

Also edited by Juliet John and Alice Jenkins

* REREADING VICTORIAN FICTION

Also edited by Juliet John

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Rethinking Victorian Culture

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'The Mote Within the Eye': Dust and Victorian Vision

Kate Flint

In 1898, the natural historian Alfred Russel Wallace published a retrospective study: *The Wonderful Century: Its Successes and its Failures*. In this, he devotes a whole chapter to 'The Importance of Dust'.¹ Dust in our towns and in our houses, he acknowledges, 'is often not only a nuisance but a serious source of disease'. As it is usually perceived by us, it is – he borrows Lord Chesterfield's original definition of dirt – 'only matter in the wrong place'. We might look to get rid of it as far as possible, for example by implementing legislation against excess or inefficient combustion of coal. But, Wallace continues:

though we can thus minimise the dangers and the inconveniences arising from the grosser forms of dust, we cannot wholly abolish it; and it is, indeed, fortunate we cannot do so, since it has now been discovered that it is due to the presence of dust we owe much of the beauty, and perhaps even the very habitability, of the earth we live upon. Few of the fairy tales of science are more marvellous than these recent discoveries as to the varied effects and important uses of dust in the economy of nature.

Wallace, *Wonderful Century*, pp. 68–9

Dust was a paradoxical substance, its position within Victorian culture perennially unstable. Emotively – and logically – it was associated with disease; its elimination or control with necessary practices of hygiene. As such, its properties are co-terminous with the wider category of dirt, and – to quote Mary Douglas's *Purity and Danger* – 'dirt avoidance for us is a matter of hygiene or aesthetics and is not related to our religion'.²

Yet once one accepts that not all dust is dirt, its resonances broaden out. These resonances may still remain pejorative. Thus dust may be seen as the marker of undesirable class status. Pip, in Dickens's *Great Expectations* (1861), wants to escape from Joe's forge, 'dusty with the dust of small coal'.³ But dust is also an equalizer, as well as a factor in establishing hierarchies. Its long-standing equation with the most reductive form of matter to which we must all return – 'dust to dust' – ensures that its evocation was full of metaphorical opportunities. And its indispensable value was also perceived, both in the basic sense of waste reclamation, typified by the material value of the Harmon Mounds in Dickens's *Our Mutual Friend* (1864–5), with their 'golden dust', and in the functions that it was seen to perform within nature. Here, again, the potential for moral elaboration is unmistakable, even in the introduction to a scientific article. J. G. McPherson writes in *Longman's Magazine* in May 1891: 'Some of the most enchanting phenomena in nature are dependent for their very existence upon singularly unimportant things; and some phenomena that in one form or another daily attract our attention are produced by startlingly overlooked material'.⁴ He cites the glow of an autumnal evening, the colour of the Mediterranean, the deep blue of the summer sky, 'when the eye tries to reach the absolute', mist, snow, rain, and hail. On the other hand, he asks:

What is the source of much of the wound putrefaction, and the generation and spread of sickness and disease? What, in fact, is one of the most marvellous agents in producing beauty for the eye's gratification, refreshment to the arid soil, sickness and death to the frame of man and beast? That agent is *dust*.

McPherson, 'Dust', p. 50

The paradox does not end here, in the juxtaposition of beauty and utility with disease and decay. It is a paradox crucially interwoven with the Victorian interest in the visible and the unseen. For dust gives rise to atmospheric effects which, as McPherson puts it, 'have a most important influence upon the imagination [...] [A]n aesthetic eye is charmed with their gorgeous transformation effects', since they stretch the mind towards contemplation of the vastness of space, of infinity' (McPherson, 'Dust', p. 50). But one cannot extrapolate simplistically from this and say that if one can see dust, it is to be equated with waste, with excess, with residue, yet if one cannot see it, only the effects to which it gives rise, we can appreciate its value and beauty.

Danger, as well as the potential for beauty, may well lie concealed from the human eye: individual dust particles are so tiny that 'a microscope magnifying 1,600 diameters is required to discern them', yet, McPherson writes, 'some are more real emissaries of evil than poet or painter ever conceived' (McPherson, 'Dust', p. 50). To think about dust, in other words, is to think not just about aspects of the materiality of Victorian life, but to consider debates concerning the perception of the material world and the conditions of vision that make this perception possible. Dust, both pervasive and evanescent, functions not only as a powerful literary metaphor; its specks also provide a meeting point for the intersection of science, vision and imagination.

