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**Living Coal: Robert Boyle, John Holland, and the Bodily Passages of
Chimney Sweep Literature, 1684-1824**

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Chimney Sweep Literature, 1684-1824**

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Report

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Dedication

This project is dedicated to my grandmother, Shirley Goheen, who made me diligent and kept me sane. I owe her everything.

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Abstract

Living Coal: Robert Boyle, John Holland, and the Bodily Passages of Chimney Sweep Literature, 1684-1824

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The University of Texas at Austin, 2016

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This project attends to a body of literature that registers the extraordinary and tragic effects of chimneys infused with living coal upon young chimney sweeps. In so doing, I show how writers, especially John Holland, registered the dynamic interrelationship between chimney sweeps, chimneys and coal as bodily passages. To assist our imagining of these bodily passages, I adapt Edward Casey's logic of place and Stacy Alaimo's concept of "transcorporeality" in order to make sense of the material exchange between the child-sweeps and the lively matter of and within the chimneys. Together, place-thinking and transcorporeality help us see the way in which dwelling within toxic places might involve processes of what Rob Nixon has called "slow violence," a violence often culminating in the spectacular erasure of bodies. In turn, I hope to contribute to a fuller understanding of what it means to live firmly emplaced in the environment in which we dwell.

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Introduction

“Coal is a reminder of our ongoing shaping of and being shaped by the earth, of living within the world rather than upon its outer surface.” –Lowell Duckert, “Earth’s Prospects”

If today we are, as Stephanie LeMenager suggests, living in oil, those living in nineteenth-century industrial Britain lived in coal.¹ In 1662, before the industrial revolution had been fully realized, John Evelyn expressed concern for the coal-stricken condition in which Londoners lived. He asked his readers:

And what is all this, but that Hellish and dismal Cloud of SEA-COALE? which is not onley perpetually imminent over her head . . . but so universally mixed with the otherwise wholesome and excellent *Aer*, that her *Inhabitants* breathe nothing but an impure and thick Mist, accompanied with a fuliginous and filthy vapour, which renders them obnoxious to a thousand inconveniences, corrupting the *Lungs*, and disordering the entire habit of their bodies; so that *Catharrs*, *Phthisicks*, *Coughs* and *Consumptions* rage more in this one City, than in the whole earth besides. (188)

In this nightmare vision, Evelyn presents a living, active sea-coal mixed with an otherwise excellent and wholesome air that has a profound capacity to affect life. “Hellish” and “dismal,” coal *corrupts* and *disorders* bodies and brings about a “thousand inconveniences.” As an adjective, “living” in my title describes such coal not as inert but as active matter that possesses in its own right a powerful capacity to affect, transform

¹ My title adapts Stephanie LeMenager’s influential book, *Living Oil: Petroleum Culture in the American Century*. In *Living Oil*, LeMenager illuminates the way in which “we experience ourselves . . . every day in oil, living within oil, breathing it and registering it with our senses” (6).

and, in the most extreme cases, dissolve the lives of urban inhabitants. The literary record documents how Britons *lived in living* coal. And other than the colliers who extracted coal from mines in Northern England, no one lived more intimately with and within coal than the children employed as chimney sweeps.

Children apprenticed as chimney sweeps, some as young as four years old, might labor for up to nine hours within a single chimney saturated with soot (the byproduct of burned coal). Rarely bathed, they remained immersed in coal even in their sleep. The sweeps often lodged in their masters' coal cellars, provided with nothing more than their soot bags to keep them warm. Coal penetrated their pores, blackened their skin, enflamed their eyes, obstructed their lungs and bred "cancerous disorders" (Hanway 8) in their bodies: the children dissolved into coal. They became, too, deeply entangled with the chimney through which they climbed. In passing through narrow chimneys, as little as eight by eight inches wide, the sweeps' bodies transformed. Their spines and ankles progressively conformed to the chimneys' twisted flues. In full view of the urban public, these disturbed, experienced corporeal forms wandered around England's cities tracing chimney and coal wherever they went. ²

² See in particular George Phillips's *England's Climbing Boys: A History of the Long Struggle to Abolish Child Labor in Chimney-Sweeping* and Benita Cullingford's more recent and well documented *British Chimney Sweepers*, both of which capture the essence of what it was like to be a chimney sweep in eighteenth- and nineteenth-century Britain. One might also look at Judith Plotz's chapter from *Romanticism and the Vocation of Childhood* entitled, "Lamb and the Child Within." In particular, pages 91-106 offer an imaginative yet scholarly rendering of the sweeps' lived experience. Finally, I recommend Tim Fulford's recent essay, "A Romantic Technologist and Britain's Little Black Boys." All of these references rely heavily on James Montgomery's comprehensive anthology, *The Chimney Sweeper's Friend and Climbing Boy's Album*, which contains a wide range of fictional and historical documentation.

This essay attends to a literature that registers the extraordinary and tragic effects of chimneys infused with living coal upon young chimney sweeps. In so doing, I show how Romantic writers like Jonas Hanway, William Blake, Charles Lamb, James Montgomery and especially John Holland, whose work will become my focal point, attempted to account for the dynamic interrelationship between chimney sweeps, chimneys and coal. My fundamental question is twofold: how was this interrelationship imagined in the past? And moreover, what contemporary theoretical models can presently assist our imagining of this interrelationship? To help answer the latter question, my project approaches representations of chimney sweeps through the lens of contemporary philosopher Edward Casey's logic of place. Casey's logic enables us to understand the sweeps as firmly emplaced bodily subjects who run continuous with the chimney. Suspicious, however, of Casey's and other place-thinkers' humanist optimism, I adapt New Materialist Stacy Alaimo's concept of "transcorporeality" in order to make sense of the material exchange between the child-sweeps and the lively matter of and within the chimneys. Together, place-thinking and transcorporeality help us see the way in which dwelling within toxic places might involve processes of what Rob Nixon has called "slow violence," a violence often culminating in the spectacular erasure of bodies. After outlining place, transcorporeality, and slow violence, this essay turns to the precise ways in which the Romantics registered chimney sweeps' bodily experiences. I offer an analysis of John Holland's poem, "An Appeal to the Fair Sex: Inviting their attention to the present situation of Climbing Boys" to argue that scientific materialist understandings of the body and of movement helped make visible the erosive, dissolving effects of living

