WATER FOUL

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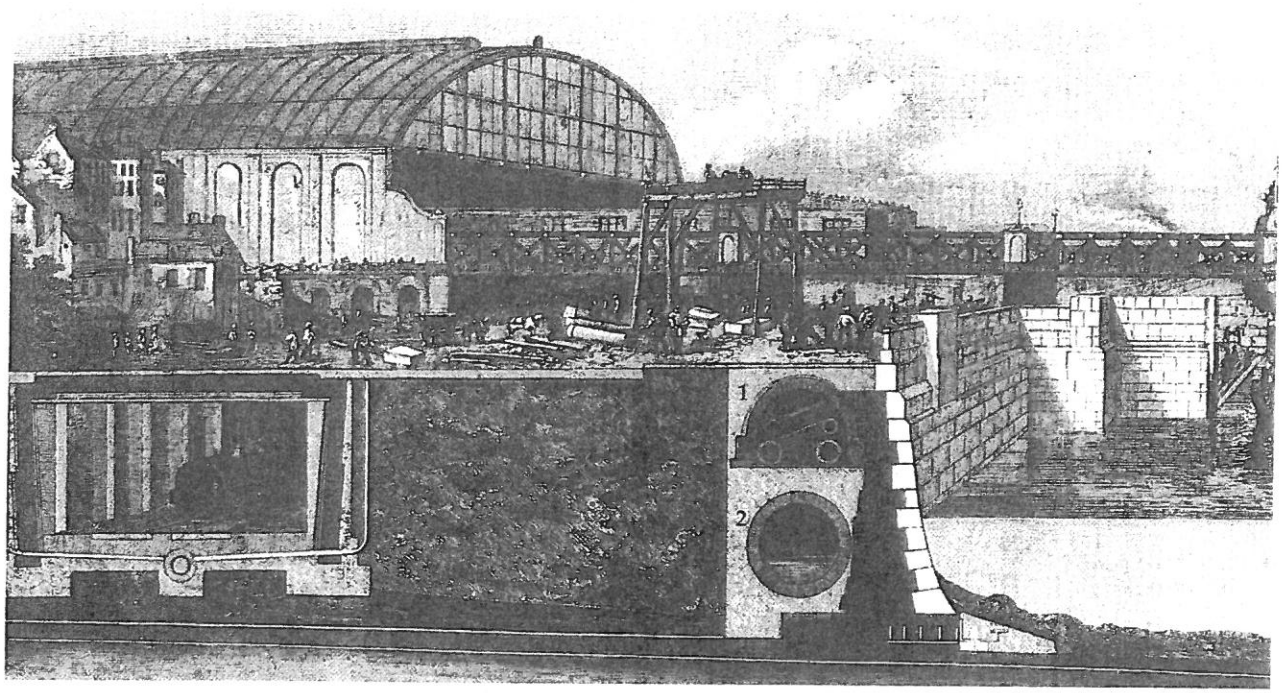

By the summer of 1858, the stench in London was unbearable. The River Thames, long the dumping ground of human, animal, and industrial waste, could no longer bear the refuse of London's nearly two million residents. The river had always been dirty—even today its stale smell is synonymous with London. Its meandering form must have made it seem like the perfect dump site and, from the time of the Roman founding of the city some eighteen hundred years prior, Londoners had thought little of tossing their rubbish in the river. Perhaps they thought no one would notice, or that the waste would be pulled to sea; perhaps they didn't think. But in the summer of 1858, the Thames itself finally noticed. That summer was unusually hot—some estimate the hottest on record—and the layers of shit stewed in the sun. In protest, the river overflowed and released an odor so unbearably fetid that Londoners dry-heaved and vomited in the streets: that summer was dubbed "The Great Stink."

The Great Stink drove the business of England to a malodorous halt. Newspapers described "men struck down with the stench, and all kinds of fatal diseases, up-springing on the river's banks" and Parliament, sitting in its posh new building on the Thames, turned entirely to solving the smell. The Great Stink was a potent reminder of the frailty of Britain's power—London was Europe's largest metropolis and the edges of Britain's empire were ever expanding, and yet the business of empire could be interrupted by a downright primitive system of waste removal.

But the Great Stink also spoke to the very limits of urban modernity. Only seven years prior, in 1851, England had held the Great Exhibition where it showcased its expansive power and knowledge. Visitors to the exhibition were reassured that Victorian England alone held the monopoly on the greatest advances in science and medicine. Now, as Charles Darwin was frantically working on *The Origin of Species*, racing against competitors to get the book to press, and Henry Gray was publishing his compendious anatomy book, Londoners were gagging at the smell of their own refuse. The Great Stink was, perhaps, an unwelcome metaphor for

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Above: Section view of the Thames Embankment depicting London's underground infrastructure. The tunnel for the Metropolitan District Railway is at left (3); Joseph Bazalgette's sewer system (2) runs beneath the "subway," a horizontal shaftway built to house gas and water pipes (1). From the *Illustrated London News*, 22 June 1867.