What is dust? Nineteenth-century scientists developed a series of increasingly refined experiments to determine its composition: methods refined by Louis Pasteur, who used gun-cotton or asbestos as a filter and then dissolved it in ether, and this proved the most effective method. John Tyndall, in the late 1860s, conducted a series of experiments by means of this technique which proved, to his surprise, that a considerable proportion of the particles floating in the air of London were of organic, rather than inorganic origin. Victorian city streets were full of dust, and to remark on it was to underscore the unhealthy hostility of the urban environment. It swirls around the spring-time streets of London – 'such a gritty city; such a hopeless city' – at the opening of Chapter 12 of *Our Mutual Friend*, a novel notoriously permeated with dust imagery, and for which Dickens considered 'Dust' a possible title;⁵ it characterizes the bleakness of a sandwich-board man's existence as he treads through W. E. Henley's 'Trafalgar Square' at the end of the century in 'An ill March noon; the flagstones gray with dust;/An all-round east wind volleying straws and grit'.⁶ Henry Mayhew, in *London Labour and the London Poor* (1861), remarks that 'In some parts of the suburbs on windy days London is a perfect dust-mill', and records the water-carts that used to go out to damp down the streets.⁷ The inorganic dust particles came from the pulverized dried mud of the streets, the wearing down of granite pavements and roadways by feet and by iron-shod horses, and above all from smoke, helping form, on occasion, what Esther Summerson, in *Bleak House* (1852–3) mistook as 'dense brown smoke' from a 'great fire'.⁸ By the end of the century, it was claimed that 'No less than 350 tons of the products of the combustion of sulphur from the coal are thrown into the atmosphere of London every winter day' (McPherson, 'Dust', p. 58). The problem was even worse in some industrial towns, prompting

Ruskin's apocalyptic recognition of the 'storm-cloud of the nineteenth century', Manchester's 'sulphurous chimney-pot vomit of blackguardly cloud' spewing out a pall of pollution.⁹ In addition to the inorganic materials were

particles of every description of decaying animal and vegetable matter. The droppings of horses and other animals, the entrails of fish, the outer leaves of cabbages, the bodies of dead cats, and the miscellaneous contents of dust-bins generally, all contribute their quota to the savoury compound.¹⁰

But this was only half of the story. For dust was not confined to the outside. Invasively, it quickly built up in the home, a fact given a threatening spin in a curious book by H. P. Malet, *Incidents in the Biography of Dust*, where the dust particles themselves threateningly address the reader: 'At this present moment we see ourselves on the table, the books, and the inkstand; if we were not carefully removed daily, we should soon bury them, as we buried Tyre and Sidon.'¹¹ 'Few people have any conception of the amount of dirt contained in an ordinary carpet', the physician Robert Brudenell Carter ominously announced in 1884; 'Curtains are even worse' (Carter, 'Lighting', p. 398). Stir up a sitting-room carpet with a broom, he suggests; let the dust settle for half an hour, put it under the microscope, and what does one find? Mrs Beeton's comment that 'Nothing annoys a particular mistress so much as to find, when she comes downstairs, different articles of furniture looking as if they had never been dusted' had increasingly more than a fastidious sniff behind it as the understanding of bacterial transmission grew.¹² Even if the only bacterium to be identified with certainty by the 1890s was that which caused suppuration in wounds, hypothetical speculation from the mid-century onwards populated the air with tiny disease-bearing organisms like dangerous insect swarms. Certainly it became recognized that dust settling on food caused the multiplication of bacteria. Moreover, the body created its own dust, through the constant shedding of 'the scales of the epidermis'.¹³

Other dusty dangers lurked within the home. Florence Nightingale, in her *Notes on Nursing*, warns that certain green wallpapers give off arsenic dust:¹⁴ it follows that those who worked in the manufacture of such papers, and in other dust-producing industries and trades suffered badly. The lungs of 'coal miners and miners in general, knife-grinders, needle-pointers, quarrymen, stonecutters, millers' – to borrow the list of a physician in the mid-1860s – were all subject to injury from dust.¹⁵

If Mrs Thornton, in Elizabeth Gaskell's *North and South* (1854–5), covers up her furniture against damage from the dirty Manchester air, and gazes with disapproval at the Hales' small drawing-room ('The room altogether was full of knick-knacks, which must take a long time to dust; and time to people of limited income was money'),¹⁶ this pragmatic middle-class angst is put into perspective by Bessy Higgins telling of the conditions in the mill, where the air is full of bits of fluff, 'as fly off fro' the cotton, when they're carding it, and fill the air till it looks all fine white dust. They say it winds round the lungs, and tightens them up. Anyhow, there's many a one as works in a carding-room, that falls into a waste, coughing and spitting blood, because they're just poisoned by the fluff' (Gaskell, *North and South*, p. 146).