(in) coal. To ground my materialist approach to Holland's poem, I provide first an analysis of seventeenth-century natural philosopher Robert Boyle's influential essay, "Experiments and Considerations About the Porosity of Bodies." Boyle approaches the body from the perspective of a corpuscular theory that understands particles of matter as always in the process of passing through one another. A hundred and fifty years later, Holland was well aware of both the corpuscular theory and Boyle's work generally. Moreover, Boyle's essay uses the chimney-as-metaphor to illustrate the way bodies function. From my reading of the chimney-as-metaphor in Boyle's essay, I suggest that the chimney has been and continues to be a site—a literal architectural location—for theoretical inquiry. My project then puts Holland's poem, "An Appeal to the Fair Sex," into conversation with the same writer's exhaustive work on the history of coal in order to demonstrate how his materialist perspective enabled him to register what I'm calling acts of "bodily passages." In registering these acts of bodily passages, I suggest, Holland asks his Romantic audience to imagine the children's bodies, moving intensely within the chimney, as beings/organisms/human subjects, open to radical dissolution. In turn, we can appreciate the extent to which Holland—and indeed, Montgomery and others—employed the available resources of language as a means to better attend to and make visible these vulnerable transcorporeal subjects who were processually erased by the slow violence³ experienced within and without the chimney.

³ Rob Nixon develops the concept of slow violence in his book, *Slow Violence and the Environmentalism of the poor*.

Place, Transcorporeality, and Bodily Passages

Philosopher of space and time Edward Casey refuses to view place as consciously apportioned bits of “space,” challenging the dominant phenomenological understanding of the relationship between place and space. Casey maintains that contrary to space, place is not an empty void waiting for humans to fill it with names. Instead, place is a viable philosophical and material category that can account for the dynamic interrelationship between people and the environments in which they dwell. For Casey, the body plays a particularly significant role in processes of emplacement: “the living moving body,” he writes, “is essential to processes of emplacement: lived bodies belong to places and help to constitute them” (“How To Get” 24). Place-thinking does not privilege human consciousness as the primary agent in constituting place. Places affect bodily subjects just as much as bodily subjects affect place: as Keith Basso tells us, they “interanimate one another” (55).

But where, exactly, is place? In the wake of Casey’s extensive work on the topic, Jeff Malpas declares that “place is everywhere... in that it is both everywhere and (‘all about’) and every where (every where is a ‘where’ and every ‘where’ is a place)—but also tautologically, since to speak of ‘where’ is just to speak of place” (2). That place designates “every where” does not necessarily entail that everyone and everything coexists within the same place. Place-thinking proves useful precisely because it acknowledges that bodies and place are porous without ever dissolving the idea of boundary. “The porosity of the skin of an organic body,” writes Casey, “rejoins, even as it mimics, the openness of the boundaries of places” (“How To Get” 23). Bodies and

places open themselves up to one another, but they are nonetheless defined by various boundaries. A study of representations of chimney sweeps, I propose, can help us think through the co-constitutive and dynamic relationship between bodies and places.

Toxic chimneys and filthy, mangled, abject children may not seem like apt candidates for thinking through place. Scholars of place often infuse their writing with an Edenic resonance devoid of toxicity. The goal, it seems, is to get back into place—as if we have somehow lost our place. Kate Rigby, for instance, celebrates Romantic writers such as those like William Wordsworth and especially John Clare who adamantly protested against the “loss or despoliation” of their dwelling places (120). Moreover, one loses his/her place usually when it has been consumed or despoiled by some larger economic force—e.g. capitalism. But do despoiled places really disappear? What if places are always in the process of being re-placed? Recall, too, how Casey’s claim is infused with optimism: the “*living-moving* body” (emphasis mine) is one of the crucial requirements in processes of emplacement. Casey affirms emplacement as a phenomenon of life and animation. Life is found wherever there are firmly emplaced subjects. But what is place-thinking to do with what we might rather call the *dying, dissolving-moving* body, which wastes away in its passage through a given toxic place? Casey and other place theorists do not take into account that dwelling thoroughly within a toxic place might involve what Rob Nixon has called “slow violence,” which often culminates in the spectacular erasures of bodies. Broadly speaking, “slow violence...occurs gradually out of sight;” it is “a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all” (2). As a victim of

slow violence, the chimney sweep—a firmly emplaced subject who runs not “coterminous but continuous” (*Getting Back Into* 255) with the chimney—dissolves tragically over time into place. In other words, radically emplaced subjects are not always pretty.

Here, New Materialist Stacy Alaimo’s attractive but strategically less optimistic concept of “transcorporeality” becomes useful to making sense of the chimney sweeps’ bodily experience. Emerging partially out of Casey’s place-thinking, transcorporeality understands the body as something “always intermeshed with the more-than-human world,” which “underlines the extent to which the substance of the human is ultimately inseparable from ‘environment’” (2). Transcorporeality aligns with place-thinking insofar as it attends to the ways in which the body and the environment are inseparable. But unlike Casey’s affirmative approach to the porous boundaries between bodies and places, Alaimo treats transcorporeality as not “a site for affirmation, but rather for epistemological reflection and precautionary principles” (144). We should be appropriately disturbed, not enthralled, by the harsh reality that bodies and environments are inextricably connected. And yet, for Alaimo, reflecting critically on this disturbing material reality opens up “ethical and political possibilities” (2). For example, she argues that transcorporeality as a concept can help trace “a toxic substance from production to consumption,” which “often reveals global networks of social injustice, lax regulations, and environmental degradation” (15). As both a mode for reflecting on the extent to which bodies are continuous with places and the extent to which bodies are shaped by larger systemic problems, transcorporeality gives us occasion to revisit representations of

chimney sweeps. As the following pages will show, Romantic writers rendered chimney sweeps as remarkable transcorporeal bodies through which one could make visible the ways in which coal—a lively, toxic substance—consumed or dissolved people.