London's paradoxical modernity: it was the epicenter of a world power, its citizens could fundamentally change human knowledge, but all of this could be ended by a plumbing problem. And that is exactly what the Great Stink was: an epic plumbing catastrophe nearly two thousand years in the making.

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Ever since the city was a tiny Roman outpost, garbage was laid to rest in its river. But the population of Londinium was small; the empire's citizens never quite took to the harsh weather or the unwelcoming population. And the Romans knew better than to live too close to the water. As London grew, it expanded beyond the boundaries of the Roman settlement and towards commerce on the Thames. Fish traps and millers' weirs were built on the river, forever altering its geography and tidal flow. Commerce had such a profound effect that it turned parts of the Thames into a stagnant pool, quite literally stemming the river's tide. The Magna Carta outlawed the weirs and traps—but the document, though powerful enough to rein in the king, was ignored by London's merchants and proved ineffective in restoring the river's flow. Commerce reigned over the river, not the king.

Around the 1500s, there was a general sense that the Thames was too dirty and that something should be done, but who should do it was a question that remained unanswered. Henry VIII was too busy beheading wives, his daughters too busy executing heretics. Besides, the murkiness of the Thames must have seemed like a spectacular backdrop for the condemned as they were paraded down the waterway toward the executioner's axe. In good British fashion, it was decided that the problem should be bequeathed to future generations. Over the following centuries, there were some haphazard attempts to fix the Thames; some tinkering here and there. Among the ousting of kings and Protestant rebellions, private companies played with the river, adding an occasional waterwheel or drainage grate. But as the population of London surged, the Thames alone bore the weight of unplanned expansion.

Every decade or so, a monarch or politician would mutter something about the dirtiness of the river and suggest that someone should really do something. Heads would nod in agreement, but no one, of course, ever did anything. The health of the Thames had little effect on the city's wealthy. Besides, much of their waste didn't even make it to the river; private hauling companies came late at night, spiriting away the contents of some of the thousands of open cesspools to the countryside, where they were used to fertilize the nation's crops. The many who couldn't afford the spare shilling to have their cesspools emptied waited for heavy rains, which cleaned them out by flooding what they held into open drains designed to carry the rainwater to the river. It was in that same current that Londoners washed their clothes and from which they drew their household water.

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By 1815, there were more than two hundred thousand cesspools throughout the city. Full of livestock, covered with horse manure, overcrowded, and with open cesspools on every street, London must have reeked with the toxic smell of shit. That year, Parliament outlawed cesspools, but they also repealed the laws that prevented direct dumping into the Thames. *Everyone* began pouring their waste into the public drains.

It's impossible to say why the smell of cesspools began to bother wealthy Londoners more in the nineteenth century than any time prior. Perhaps it was the shift toward privatization in this period—the emergence of family and familial intimacy—that demanded the domestication of waste. Or it might have been that the migration into cities produced the desire to find beauty in those spaces and differentiate them from the familiar farm smell of the countryside. "Smell," Dominique Laporte wrote in his genealogical meditation *History of Shit*, "the antinomy of order and hygiene, is equally incompatible with beauty." Or, perhaps, it was simply the sense that urban spaces are more pleasing, or are at least more bearable, if they are not littered with shit. Whatever it was, nineteenth-century Londoners demanded a safe distance from bodily discharge and its odors.

If the bourgeois sought refuge from the offending smell of human waste, they also wanted to banish those whose livelihood depended on that very waste. As Londoners began discarding their privy's contents into the river, an entire subculture

dedicated itself to digging through shit to find treasure. The poorest of the city's poor scavenged the waste, sifting out food, change, and "pure" dog shit to be sold to leather cleaners. Social observer Henry Mayhew sketched the taxonomy of the lowly laborers in his serialized 1840s classic of muckraking, *London Labour and the London Poor.* Describing the "subterranean city of sewerage," Mayhew identified the "toshers" who rummaged in the sewers for precious objects that might have slipped through the drains. And there were also "mudlarkers," usually boys, who picked through the mudflats and drainage entrances of the Thames at low tide. Those who relied on the Thames for their daily bread were the least skilled of England's unskilled labor, men unable or unwilling to work factory jobs and abandoned boys too artless for Fagin's gang.

Though disdained and discarded by London's middle classes, the subterranean dwellers were vital figures in the city's waste management—their unofficial labor kept the drains flowing and freed proper Victorian families from the offensive odors of their own bodies. The Thames scavengers were a strange metaphor for the river: fetid animals who crouched in dung, morally toxic yet bounteously providing. It was a paradox that seemed to be the material reality of modernity itself.