If dust was a hazard of the industrial city, so did it form an unfavourable aspect of colonial life. This is brought out well in Emily Eden's *Up the Country* (1866), a collection of letters written in 1837–40. The dust in India is 'much worse' than a London fog back home.¹⁷ In Cawnpore, 'people lose their way on the plains, and everything is full of dust – books, dinner, clothes, everything' (Eden, *Up the Country*, p. 64). It is as though the substance of the country is performing a kind of reverse colonization. Anxiety about the insinuating, corrupting qualities of dust was certainly merited in terms of practical hygiene. Flora Annie Steele and Grace Gardiner, in *The Complete Indian Housekeeper and Cook*, warn that 'Dirt, illimitable, inconceivable dirt must be expected, until a generation of mistresses has rooted out the habits of immemorial years'.¹⁸ They advise that a much larger quantity of dusters will be necessary than in an English household, and recommend tan stockings and shoes, 'as they do not hold the dust' (Steele and Gardiner, *Housekeeper*, pp. 53, 174). But this anxiety concerning hygiene is also a metaphorical lens, as Gail Low has suggested, through which a central problem of Empire – the fear of contamination of national identity – becomes evident.¹⁹

Mary Douglas suggests that:

If we can abstract pathogenicity and hygiene from our notion of dirt, we are left with the old definition of dirt as matter out of place. This is a very suggestive approach. It implies two conditions: a set of ordered relations and a contravention of that order. Dirt then, is never a unique, isolated event. Where there is dirt there is system. Dirt is the by-product of a systemic ordering and classification of matter, in so far as ordering involves rejecting inappropriate elements.

Douglas, *Purity and Danger*, p. 35

Once one moves away from a definition of dust as dirt, its status becomes less stable. Its position as marginal, surplus, unwanted matter may be reversed. 'Rubbish', as has been succinctly stated by Michael Thompson in his book on *Rubbish Theory*, 'is socially defined',²⁰ and hence one person's discarded waste can be another person's source of wealth. The arguments surrounding precisely what *was* in those mounds which dominate the plot and landscape of *Our Mutual Friend* have been well enough rehearsed, and it has been satisfactorily established that even if these heaps probably did not, after the sanitary measures of 1848, stand in proximity to where human excrement was deposited, the two were likely to have been closely associated in the popular mind.²¹ Hence the symbolic relationship of wealth to shit ('dust' had been a colloquial word for money since the early sixteenth century) has been a plausible enough critical extrapolation, and, moreover, one which has received psychoanalytic endorsement through Freud's equation of money with faeces.²² Readers of *Household Words* would already have been familiar with the idea of the value of dust – taking the word in its broadest sense. John Capper's article 'Important Rubbish' in *Household Words* classifies the contents of the mounds, thus bringing system to them, rescuing them from the category of dirt,²³ and a visit to the dust-yards, showing a concomitant fascination with recycling, became something of a mid-nineteenth-century journalistic standby. The most valuable of all components – excepting the occasional coins or pieces of jewellery – were coals, coal-dust and half-burned ashes: the 'breeze' that was baked into building blocks, and 'thus', the readers of the *Leisure Hour* were reminded in 1868, 'our houses may be said to arise again from the refuse they have cast out'.²⁴ Bones went to boiling-houses, to be turned into soap and gelatine, and eventually toothpicks and knife-handles and toothpowder, and fertilizer. Paper becomes papier-mâché or paper again; clothes are sent off to make shoddy – torn-up woollen material – and in turn become clothes again. This shoddy was known as 'devils-dust', ostensibly from the name of the machine used to tear up the fabrics, but in fact redolent of the poisonous nature of the greasy, germ-ridden, 'choking clouds of dry pungent dirt and floating fibres', as Mayhew termed them (Mayhew, *London Labour*, p. 30): 'Devilsdust', the double-edged name, signifying both exploitation and sedition, given by Disraeli to a dark, melancholy, ambitious, discontented ponderer on the rights of labour in *Sybil* (1845), who had started his working life as a nameless orphan manufacturing shoddy. Glass, old shoes, metals: all were re-used. And broken toys and chipped china frequently were appropriated by the

women who carried out most of the dust-sifting for their own homes. A philanthropic visitor of the 1880s remarks how one home she knows 'is beautified throughout with dust-bin trophies, the mantelpiece and side-table shining with showy bits of glass and china and ornaments of various devices. There are cut-glass decanters, flower-vases, wine-glasses, tumblers, and even a delicate little bowl of the lately fashionable iridescent glass'.²⁵ If dust at its most pernicious is insidious, invisible, here we have dust brought into view and celebrated, commodified.