My project, then, employs place-thinking and transcorporeality to make sense of not only the way in which the Romantics perceived the alarming implications of the material experience of the sweeps, but also how the sweeps themselves experienced their lives on a day-to-day basis. A study of representations of chimney sweeps, then, affords us an opportunity to understand what it means to experience one's self as a firmly emplaced, transcorporeal subject. Additionally, my project moves across disciplines and disparate modes of representation. In *Slow Violence*, Nixon imaginatively borrows the term “ecotone” from field biologists in order to justify the need for interdisciplinary work. “Ecotone” designates zones that unite different bioregions (30). A marsh that conjoins a forest and a field, for instance, is an ecotone. The idea of ecotone, Nixon suggests, can help us think through the porosity of boundaries between academic disciplines. “In particular,” he asks, “what kinds of connective corridors toward other disciplines can scholars creatively navigate in an intellectual milieu where habitat fracture is becoming increasingly pervasive?” With Nixon's provocative question in mind, my project attempts to locate overlaps between anthropology, literary studies, science, and history in order to understand and recover representations of chimney sweeps and their bodily experiences. Specifically, my project asks, in what locales do we find sentimental poetry and scientific, empirical discourse intersecting? As I will show, “passage” functions in these representations as a sort of linguistic “ecotone” or

“connective corridor” that enabled eighteenth- and nineteenth-century writers and readers to comprehend the kinds of slow violence that ultimately dissolved young chimney sweeps.

Just as place is “every where” in the world in which we dwell, so is passage “every where” in literature. To refer to a discrete unit of literature is to refer to a passage. We call paragraphs, stanzas and even individual lines “passages.” We quote these passages, analyze them, turn them inside out and proceed to generate more passages. Moreover, *passage* aids our imagining of a wide range of phenomena. Karl Marx, for instance, describes the process of exchanging commodities as a “passage” from one hand to the next (148). Charles Darwin refers to flower stems as “passages” through which bees move (232-33). In so doing, the bees absorb and subsequently disperse pollen, enabling in turn processes of reproduction. “Passage” is also used synonymously with “corridor,” which Kate Marshall views as the “dominant organizational structure in modern domestic and institutional architecture” (7). Not surprisingly, in Sigmund Freud’s work, “passage” stands in for the vagina (81). We refer to the route through which millions of African slaves were transported as the Middle “Passage.” Paul Gilroy imagines ships sailing through the Middle Passage as “living, micro-cultural, micro political system[s] in motion” that contain and negotiate worlds of difference (4). But why is *passage* so pervasive throughout literature? Perhaps it is because the term conveniently stands in at once for bodily structure—organic or artificial—and for the *movement* of any given bodily matter: the bee makes passage through a passage. In other words, passage implicates both structure and movement (Marshall 8). Importantly, it also

implicates change. More than simply a movement from one place to another, passage signifies “a transition from one state or condition to another” (OED), or as Casey would say, one “place to another” (*Getting Back Into* 20). In attending to the chimney sweeps, I show how writers like Jonas Hanway, James Montgomery, Charles Lamb and especially John Holland registered radical acts of bodily passage. Romantic readers were to imagine the chimney sweeps passing through the chimney becoming every step of the way more and more radically conditioned to the chimney-as-place. This imagining of chimney sweeps, for the Romantics, signaled the terrible possibility that all people—people everywhere—could become intensely a *part* or particle of, even dissolve into, the places in which we dwell.

Attending to Passage: Robert Boyle and the Chimney-As-Metaphor

Eighteenth- and nineteenth-century British writers responding to the plight of the chimney sweeps often imagined the young laborers' movement through chimneys as acts of bodily passage. Consider Jonas Hanway, among the first to take serious measures to improve the conditions of the chimney sweeps, when he writes:

The difficulty of learning to climb in darkness, surrounded by soot in the passage of the chimney, and its appendages, is easily comprehended. But it may not be vulgarly known, that the soot drawn in by respiration, joined to the confined air, naturally creating thirst, drinking upon it frequently irritates and inflames the passages, and brings on a disease peculiar to this occupation, sometimes breeding cancerous disorders. (8)

Here, Hanway conflates the structure of the chimney with the child's body. "Passage" as a polyvalent metaphor indicates both the chimney's flue, and the child's lungs, and designates at the same time movement and anatomical structure. Moreover, in rendering the sponge-like child saturated by the "passage of the chimney," Hanway's description insinuates an understanding that bodies traveling through these passageways are exceptionally porous and therefore radically susceptible to physical transformation. From a rhetorical standpoint, it seems obvious that this "passage" aims to elicit sympathy. As readers, we are to imagine that passing through a chimney is like moving through a corridor in hell. This affective language, I suggest, has its roots in seventeenth-century scientific discourse. In particular, the work of Anglo-Irish natural philosopher and theological writer Robert Boyle (1627-1691) influenced perceptions such as Hanway's.

In the following pages, I examine Robert Boyle's materialist perspective on the way in which matter passes between bodies in order to help us more firmly grasp what the Romantics perceived when they witnessed what Charles Lamb calls the "sable phenomenon" (138).

As a natural philosopher and resolute materialist invested in acquiring knowledge through rigorous experimentation, Boyle was among the first to articulate a corpuscularian philosophy, an approach to the natural world that perceives all matter to be made up of mechanical-engine-like corpuscles. Most notably, Boyle demonstrated through experimentation with the air pump that air was, in fact, corpuscular just like everything else in the natural world (Lewis 43). Like many seventeenth-century empiricists, Boyle investigated natural phenomena in the service of Christian knowledge. He therefore approached the natural world presupposing the limits of human reason, attributing the mystery of motion, for instance, to an infinite and incalculable God (*Selected Philosophical* 19). Thus, his empiricism relies also upon metaphor to help explicate natural phenomena. As John Harwood suggests, Boyle's "movement between literal and figurative" language links "his moral philosophy and his natural philosophy" (51). For Boyle, Harwood points out, nature is material as much as it is textual, and if nature is "an encrypted text, the natural philosopher needs to find the correct keys to unlock it. Metaphor was crucial to seeing and communicating" (5). Attending to the chimney-as-metaphor in Boyle's 1684 essay, "Experimentations and Considerations About the Porosity of Bodies" (Abbr.: "Porosity"), helps us see the way in which he imagined the deep, intricate relationship between text, bodies, and the environment.

