and above matter. This seems so pertinent to Whistler and to the whole structure of the persistence of vision, something we do with phenomena rather than an empirically pre-existing structure. I would like to know where Flint stands here, but with careful and honourable reticence she puts the argument clearly without, as far as I can see, committing herself to one position or the other.

To turn to the other three articles: Faraday's beguiling text, *The Chemical History of a Candle*, is particularly pertinent to Anna Henchman's reading of *Bleak House* (1852–53) through the reek of the tallow candle, but there are other reasons for relating him to these articles. Though he frequently comments on the unpleasant smell of a snuffed candle as the experiments progress, what is more important is the purism of his chemistry. He sees the candle flame as one of the most beautiful things in the world, but never connects it with any form of pollution or invasive industrial process and its social effects:

Is it not beautiful to think [...] that such a dirty thing as charcoal can become incandescent? You see it comes to this — that all bright flames contain these solid particles; all things that burn and produce solid particles, either during the time they are burning, as in the candle, or immediately after being burnt, as in the case of the gunpowder and iron filings — all these things give us this glorious and beautiful light. (p. 55)

Manipulating flame, playing with the elements of combustion, demonstrating the weight of the atmosphere, Faraday's is a didacticism of pure delight, and his enthusiasm and clarity are hard to resist. His is a legitimate document of pedagogy, but its innocence is, in retrospect, disturbing.

The science Kate Neilsen references is not chemistry but astronomy, and here the cosmic narrative is profoundly different from that of positivist science. And since our readings of nineteenth-century astronomy are on the whole optimistic, it is more than salutary to be offered a different reading. Neilsen charts the way the sun and pollution were connected, as solar storms identified in 1859 were associated with terrestrial disruptions and with electrical malfunctions. The earth was seen to be in a state of war: the pollutions of factory smoke were analogous to the contaminating and disruptive processes of outer space.

⁴ Theodor Adorno, *Aesthetic Theory*, trans. by Robert Hullot-Kentor (London: Athlone Press, 1997), p. 82.

One would think that all that could be said on pollution in *Bleak House* has already been said. But Anna Henchman brilliantly refutes this assumption by rigorously setting out the stench of the tallow candle, its composition from the animal fats — ox, cow, or pig — that made rooms, particularly the rooms of the poor, reek and *taste* of the candle's fatty origins. It testifies to her powers of analysis — of the way burning animal fuel provided a model for the depletion of ingestion in the economy, the way the industrial order was identified with greasy smells and meaty tastes, and the air, victim of perverse food chains, circulated particulates in an early stage of decomposition — that it is easy to gag at her descriptions. Dickens's candles are too 'close to being alive', transgressing the boundaries between the manufactured object and its origins. Because of its foundation in animal matter and decaying flesh, forms of cannibalism lurk in the society of the novel. The air becomes a container for social ills. No one has thought about *Bleak House* in this way before.

Finally, this group of articles ends with Jesse Oak Taylor's admonitory discussion of Joseph Conrad's 1898 short story, 'Youth'. Conrad has often been associated with critiques of capital and capitalism, but this article changes the terms in which we read the story by taking a step back and making it legible through its relation to the large-scale geophysical flows of the Anthropocene, the movement from sail to steam, and to a global system defined by the use of fossil fuel. His fascinating close reading of 'Youth', as fossil fuel, the sailing craft's cargo of coal, literally ignites disaster after a prolonged period of slow combustion wilfully ignored by the crew, creates a chilling allegory for the structure of ecological disaster, which ignites after a slow build-up of forces. He sees the tale also as an allegory of the learned 'cognitive imperviousness' that represses knowledge of the disaster to come: 'Youth' is a scale model of the Anthropocene predicament. Both Taylor and Henchman encounter spontaneous combustion in their texts, and this gives them an interesting relation to Bachelard, whose penultimate chapter is on this theme.

Together, these articles constitute the beginnings of a coherent poetics of fire for the Victorian period, a narrative of calorifics, to invent a term, moving as they do through aesthetic production, Victorian knowledges, and material culture. By its nature this project is open-ended — and endless. To give just one example, by way of a suggestive coda: I hope that the London Match Girls' Strike of 1888 might have a place in this poetics of fire at some point, with their perilous work with white phosphorus, the cheapest way to ignite a match, and their heroic resistance to its poison.⁵

 $^{^5}$ The thumbnail image to this afterword in the Table of Contents is a detail from 'The Match Makers of the East End', Graphic, 20 May 1871. © Illustrated London News Ltd/Mary Evans.