Andrew H. Miller, in *Novels behind Glass*, has usefully noted that 'Dickens' final validation of the dust-heap [...] presents the possibility that revolutionary change is unnecessary: if the potential of what we discard is actually used, then a fundamental restructuring of the economy will not be required'.²⁶ The metaphoric potential of dust, the extraction of value from the abject, or the restitution of the discarded, was a common trope. At its simplest, excavating a dust-heap for what is lost provides a return to order. In Wilkie Collins's *The Law and the Lady* (1875), the heroine, Valeria Woodville, gains proof that her husband did not in fact murder his former wife when she has a dust-heap excavated in the grounds of the house where they had been staying at the time of her death. This archaeological excavation in miniature digs through layers of ashes and other household refuse in order to turn up morsels of paper, which, when painstakingly restored into the form of the letter they had once been, prove Eustace Woodville's innocence, reinstate his good name, save his second marriage, and bring the complex plot to a resolution. At a more obviously figurative level, Ruskin, in *The Ethics of the Dust* (1866), provides a paradigm which was borrowed by others, and which itself was recycling paragraphs already published in *Modern Painters*, V (1860). He invites one to consider 'the dust we tread on', taking, by way of example, 'an ounce or two of the blackest slime of a beaten footpath on a rainy day, near a large manufacturing town'. Here, all kinds of geological elements are at helpless war with one another. But suppose one could separate out and in some wonderful way extract and recombine their atoms, we obtain a clear blue sapphire from the clay, an opal from the sand, a diamond from the soot, and a star-shaped drop of dew from the water. This instantly becomes a lesson in politics: 'political economy of competition' is replaced by 'political economy of co-operation'.²⁷ The distillation of even the most unpromising, basic raw material produces naturally formed beauty combined with material wealth. Ruskin's lesson is secular: a similar but theological point is

made in Charles Reed's *Diamonds in the Dust* (1866), in which he asks his Sunday School readers to consider, among other things, 'the boyhood of great men, men who have come up from the ranks of poverty': a Smilesian list of men like Isaac Newton, Humphry Davy, James Watt, Brunel and Martin Luther: 'Are not all these from the dust of the earth, and are they not diamonds of the first water?'²⁸

Other religious appropriations of dust take the reader straight back to the dust-heap. Mabel Mackintosh's children's story *Dust, Ho! or, Rescued from a Rubbish Heap* tells of a couple of girls sorting the rubbish that their drunken father collects.²⁹ One day, Janet comes upon a coloured picture of a seated man who had drawn a little boy close to him: beyond him a group of mothers with children, beyond them a crowd of angry men, and beneath the illustration the text 'Suffer little children to come unto Me', and a hymn. She takes the picture inside as a present to amuse her little crippled brother; a middle-class charitable visitor, who had noticed the beautiful girls in their squalid surroundings, visits their home, explains the message of the pamphlet. The words provide sustenance and hope for the dying cripple; the visiting woman gives Janet the opportunity to become a servant in her own home, and the other girl proves the means of salvation through which her father is weaned off gin and onto the gospel. Providential illumination here is literally found in the dust, where it might least be looked for; similarly, there is a message about human good being redeemable from the least promising surroundings. All these homiletic lessons derive from asking, at least implicitly, the question posed by Eustace R. Conder: 'What can seem of less consequence, or more worthless, than a pinch of dust?'³⁰ The reader is reminded that every one of our actions is watched; that throughout our life, we constantly leave deposits and pick things up: 'Pray that when your life-journey comes to an end, the dust under your feet may show that you have been walking in the right road' (Conder, *Dust*, p. 3). God here is turned into a detective-like figure, just as Sherlock Holmes reads signs of past movements in the dust in *A Study in Scarlet* (1887).

To clear away dust is to bring the past to light. But to fail to rise from the dust is to be consigned to the dust-heap of history. Ouida makes this point strongly, if a little mawkishly, in her short story 'Street Dust', in which two orphan children from the Campagna come into Rome after their mother's death to sell flowers, are arrested for begging, victimized by what Ouida portrays as a corrupt, compassionless bureaucracy, turned helpless and penniless onto the street, and take shelter in a church portico in a half-demolished street, down which a

keen wind blows 'clouds of grey dust'.³¹ However, in this late-Victorian tale, there is no divine rescuing hand helping these social victims. They are found by scavengers the next morning, dead; taken to the mortuary:

and thence, none recognizing them, they were carried to the common ditch in which the poor and nameless lie. What were they more than the dust of the street, blown about a little while by the winds, and then swept away and forgotten?

Ouida, 'Street Dust', p. 56

It is this fear, that dust equals oblivion, a return to origins which we cannot transcend, that Tennyson seeks to redress in his poetry, most notably in 'In Memoriam' (1850). His dread is that all we will come to is 'Two handfuls of white dust, shut in an urn of brass!' as he puts it in 'The Lotos-Eaters' (1832; l. 113).³² In the early times after Hallam's death, Tennyson wants to have trust in a notion of immortality, 'Else earth is darkness at the core,/And dust and ashes all that is' (xxxiv. 3-4), but is vulnerable to the suggestion that it might be possible for a voice from beyond the grave to murmur - from some presumably earth-bound afterlife - "'The cheeks drop in; the body bows;/Man dies: nor is there hope in dust'" (xxxv. 3-4). The dread is that human existence, and the memory of it, will be subject to the same process of erosion as hills slowly eaten away by streams to create "The dust of continents to be' (xxv. 12); subject to 'Time, a maniac scattering dust' (l. 7); that those who have loved, and suffered, and 'battled for the True, the Just', will at the end of it all 'Be blown about the desert dust' (lvi. 19), reduced to the elemental fragments that go to make up our physical composition, and deprived of all sense of identity. But in the Prologue, Tennyson has already set up God's role in all of this: 'Thou wilt not leave us in the dust' (Prologue, l. 9), he confidently announces, and goes on to piece together the atomized being.