Examining the chimney metaphor, among other aspects of Boyle's essay, makes evident how the chimney has long been and can continue to be a bodily passageway into theoretical inquiry.

The following pages implicitly situate Boyle in an emerging New Materialist discourse that attends to the material agencies of matter belonging to the more-than-human-world. Perhaps because Boyle belongs to a canon saturated with natural philosophers who replaced an organic view of nature with a constructivist, mechanical view, thereby contributing to what Carolyn Merchant has called the "Death of Nature" (235), New Materialists have ignored Boyle, favoring instead the philosophy of his contemporary, Benedict de Spinoza. Jane Bennett, Stacy Alaimo and others have mobilized the way in which Spinoza "ascribes to bodies a peculiar vitality" (Bennett 2). Yet, that Boyle has been ignored is surprising considering that New Materialist scholarship in many ways hinges upon the idea—indeed, the fact—that bodies are not stable but remarkably porous and therefore always open to change. Alaimo builds the concept of transcorporeality partially out of what Nancy Tuana terms "viscous porosity" (14). Viscous porosity is opposed to fluidity in that the former's "emphasis on the mediating membranes, which may be biological, social, and political, [makes it] . . . a powerful model for understanding interaction in scientific/ethical/political terms" (15). In New Materialist thinking, porosity is the fundamental and "commonsensical" concept for challenging individualistic frameworks that try to deny the "biophysical" (15). Given that porosity is so essential to New Materialism, I propose that those like Boyle who meticulously attended to materiality offered eighteenth and nineteenth-century writers

linguistic resources for eliciting sympathy on the part of readers. Such a proposal will allow us to attend to the materialist aspects of even the most sentimental literature.

In the first of two essays in “Porosity,” Boyle gives a relentless “account of several things that pass in a Human Body” in order to “remove, or much lessen that great Prejudice” that some physicians at the time held against the use of externally applied medicine. Boyle’s essay unfolds in two stages. In the first place, it goes to obsessive lengths to demonstrate that “both the number and variety” of pores in animal bodies (including those of humans) “cannot be but very great” (5). To justify his claim, Boyle considers various instances in which bodies take in and subsequently perspire weighty matter. Essentially, he maintains that because excretion does not account for the total loss of weight per day, the remainder of whatever the body takes in on a daily basis must be discharged through pores. Establishing that bodies are porous, Boyle then conducts several experiments on live and dead bodies to show that effluvia can pass through bodily pores and reach even the internal parts of the body. “It will not seem incredible,” Boyle asserts, in a significant deployment of the metaphor of passage, “that the Effluvia of Amulets should in tract of time get passage through the Pores of the Skin of a Living Body” (36). Boyle recognizes that in passing through pores, corporeal effluvia can have a powerful effect on the body. For Boyle, this natural phenomenon generates life. As an illustration, he considers how tree sap, “which passing through strainers, (whereby its Corpuscles are separated, and prepared or fitted to be detained in several parts) receives the alterations requisite to being turned into Wood, Bark, Leaves, blossoms, &c.” (7). Boyle’s world is made up of bodies acting upon one another at all times, passing through

and allowing passage for one another. Readers of Boyle are shown that matter, even if invisible, has the capacity to affect precisely because bodies involuntarily allow it passage.

Boyle observes that as the minute bodily corpuscles pass through pores, transformation happens. And in Boyle's mind, children especially, whose "Skin is ordinarily more soft and lax" (20) and therefore more porous, are particularly defenseless to the radical transformative effects of effluvia. Children's extraordinarily susceptible bodies account for Boyle's observation of what happens when one applies a rag saturated in either tobacco or liquor to a child's wounded head. A particular physician's claim that he had once been made to vomit "by a certain application of decoted Tobacco to his wrists, and some other external parts" (25) brings to Boyle's mind "what is affirmed to have been observed in some Children that have scabb'd heads, who have been made Drunk, by the application of Clothes or sponges wetted in Infusion of Tobacco, or of strong Liquors, and applied to the part affected" (26). In Boyle's account, children are particularly vulnerable to the toxic streams of particles. Similarly, chimney-sweep observers like Hanway were unusually aware of soot's dangerous effects on young chimney sweeps. To return to the quotation already cited, Hanway notes that it "may not be vulgarly known" that:

the soot drawn in by respiration, joined to the confined air, naturally creating thirst, drinking upon it frequently irritates and inflames the passages, and brings on a disease peculiar to this occupation, sometimes breeding cancerous disorders.

Hanway does not take for granted that readers would know that soot might be the source of the “chimney sweeper’s [scrotum] cancer.” This is significant because it reveals that Boyle’s discoveries had not been fully integrated into public knowledge by the late eighteenth-century. The implication follows: anxieties about the body’s especial vulnerability to an essential, everyday material composition such as soot were suggestively followed by an emerging hyper-awareness of bodily porosity. The children passing through those dangerous soot-enveloped passages became in themselves passageways into new modes of perceiving the world.

Throughout Boyle’s work, “passage” functions as one of the primary terms for communicating the way in which matter moves in and out of bodies. In a similar manner, he uses “penetrate” and “permeate.” But “passage” produces a special effect because it also refers to the structure through which matter passes. Bodily organs, especially, take the name of “passage,” for instance: a “Urinary Passage” (31). Bodily passages allow passage of matter; matter needs a passageway. While Boyle may not have been the first to think about bodily organs as passageways, it is important to recognize that in his thinking, the passage of matter functions as one of the key steps in the production of natural phenomena. Bodily conditions alter when “in tract of time effluvia [should] get passage through the Pores of the Skin of a Living Body.”