Tennyson's fear, I suggest, is not just of the certainty and finality of mortality. It chimes with a wider fear of reversion, of history not moving in a confident forward direction, of contemporary society decaying, or alternatively sinking as a result of catastrophe or degeneration. The apprehension that haunts Tennyson, and others, is of what might happen both to an individual, and to morally bankrupt society, as apotheosized in the final line of Hopkins's 'The Sea and the Skylark' (c.1877), that we are breaking 'down/To man's last dust, drain fast towards man's first slime' (ll. 13-14).³³ This dread of reversion provides

a dialectical contrast to the prevalent myth of historical progress. It is this property of dust, to remind one that the machines of the industrial age have not supplied the power to drive history forwards, that technological change is not to be equated with social betterment, that history involves the destruction as well as the accumulation of the material, that led to Walter Benjamin's fascination with dust in his vast, incomplete *Passagen-Werk* (1927-40). He quotes Henri de Pène, writing in 1859 of how he returns from the *Courses de la Marche*: "'The dust has surpassed all expectations. The elegant people back from the *Marche* are practically buried under it, just as at Pompeii; and they have to be disinterred, if not with pickaxes, then at least with a brush'". Dust, he goes on to say, 'settles over Paris, stirs, and settles again. It drifts into the passages and collects in their corners; it catches in the velvet drapes and upholstery of bourgeois parlors; it clings to the historical wax figures in the Musée Gravin. The fashionable trains on women's dresses sweep through dust'.³⁴ All of this helps suggest to Benjamin that history is, at the very least, standing still: the phenomenon of dust calls the whole idea of progress, of teleology, into question.

Celebrating the beauty of history's meaningless accretions, Marcel Duchamp, as part of the visual notes that he took for the *Large Glass* (or *The Bride Stripped Bare by her Bachelors, Even*) (1915-23), fixed dust which had fallen on the surface of a flat pane of glass over a period of months: the result, photographed by Man Ray, was entitled *Elevage de poussière* (*Dust Breeding*) (1920). But it was not dust itself that was seen as possessing aesthetic potential by the Victorians, with the exception of motes dancing in the sun-beam. Even these have their demonic opposite, the motes in the moonbeam in *Dracula* (1897) which, metamorphosing into vampiric figures, show how Stoker has picked up on the poisonous, miasma-like potential of dust in the air. Rather, dust's aesthetic importance, the grounds on which dust is something to be welcomed, rested on its presumed ability to cause certain atmospheric and climatic effects.

The researches and writing of John Tyndall are crucial here. In his essay 'The Scientific Use of the Imagination' (1870), he presents his fascination with the physical basis of light to a general audience.³⁵ In so doing, he claims that the light of our firmament is not direct solar light, but reflected light. He elaborates on the nature of this reflection by asking why the sky is blue. He asks his audience to imagine that white solar light, as it falls, somehow gets divided, breaking into the colours of the spectrum. What he calls an 'undue fraction' of the smaller light waves are scattered by particles, particles in the air, and the proportions

of this scattering ensure the predominance of the colour blue. At this point, Tyndall suggests that we consider 'sky-matter':

Suppose a shell to surround the earth at a height above the surface which would place it beyond the grosser matter that hangs in the lower regions of the air – say at the height of the Matterhorn or Mont Blanc. Outside this shell we have the deep blue firmament. Let the atmospheric space beyond the shell be swept clean, and let the sky-matter be properly gathered up. What is its probable amount? I have sometimes thought that a lady's portmanteau would contain it all. I have thought that even a gentleman's portmanteau – possibly his snuff-box – might take it in. And whether the actual sky be capable of this amount of condensation or not, I entertain no doubt that a sky quite as vast as ours, and as good in appearance, could be formed from a quantity of matter which might be held in the hollow of the hand.

Tyndall, *Imagination*, p. 36

This handful of dust excites not fear, but awe: an awe which Tyndall mediates through Kant's comment that two things fill him with this condition: 'the starry heavens and the sense of moral responsibility in man' (Tyndall, *Imagination*, p. 51). The tiny particles which go to make up 'sky-matter' are responsible for creating our sense of infinity, a sense which A.W. Moore has in turn described as partaking of the paradoxical. Infinity 'is standardly conceived as that which is boundless, endless, unlimited, unsurveyable, immeasurable', yet set against this is our own finitude. 'It is self-conscious awareness of that finitude which gives us our initial, contrastive sense of the infinite and, at the same time, makes us despair of knowing anything about it, or having any kind of grasp of it'.³⁶ The smallness of dust, in other words, as Tyndall uses it, has the power to create tension between our own sense of equivalent smallness, and the vastness of our physical universe: moreover, the employment of the imagination which is necessary to our comprehension of the operation of 'sky-matter' involves moving beyond our own materiality, the dust of our own bodily composition. 'Breaking contact with the hampering details of earth', Tyndall concludes his piece, the awe felt by the scientist 'associates him with a power which gives fulness and tone to his existence, but which he can neither analyse nor comprehend' (Tyndall, *Imagination*, p. 51).