For Boyle, “passage” must have been the most readily available metaphorical referent to empirically account for such phenomena. Fascinatingly, though, at the one point in the essay where Boyle profoundly deviates from his commitment to rendering natural phenomena in the most empirical terms available, he replaces “passage” with the

architectural/infrastructural structure most central to my project: the chimney. He uses the chimney to illustrate the way in which it is possible for the “great number of pores” to emit excess weight not discharged through digestive systems or through the windpipe.

Boyle writes:

But though I look upon the Windpipe as the great Chimney of the body in comparison of those little Chimneys (if I may so call them) in the Skin, at which the matter that is wasted by perspiration is emitted, yet the number of these little vents is so very great, that the fuliginous Exhalations that steal out at them, cannot but be very considerable” (15).

This argument entails the idea that the windpipe, or the “great Chimney of the body,” does not stand as the only passage through which one perspires excess weight. It is the “little chimneys” that channel undesirable effluvium outside of the body. Boyle advances the chimney metaphor even further by referring to effluvia as “fuliginous,” which the OED defines as “pertaining to, consisting of, containing, or resembling soot.” Boyle, then, imagines the body as an aggregate of a vast number of little chimneys working tirelessly to discharge sooty effluvia.

But as we know, a passage works both ways. Through pores, effluvia passes both into and out of the body. A perfect chimney, as John Carter noted in a 1774 magazine article directed toward young builders, should effectively temper the war between the inside and the outside. The builder’s primary aim should be to “obviate” the “inconveniences” that occur when the chimney fails to channel smoke into the open air (109). Boyle imagined properly functioning bodies as well-constructed chimneys that

successfully obviated inconvenient (or damaging) effluvium. A body that allows passage and subsequently retains dangerous “fuliginous” matter is more radically vulnerable to transformation. And for Boyle, who more than the child is susceptible to such change?

With Boyle’s materialist perspective in mind, let me return to Hanway’s “soft and lax”—and therefore easily molded—child who spends his day moving through the “passages of the chimney.” The child, whose body is itself an aggregate of not-so-well-developed chimneys, passes through equally not-so-well-developed architectural chimneys that have failed to channel fuliginous matter out into the open air. The chimney’s sooty particles pass through the child’s many chimney-pores. And because the child is “soft and lax” he/she retains the soot. The soot passes deeper and deeper into the child’s interiority, “breeding cancerous disorders” which manifest—if they make it far enough—in his/her later years. Darkened, warped and diseased in this radical act of bodily passage, the child becomes “other than” whatever he or she had been before. And this transformation culminating in total dissolution, for the Romantics, was terrifying.

Registering Bodily Passages

On January 1st, 1824 James Montgomery, a Sheffield minister, writer, and reformer, circulated a letter entreating some of the most prominent literary figures of the period to write on behalf of the children employed in the chimney-sweeping business. Recipients included Joanna Baillie, Walter Scott, Charles Lamb, and others; not all took it upon themselves to write for the cause, but all responded with some form of endorsement. Baillie sent a letter “describing an ‘old Scottish mode of sweeping chimneys’ by means of a rope and a bunch of heather . . . worked up and down the flue, between a man at the top and another at the bottom” (xi). Scott wrote informing Montgomery that he had constructed his chimneys in such a way that they could be cleaned without setting children to the task (x). Though Lamb expressed doubt as to whether Montgomery’s rather ambitious project would have any real effect, nevertheless he wished “the little Negroes all the good that [could] come from it” and referred his friend to William Blake’s well known poem, “The Chimney-Sweeper” from *Songs of Innocence and Experience* (Quoted in “Charles Lamb” 23). Those who did respond to Montgomery with poems and short stories have left us with an extraordinary and invaluable archive of representations of chimney sweeps. With over 400 pages of material, Montgomery managed to compile dozens of poems, short stories, court

documents including personal testimonies and cross examinations into what he entitled, *The Chimney-Sweeper's Friend and Climbing Boy's Album*.⁴

Among these reformist contributors was John Holland (1794-1872), a Sheffield poet and writer befriended by Montgomery who recognized in him a great “poetical talent” (quoted in Hudson 20). Although he has all but disappeared from critical discussion today, Holland had a long, diverse, and successful literary career. In addition to the several volumes of poems with moral and religious messages, Holland wrote extensively on geological, scientific, and industrial subjects. Significantly, he published in 1835 an impressive volume titled *The History and Description of Fossil Fuel, The Collieries, and Coal Trade of Great Britain*. This volume, I would argue, outlines the scientific materialist perspective that underpins his poem, “An Appeal to the Fair Sex: Inviting their attention to the present situation,” which appears in Montgomery’s *Album*. Demonstrating awareness of Boyle’s work, the corpuscularian theory, and of the trajectory of modern science, *The History and Description of Fossil Fuels* can help us make sense of how Holland perceived materials, such as soot, acting on chimney sweepers’ bodies. Additionally, it is interesting that Holland would take an interest in the

⁴ Though historians such as George Phillips and Benita Cullingford have mined the *Album* for its rich historical documentation, it has only recently been treated in literary studies. See Judith Slagle’s article, “Literary Activism: James Montgomery, Joanna Baillie, and the Plight of Britain’s Chimney Sweeps” for a comprehensive reading of the *Album*. Essentially, she explores the debate amongst literary activists concerned with the proper modes of expression that might best compel the legislature to abolish the use of children in the chimney sweeping business. See also Tim Fulford’s article, “A Romantic Technologist and ‘London’s Little Black Boys.’” Fulford attacks the album, arguing that Montgomery and others’ technologized benevolence “treated working people as objects to be ordered, disciplined and machined into usefulness and gratitude” (41).

material context of the chimney sweeps: coal as a geological and industrial substance, processes of extraction, and coal miners themselves. The material extracted from the dark passages of Britain's coal mines profoundly affected both colliers and chimney sweeps. Both worked and lived in perpetual blackness in service to the comfort of others. Attending to Holland's far less sentimental investigation of the history and description of coal in *Fossil Fuels* allows us to revisit his contribution to the *Album*, "An Appeal to the Fair Sex," with a new materialist's eye.

Holland's *The Description and History of Fossil Fuels* covers many topics, including the particular agencies involved in producing fire, the highly elaborate and intricate processes of coal extraction, the dangers involved in this extraction, and descriptions of the characteristics of the colliers. In the opening pages of *The Description and History of Fossil Fuels*, Holland surveys debates about the causes of one of the "primary qualities or conditions of matter" (1) that is, fire. "Fire," he writes, "is understood to mean matter in a state of combustion or incandescence" (2). Though not interested in providing a "lengthened investigation" in the cause of this combustion, Holland nevertheless references several theories that regard heat as "a fluid of inappreciable tenuity, whose particles are endowed with indefinite repulsive powers, and which, by their distribution in various proportions among the particles of ponderable matter, modify cohesive attraction, giving birth to the three general forms of gaseous, liquid, and solid" (2). Holland also makes reference to the "vibratory theory" of heat, which runs parallel with the corpuscular or undulating theories that were supposed to explain the phenomena of light (3). If there were any relationship between light and heat,

the obvious assumption would be to apply the corpuscular theory (which accounts for light) to heat as well. But here Holland invokes Dionysius Lardner's skepticism about whether or not material theories can be used to explain the phenomenon of heat (4). This leads Holland to suggest that the multiplicity of material theories goes to "shew how little room there is to pronounce dogmatic decisions on the abstract nature of heat" (4). But though Holland is slow to jump to any conclusions about the source of heat, it is worth pointing out that he was aware of theories that recognized the agentic character of particles. Holland quotes sources in which particles or corpuscular bodies are made the subject of the verbs: particles are "endowed," however mysteriously, with "ideo-repulsive powers" that can "*modify* cohesive attraction, *giving birth* to three general forms of gaseous, liquid, and solid" (italics mine 4). Holland's recognition that particles possess a power to act upon and transform bodies, and generate phenomena, is fundamental to how he perceived the world.

Holland's familiarity with material and chemical theories enabled him to effectively describe how accidents occurred in processes of coal extraction. Explosions caused by what Holland refers to as "fire-damps" were one of the most dangerous and frequent accidents that materialized in the mines. "Fire-damps" is the term for the accumulation of inflammable and poisonous gasses that fail to exit the mines. In order to facilitate proper ventilation, Holland tells us, miners installed furnaces either at the bottom or the top of the upcast shaft. These furnaces would help circulate air through the mines. This method of circulating air also involved a "complicated arrangement of stoppings and trap-doors," which would be periodically lifted by children usually called

“trappers” in order to force the air “through every passage” (222). Without this complicated system of child-operated trap-doors, it was “nearly impossible for the workers to prevent its exploding at their lights as they pass[ed] and repass[ed] along the working headways.” But when, as Holland notes, these systems were neglected and stagnate air or “fire-damps” accumulated within the mines the miners became liable to serious injury and even death. He writes:

Blasts occurring in stagnations, as in the face of one or two boards, though they generally scorch the persons in their way, seldom kill them; but when the air has proceeded lazily for several days through a colliery, and an extensive magazine of fire damp is ignited in the wastes, then the whole mine is instantly illuminated with the most brilliant lightening—the expanded fluid drives before it a roaring whirlwind of flaming air, which tears up everything in its progress, scorching some of the miners to a cinder, burying others under enormous heaps of ruins shaken from the roof; and, thundering of the shaft, wastes it volcanic fury in a discharge of thick clouds, of coal, dust, stones, timber, and not infrequently limbs of horses. (225-26)

As spectacularly horrific and terrible as these violent incidents might have been, Holland notes that the “after-damp” is even more destructive. The survivors of the initial blast are “often instantly suffocated by the *after-damp*, which immediately fills up the vacuum caused by the explosion” (226). Holland draws on his knowledge of science or material theories in order to make visible not just the culminating spectacle, but the slow, hidden violences that manifest deep within passages of the mine.

Holland's highly emotive, sentimental 1824 poem, which predates *Fossil Fuels* by nine years, foreshadows his materialist view of the world. Of course, it is hard to say whether or not Holland was aware of materialist theories when he wrote "An Appeal to the Fair Sex." In fact, it appears that he drew most of his knowledge of heat from Lardner's *Treatise on Heat*, which did not appear until 1833. But if it did not emerge directly out of scientific discourse or directly from reading Boyle or other materialists, the poem nonetheless attends to the material and transformative effects of bodily passage.

As the title suggests, Holland's poem implores the British "transcendent woman" (277) to employ her innate talent for arousing or eliciting sympathy in the breasts of men acting within the public sphere. As a testimony to woman's power for implementing change from the position of her "little sphere" (279), Holland alludes to women's role in bringing about the abolition of the slave trade, pointing out that it was "Woman's smile, and Woman's voice" (278) that travelled through her husband into the social sphere. At this point, Holland exploits the irony that while they may have ended a slave trade taking place thousands of miles away, British subjects have refused to acknowledge the slaves employed within their own homes: that is, the chimney-sweepers. "Give your tears," Holland begs of woman, "—let them wash out this stain. / This long, deep-written scandal of our isle" (281). He then moves into an essential stanza that follows the child-sweeper's "sad tale" (281). Significantly, Holland imagines in this "tale" the child's "first passage up a noisome flue, / Through sulphur, soot, and darkness!" (281). From the child's dark passage through the chimney, Holland follows him into the streets and into his dwelling place. The child then returns to the chimneys belonging to those who hear

him working only to dismiss him as “but a chimney sweeper in the flue” (283). Holland then imagines the child walking on a fresh blanket of snow, “leaving a sooty-track,” (283) and singing a ballad, each of its seven stanzas concluding with the phrase, “but nobody loves me.” Nearing the end, the poem captures a spectacular and fatal incident in which the child, now named “Henry,” suffocates as a result of failing to pass through the chimney after being forced to sweep by his cruel master. As if he were performing a cesarean section on an ineffectual and wasted womb, the master tears open an “aperture” in the chimney and removes Henry, whom he discovers to be “smothered in an avalanche of soot” (286). Holland concludes the poem with a series of imperatives commanding women, “Write with your pens, embroider with your needles, / Sing to your music, ‘Pity the poor sweep!’” (287). As a whole, the poem lays the burden of social reform on women whose natural sympathetic powers can incite their husbands to act on the behalf of the pitiful.