Not everyone wished to accept Tyndall's theories: Ruskin, in particular, scorned them, and 'rebelled against the idea of dust-motes in the

upper regions of the air, and especially resented the idea that the clear blue of the sky could be due to anything so gross and terrestrial as dust'.³⁷ Although their veracity was being questioned by the end of the century in respect to what *actually* causes the blue of the sky, Tyndall's arguments were rehearsed again by Wallace in *The Wonderful Century*, who explained, moreover, the aesthetic pleasure created by the effect of thicker dust particles in the lower atmosphere, particularly when struck by the slanting rays of the setting sun, producing 'not unfrequent exhibitions of nature's kaleidoscopic colour painting'. The most spectacular effects are produced when the sun has slid below the horizon, and when there are a certain quantity of clouds:

These, as long as the sun was above the horizon, intercepted much of the light and colour; but, when the great luminary has passed away from our direct vision, his light shines more directly on the under sides of all the clouds and air strata of different densities; a new and more brilliant light flushes the western sky, and a display of gorgeous ever-changing tints occurs which are at once the delight of the beholder and the despair of the artist. And all this unsurpassable glory we owe to – dust!

Wallace, *Wonderful Century*, pp. 73–4

These theories had been confirmed, for Wallace, by the explosion of Krakatoa on 26–7 August 1883 which had released, it was estimated, some 70,000 cubic yards of dust into the atmosphere. These circled the globe several times over the succeeding years, causing the spectacular sunsets of the 1880s.³⁸ Gerard Manley Hopkins, in one of his rare appearances in print, contributed to a correspondence in the science journal *Nature* recording these recent phenomena, before their cause was ascertained.³⁹ He notes how they differed from ordinary sunsets, the light being both more intense and yet lacking in lustre, the colours being impure and not of the spectrum. His account of the sunset of 16 December 1883 demonstrates his Ruskin-influenced techniques of precise observation as he notes:

A bright glow had been round the sun all day and became more remarkable towards sunset. It then had a silvery or steely look, with soft radiating streamers and little colour; its shape was mainly elliptical, the slightly longer axis being vertical; the size about 20 from the sun each way. There was a pale golden colour, brightening and

fading by turns for ten minutes as the sun went down. After the sunset the horizon was, by 4.10, lined a long way by a glowing tawny light, not very pure in colour and distinctly textured in hummocks, bodies like shoals of dolphins, or in what are called gadroons, or as the Japanese conventionally represent waves.

Hopkins, *Correspondence*, p. 165

So strange are these solar manifestations that he is resorting to similes drawn not from other aspects of nature, but from stylized representation. Such sunsets fed directly into poetry: into, for example, Tennyson's 'St Telemachus' (1892) and *Eros and Psyche* (1885), by Hopkins's friend Robert Bridges, a piece which has some suspiciously close verbal resemblances to Hopkins's own published account.

Despite the emphasis which Wallace placed on the aesthetic appeal of dust's effects, he was ready to concede that there might be some who would be willing to sacrifice them if by doing this they would be escaping its disagreeable properties. But dust is not dispensable. He, like other late-nineteenth-century commentators on the topic, calls attention to the work of the Scottish scientist John Aitken, who proved that it is the presence of dust in the higher atmosphere that causes 'the formation of mists, clouds, and gentle beneficial rains, instead of waterspouts and destructive torrents' (Wallace, *Wonderful Century*, p. 76). This, together with its capacity to produce beauty, allows Wallace to make a strong case for the rehabilitation of dust's reputation. Despite the fact that it brings dirt, discomfort, and even disease, it is 'an essential part of the economy of nature', both helping to render life more enjoyable in aesthetic terms, and being nothing less than essential to our climatic systems. From this, he draws a conclusion very similar to other, more pious commentators: 'The overwhelming importance of the small things, and even of the despised things of our world, has never, perhaps, been so strikingly brought home to us as in these recent investigations into the wide spread and far-reaching beneficial influences of Atmospheric Dust' (Wallace, *Wonderful Century*, p. 83).

To focus on dust, as I suggested earlier, raises certain questions about Victorian fascination with the relationship between the visible and the invisible, and with techniques of seeing, both technological and physiological. Added to this must be concern with the individuality which manifests itself in the act of seeing and the recording of this act: what

G. H. Lewes wrote of as our subjective co-operation in the perception of objects, or, to recast this through George Eliot's words in *Middlemarch* (1871–2): 'Will not a tiny speck very close to our vision blot out the glory of the world, and leave only a margin by which we see the blot? I know no speck so troublesome as self'.⁴⁰ This analogy, employed to show the impossibility of stable, objective vision, draws on the sense that dust is simultaneously indispensable yet problematic.