We could approach this astonishing text from a number of angles. For instance, Tim Fulford, who reads the representational practices in the *Album* with suspicion, points out that Montgomery, especially, viewed the chimney sweeper as a morally depraved black slave who must be “brought into the light, be taken from his murky haunts, to institutions where improvement could be inculcated and inspected and where he could be returned to whiteness” (41). It is worth quoting at length Fulford’s reading of Allan Cunningham’s “The Orphan Child,” also included in the *Album*, which renders a compassionate woman as capable of cleansing the white boy obscured by a sooty complexion. Fulford writes:

Compassion, here, is the virtue that touchingly overcomes class and race difference. For Cunningham, the gentlewoman's condescending touch of the filthy slave is both maternal and erotic. It works by sensually converting the boy to gentility. Her fingers heal because they are white, and they are white because she has never labored with them. Laying on her gentlewoman's hands, she works miracles. The boy flushes with joy but turns not red but white. He becomes gentle too, grows alive to delicate feelings because he no longer has to work. (41)

According to Fulford, the project of relieving chimney sweeps was one that ultimately aimed to "gentrify the working classes." Cunningham's maternal and erotic rendering of woman's capacity to "gentrify" the chimney sweeps reflects an "urgency to remove the sweeps' blackness—that sign of their slave-like condition and of their supposed moral darkness." Because blackness had deep affiliations with depravity and savagery, the unnatural blackness that marked chimney sweeps was a problem that had to be undone lest there be a host of children who resemble Africans treading the streets of Britain's cities. Moreover, the project of turning what Charles Lamb calls the "negroes of our own growth" (138) back into healthy productive white Christian citizens was driven by an overwhelming anxiety that raw materials such as soot could destabilize one's humanity (O'Connor 49). As Erin O'Connor points out, the Victorians especially viewed "savagery" as something that "could be produced from the smudges of stuff . . . race itself could rub on—or off" (49). It is not hard to see that those attending to the chimney sweeps imagined material "stuff" as substance containing a power to alter, devolve and waste away any given human subject. My own reading will further explore this concern

with the transformative and dissolving powers of material, which produced so much anxiety in the Romantic and Victorian imaginations.

In “An Appeal to the Fair Sex,” Holland renders the act of an excruciatingly painful passage through the chimney as an act in which radical dissolution unfolds. The “dread pass” (282) absorbs into its body the child who cannot “exclude the particles obscene” from finding passage into his porous body. In failing to prevent passage of effluvia into his body, the child becomes Other—a distorted figure that runs not, as Edward Casey might say, “coterminous but continuous” with the chimney. In other words, we see in Holland’s poem the chimney and the child collapsing into one another. In turn, we can appreciate the extent to which Holland—and indeed, Montgomery and others—employed the available resources of language as a means to better attend to and make visible these especially vulnerable transcorporeal subjects who were processually erased by a slow violence experienced within the chimney.

Before reaching the culminating spectacular, violent event in which Henry’s life and body dissolve, Holland imagines the transformative effects of passing through chimneys. He visualizes a sweep’s first passage through a chimney flue with a profound emphasis on the sensual, bodily, and material experience.

In his first passage up a noisome flue,
Through sulphur, soot, and darkness! Could he tell
What tremors shook him, as he forced his way
Up the foul vent; with lacerated feet,
Now scrambling hard, a footing to ensure;

Now writhing like a serpent, to intrude

His agonizing frame through some dread pass! (281-82)

Holland characterizes the child sweep's involuntary passage through a structure infused with hidden, poisonous materials as an excruciating intrusion. The sweep "intrude[s] / His agonizing frame through some dread pass!" We are to feel the tremendous, forceful, bodily pressure involved in this laborious process. Against his will, the sweep "force[s] his way," "scramble[s] hard," and "writhe[s] like a serpent" through this dense, constrictive and toxic place. In a sense, the child is at war with the chimney.

As the "passage" continues, Holland registers a transformative, bodily, fleshy experience in which the sweep absorbs the toxic chimney-as-place into his being.

His eyes, meanwhile, blind with the falling filth

Nor from his ears, his nostrils, nor his mouth,

Can he exclude the particles obscene,

And worst of all in this revolting task,

That climax of all horrors to a child,—

The dread of suffocation which he feels,

But what avail his terrors or his tears;

His knees excoriate, and his sinews cramp'd?

His flexile form, so exquisitely nerved,

Goaded with curses, or at the rope's end,

Must henceforth, as an animate machine,

Be used, and treated vilely, day by day. (282)

The intrusive relation is reciprocal. As the sweep's "agonizing frame" intrudes the passage, the chimney intrudes his body. Under immense pressures, the sweep cannot "exclude" the materials from entering his "flexile form, so exquisitely nerved." The "obscene" particles, "falling filth," composed of "sulphur, soot and darkness" stream into his ears, nostrils and mouth, creating in him a "climax of horrors,"—that is a felt "dread of suffocation." Labor intended to allow free passage of air through the chimney ironically intensifies a literal, sensuous feeling of suffocation. Moreover, the sweep's flesh becomes part of the chimney itself. Hot, corrosive, sharp bricks lacerate and excoriate his feet and knees. There is a fleshly, material exchange between the child and the chimney. Skin for soot, soot for skin. Used as an "animate machine [. . .] vilely, day by day," the sweep's porous, vulnerable, transcorporeal body absorbs the toxic chimney-as-place. He becomes, over time, the chimney and chimney coal itself.

It is not only in the moment of intensified labor that the sweep runs continuous with the chimney. In the subsequent stanzas, Holland follows the sweeps into the streets through which he disperses the chimney-as-place, tracing chimney and coal wherever he goes. The violence within the chimney shifts to the violence without:

'Twas winter, and the air was frost-keen,
White, deep untrodden, lay the level snow,
When through the streets, in sooty blankets wrapped,
This way and that, the chimney-sweepers went,
Hirpling and shuddering to their wonted tasks. (282)

Holland here invokes a familiar trope of sweeps wandering through snow-covered streets in the early hours of the morning.⁵ Significantly, Holland inverts the violence. As opposed to the scorching chimney flues, the sweeps are exposed to freezing temperatures. In “sooty blankets wrapped,” the sweeps are exposed not to material pressures but to punishing openness. But they nonetheless are imagined as carriers of the chimney-as-place. Holland directs our attention to a singular sweep, Henry:

One little Boy, along the new fall'n snow,
Past slowly on, leaving a sooty-track:
He ambled sadly with unequal gait,
Musing, and mourning his sad destiny. (283)

Holland pits Henry's black figure, ambling “sadly with unequal gait,” against the white snow. His obscured body immersed in soot is ironically—as Judith Plotz notes—“highly visible” (94). Contrary to the highly visible child, chimney flues are by nature out of sight. Presumably, then, the Romantics could only “pursue” the sweep “in imagination” as he passed through the chimneys, “through so many dark stifling caverns, horrid shades! (Lamb 138). But Holland sees the sweep's body as the primary vehicle through which we can imagine the alarming violence within the chimneys. In plain view, Henry's body traces a “sooty-track” giving onlookers visual access to enclosed chimney flues.

⁵ See William Blake's Chimney Sweeper poem from *Songs of Experience*, which begins, “A little Black thing among the snow.” The copper plate accompanying the poem pictures a solitary black figure carrying a soot bag walking along a snow-white city street. Sweeps began working as early as 3am because it would have been the only time the chimneys were cooled down. A law passed in 1788 prohibiting sweeps from working such early hours in the winter months, but those laws were largely ignored (Cullingford 107).

Moreover, not only do we see the embodied chimney in Henry's form, we smell it, too.

Holland imagines Henry's gloomy ballad:

My playmates, once who loved me well,
Now from my presence flee;
They say I have a sooty smell;
So nobody loves me. (284)

Othered by his labor, Henry at all turns permeates, disturbs and—much like the smoke emitted from chimneys—pollutes bystanders' senses. From Holland's perspective, Henry serves as a terrible visual and sensual reminder that the English of the early nineteenth century were dissolving into a place infused with living coal.

The culminating, spectacular erasure of Henry's dissolving, dying-body unfolds near the end of the poem. After having sung his ballad, Henry is forced up a chimney flue by his master:

Anon they enter'd an adjacent dwelling,
Whose tall and zigzag chimney, crept aloft
By the next gable, like a torturous snake;
Up the strait aperture of this foul flue
Was Henry sent; awhile he made his way,
And nought was hear, save now and then a sob
At intervals, when passed his rattling scraper,
A sigh suppress'd: but soon his wheezing lungs
Inhaled the stilling damp, and the close pass

Forbade his progress; There he lay, close wedged,
Panting in agony and weeping loud;
Darkness above—below, his master's curse,
Threatening with fire and stripes the shuddering boy.
His cries sunk down to moans, his moans grew weak,
Anon, and all was still: [. . .] (285)

Just at the moment in which he is most firmly emplaced, “close wedged,” Henry’s life comes to a close. As he inhales the “stilling damp,” or poisonous draft, we hear his “wheezing lungs,” his “panting,” and his “weeping.” Suffocation in this particular case is no longer a feeling, but an insurmountable reality. Like the miners who suffocate from fire-damps, Henry’s death is prolonged, hidden from view. We can only hear and imagine.

Henry’s spectacular erasure becomes apparent in the removal of his body from the chimney. Once Henry’s life comes to a close, the master tears open the chimney as if he were performing a cesarean section on a wasted and ineffectual womb:

[. . .] — the master now
Betray’d one vague emotion—bit his lip—
And seem’d to quell some struggling agony.
He scaled the wall, and broke an aperture
Into the fatal vent: there lay the boy,
Smother’d beneath an avalanche of soot!
He brought him down, unstiffen’d yet, and warm,

His eye-balls started and inflamed—his cheeks

Still moist, and mark'd where the hot tears had flow'd. (285-86)

Torn from the womb-like passage of the chimney, Henry lies “Smother'd beneath an avalanche of soot.” Depleted of oxygen, he falls into the wake of an avalanche and becomes one with the chimney and coal.

Let me end by suggesting that Holland recognized that the total dissolution of the sweeps was the culminating effect of a costly infrastructure set in place all for the sake of comfort. Early in the poem, he entertains the idea that nineteenth-century Britons have willfully forgotten the costs of comfort:

Oh there is *comfort* in an English home;

And there is *comfort* in an English fire

[. . .]

Yet, ah! While sitting in the social group,

With every comfort,—every blessing blest,

How often we forget to pity them,

Who have no comfort! [. . .] (280)

For Holland, the chimney sweeps' dying, dissolving, transcorporeal bodies immersed in, and eventually erased by, living coal, provided a window into a slow violence that occurred “gradually out of sight, a violence of delayed destruction . . . dispersed across time and space . . .” (Nixon 2). Tim Fulford captures this slow violence thus:

If child colliers worked at the start of a process of heat production, [chimney sweeps] labored at the end of it. Coal-burning chimneys needed a stronger

draught, and therefore narrower flue, than wood-burning ones, particularly grander houses where the air passage was hindered as the flue turned through several angles to reach a central stack. Only small boys could squeeze through the twists and turns of the chimneys, some only nine inches square, to be found in the palaces of the Bishop of London and the King himself. Such chimneys rapidly filled with soot and needed frequently cleaning, yet were impassible to brushes.

The comfort of the rich depended upon the poor. (37)

In both these past and present imaginaries, the violence inflicted upon the sweeps begins with an insatiable, voracious, and uncompromising desire for comfort—a comfort promised by properly functioning chimneys fueled by living coal. And if, at their own expense, the sweeps enabled such comfort, they signaled also to those like Holland the terrifying possibility that the cost of living with and within living coal would come at no small price. And if the sweeps signaled in the past such a possibility, they can—as I hope my essay has shown—continue to remind us living in the present that we, too, are transcorporeal subjects always in processes of passing through and allowing passage of toxic matter, and that the price of living with and within such matter is never small.

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