The study of dust and its effects, both injurious and beneficial, would have been impossible without the developments which took place in the technology of the microscope, unlocking, as Philip Gosse put it, 'a world of wonder and beauty before invisible'.⁴¹ Once again, the popular literature which developed around the domesticized version of this instrument tended to emphasize the divinely sanctioned social messages to be gleaned from concentrating on the miniature and the obscure. Mary Ward, for example, in *A World of Wonders Revealed by the Microscope* reminds the 'Emily' to whom this work is ostensibly addressed that one is looking at 'the works of One who judges not as we do of great and small; who "taketh up the isles as a very little thing," and counts the nations as "the small dust of the balance"', yet promises individual salvation to each being from those nations.⁴² More generally, the microscope was praised for its ability to train one's powers of careful observation, and for its democracy – a considerable amount of useful work could be performed by the amateur naturalist, it was asserted, with a very cheap instrument; this work could be performed by those living the most cramped of urban existences, taking the raw materials of their science from the world around them, investigating 'the commonest weed or the most familiar insect [...]. There is not a mote that dances in the sunbeam, not a particle of dust that we tread heedlessly below our feet, that does not contain within its form mines of knowledge as yet unworked. For if we could only read them rightly, all the records of the animated past are written in the rocks and dust of the present'.⁴³ We may come to see through "'the world of small"', to use William Carpenter's term, that size is relative, that mass has nothing to do with real grandeur. 'There is something', he continues, 'in the extreme of minuteness, which is no less wonderful, – might it not almost be said, no less majestic? – than the extreme of vastness'.⁴⁴

Yet whether examining the minuscule, or the vastness of the heavens, the more one could see when the natural powers of the eye were augmented by the crafted lens, the more scientists were aware of what lay beyond one's visual reach. It was here that observation of the

natural world had to yield place to the importance of the imagination, increasingly recognized as having a central role within scientific inquiry, taking one beyond what the eye can see. The imagination is the instrument with the true power to open things up. As G. H. Lewes, one of the most sustained advocates for the employment of this faculty, put it: 'The grandest discoveries, and the grandest applications to practice, have not only outstripped the slow march of Observation, but have revealed by the telescope of Imagination what the microscope of Observation could never have seen.'⁴⁵ Tyndall invited his reader to:

Conceive a grain of sand of such a size as just to cover the dot placed over the letter *i* in these pages; there are animals so small that whole millions of them, grouped together, would not be equal in size to such a grain of sand. These are the results of microscopic research; but the microscope merely opens the door to imagination, and leaves us to conjecture forms and sizes which it cannot reveal.⁴⁶

What we are being encouraged to do, in other words, is to learn to see differently, to see with the mind's eye. The powerful lens of the microscope, revealing simultaneously the dangers and the welcome properties of dust, is not enough in itself. Nor is it sufficient to see with the eye of the social recorder, although this may allow one to bring order to the components of dust and hence, in Mary Douglas's terms, reclaim the properties of the dustheap from over the borderline of that which has been discarded, and which hence threatens social order. Dust, as so many commentators on the materiality of this substance pointed out, is a paradoxical substance: a threat, yet, to use a formulation of Wallace once again, 'a source of beauty and essential to life' (Wallace, *Wonderful Century*, p. 68). But its real fascination to the Victorians lay not so much in the dialectics of this materiality, but in the fact that its insidious physical presence also partook of something far more metaphysical; reached, even, towards the Kantian sublime. As Tyndall acknowledged in 1870, 'beyond the present outposts of microscopic enquiry lies an immense field for the exercise of the speculative power' (Tyndall, *Imagination*, p. 41). The importance of dust to Victorian culture lies precisely in this capacity to suggest the vastness of imaginative conjecture that may lie behind and beyond the most apparently mundane: the invisible behind the visible.

Notes

1. (London: Swan Sonnenschein, 1898), pp. 68–84.
2. *Purity and Danger: an Analysis of the Concepts of Pollution and Taboo* (London: Routledge, 1966; 1984), p. 35.
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4. J. G. McPherson, 'Dust', *Longman's Magazine*, 18 (1891), 49–59 (p. 49).
5. Charles Dickens, *Our Mutual Friend*, ed. Stephen Gill (Harmondsworth: Penguin, 1971), p. 191.
6. W. E. Henley, 'Trafalgar Square', in William Nicholson, *London Types: Quatorzains by W. E. Henley* (London: Heinemann, 1898), p. [vii]. The sonnet illustrates Nicholson's print of a sandwich-man advertising Seeley's *Ecce Homo*.
7. Henry Mayhew, *London Labour and the London Poor*, 4 vols (London: Griffin, 1861), II, 188.
8. (New York: Norton, 1977), p. 29. For an overview of this topic, see Peter Brimblecombe, *The Big Smoke: a History of Air Pollution in London since Medieval Times* (London: Methuen, 1987).
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10. Robert Brudenell Carter, 'Lighting', in *Our Homes, and How to Make them Healthy* (London: Cassell, Petter, Galpin, 1883–5), pp. 397–8.
11. (London: Trübner, 1877), p. 34.
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13. [Anon.], 'Dust and Hygiene', *All the Year Round*, 3rd series, 13 (1895), 154.
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15. F. Oppert, *On Melanosis of the Lungs and Other Lung Diseases arising from the Inhalation of Dust* (London: John Churchill, 1866), pp. 3–4.
16. (Harmondsworth: Penguin, 1970), p. 139.
17. Emily Eden, *Up the Country* (London: Virago, 1983), p. 110.
18. Two Twenty Years' Residents [Flora Annie Steele and Grace Gardiner], *The Complete Indian Housekeeper and Cook* (Edinburgh: Frank Murray, 1890), p. 57.
19. Gail Low, *White Skins, Black Masks* (London: Routledge, 1996), p. 162.
20. *Rubbish Theory: the Creation and Destruction of Value* (Oxford: Oxford University Press, 1979), p. 11.
21. See Harvey Peter Sucksmith, 'The Dust-heaps in *Our Mutual Friend*', *Essays in Criticism*, 23 (1973), 206–12.
22. See Sigmund Freud, 'Character and Anal Eroticism' (1908), *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, ed. James Strachey and others, 24 vols (London: Hogarth Press and the Institute of Psychoanalysis, 1953–74), IX (1959), 169, and 'The Interpretations of Dreams', *Works*, V (1953), 403.
23. 11 (1855), 376–9.
24. [Anon.], 'Our Dust-bins', *Leisure Hour*, 17 (1868), 719.
25. H. A. Forde and her sisters, *Dust, Ho! and Other Pictures from Troubled Lives* (London: Christian Knowledge Society, c. 1885), p. 13.

26. *Novels Behind Glass: Commodity Culture and Victorian Narrative* (Cambridge: Cambridge University Press, 1995), p. 125.
27. John Ruskin, *Modern Painters*, V (1860), in *Works*, VII, 207.
28. *Diamonds in the Dust: a New Year's Address for Sunday Scholars* (London: Sunday School Union, 1866), pp. 21–2.
29. (London: John F. Shaw, 1891).
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31. *Street Dust and Other Stories* (London: F.V. White, 1901), p. 50.
32. All quotations from Tennyson's poetry are taken from *The Poems of Tennyson*, ed. Christopher Ricks, 3 vols (London: Longman, 1987).
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36. *Infinity*, ed. A.W. Moore (Aldershot: Dartmouth Publishing, 1993), p. xi.
37. Oliver Lodge, 'Ruskin's Attitude to Science', *St George*, 8 (1905), 290; quoted in Ruskin, *Works*, XXXVII, 525.
38. See further Richard D. Altick, 'Four Victorian Poets and an Exploding Island', *Victorian Studies*, 3 (1960), 249–60; Thomas A. Zaniello, 'The Spectacular English Sunsets of the 1880s', in *Victorian Science and Victorian Values: Literary Perspectives*, eds Jim Paradis and Tom Postelwait, *Annals of the New York Academy of Sciences*, 360 (1981), 247–67.
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46. John Tyndall, *Natural Philosophy in Easy Lessons* (London: Cassell, Petter and Galpin, 1869), p. 6.

5

Purging Christianity of its Semitic Origins: Kingsley, Arnold and the Bible

Stephen Prickett

Few members of the diplomatic corps of a foreign country can have played a larger part in the cultural life of the host nation than Baron Christian Bunsen, the Prussian ambassador to the Court of St James from 1841 to 1854. In 1847 he was to add a personal alliance to his political mission to Britain by his marriage to Frances Waddington, a Welsh heiress, but his place in British life had started much earlier and extended far beyond the diplomatic and social sphere. In 1841 he inaugurated his long-cherished scheme for union between the Anglican and Prussian Lutheran State church with a proposal for a joint Bishopric of Jerusalem. Each Church would appoint its candidate in turn, and the Bishop then chosen would minister alike to both Anglican and Lutheran communities. The idea was taken up enthusiastically not merely among the liberal Anglicans, who were closest theologically to Bunsen, but even initially by Pusey and the Tractarians – and was effected by an Act of Parliament in October of that year.¹ Geoffrey Faber has argued that, had Newman not in the end been so implacably opposed to the whole scheme, helping to make it a one-off arrangement rather than the prelude to what some hoped would be eventual union, the relations between Britain and Prussia might have been so different as to avert the catastrophe of the First World War.² Certainly Bunsen was a key figure in London intellectual life of the 1840s, his ideas tapping into a huge existing reservoir of pro-Teutonic sentiment.

Though it is tempting (if not quite accurate) to suggest that English 'Teutomania' flourished in inverse proportion to actual knowledge of