Like their metaphorical counterpart, toshers and mudlarkers were overburdened by the weight of urban refuse. It's estimated that by 1857, some 250 tons of human, animal, and industrial waste entered the Thames daily. By then, the waste had killed what little life the Thames still supported—the river salmon that Londoners had once feasted upon were all gone. It was in that same year that the flush toilet was invented, and Victorians rushed to have them installed in their homes—after all, to no longer have to touch one's own shit was the ultimate status symbol of modernity. But coupled with London's swelling population, the flush toilet—like all technological advances—proved perilous. The device and the plumbing that came with it hooked directly to the subterranean cesspits buried throughout the city. But the cesspits were already unable to contain the swelling population's waste, and the added water overburdened the outdated system, forcing their content onto the streets and into its open drainage. The toilet, however miraculous, displaced the problem to the middle of the Thames. The city's refuse was too dense for the river to carry to the ocean, and there it sat.

The celebrated scientist Michael Faraday published a call to arms of sorts in 1853, writing in the *Builder* that "the flood is now on, below London Bridge, bad as poetical descriptions of the Stygian Lake, while the London Dock is black as Acheron ... where are ye, ye civil engineers? Ye can remove mountains ... and fill rivers ... can ye not purify the Thames, and so render your own city habitable?" That a river in Hades could be conjured up when describing the Thames speaks to the murky death trap into which the life-giving river had morphed. But few listened to Faraday; maybe no one could imagine London without the soot that covered its monuments or the shit that filled its river. What would a scientist know about commerce?

In that summer of 1858, however, an oppressive heat wave rolled in, and modernity's waste fermented in the sun. The Thames revolted and spewed back the hundreds of years of offerings Londoners had given to its water. It's mercifully hard to imagine how devastating and incapacitating the onslaught of the stink must have been. Londoners reported vomiting attacks, seizures, and even deaths. Language itself seemed to fail as the noxious smell drifted off the Thames. "Gentility of speech," wrote the *London City Press*, "is at an end—it stinks."

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It was then that everyone decided that something should really be done. The stink was toxic; the foul-smelling vapors that emerged from the river were believed to be the source of cholera. The illness, this account went, was a rot of the body that could be caught simply from inhaling putrid air. The disease had swept the city some four years prior and the epidemic had left nearly ten thousand dead in its wake. But the epidemic's victims had been largely poor, and believed to be victims of their own fetid, dirty lifestyle. The Great Stink was different; wealth could

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Opposite: Black as Acheron. Scientist Michael Faraday was an early advocate for cleaning the Thames, calling on the city's engineers the "purify" the river five years before the Great Stink. Cartoon from *Punch, or the London Charivari*, 21 July 1855.

Bazalgette, master of drainage. Cartoon from *Punch, or the London Charivari*, 1 December 1883.

not protect from putrid, deadly stench. As cholera lurked, the reassuring stability of the hygienic and fragrant threatened to crumble.

Hundreds of years of arguing hadn't answered the question of just who should fix the problem. Parliament insisted it was the city of London's responsibility; the city of London claimed it was broke. The Thames was everyone's problem, and no one's responsibility.

Members of Parliament took to the chamber floor to do what they had been sent to do—give speeches. But as the *Globe* laconically recounted, "Disgust, alarm, and reasonable precautions induced members to stop away." The stink was so overpowering it muted usually long-winded orators. Parliament tried again and ordered that the windows be covered with sheets soaked in lime chloride. But the attempts to block the noxious air wafting into Parliament were futile—the ordinary work of government came to a grinding halt.

Londoners complained to newspapers; a reader of the *Morning News* described the "abominable, loathsome, and fever-breeding smells perpetually emitted from that river which was formerly the boast of every Englishman." In return, the paper's editors demanded answers from their government, asking, "Is this atrocious state of a semi-barbarous age to continue?" The public agreed that the stink, odious and noxious, tainted the nation's image as an unsoiled beacon of modern progress.

Parliament still hemmed and hawed. They ordered sanitary crews to dump tons of lime into the river. When that didn't work, members suggested that the chamber be permanently moved. But no, they finally agreed, that would not do: their posh neo-Gothic monolith had just been completed at the cost of a few million pounds. If they abandoned their fashionable new building, then voters might raise an eyebrow come election time.

Benjamin Disraeli—then the House of Commons' minority leader—took to the floor and offered a speech that resembled the second-rate novels he had written before setting his eyes on politics. "This Stygian Pool reeking with effable and intolerable horrors," Disraeli called the Thames, warning all of a "pervading apprehension of pestilence in this great city!" The comparison to the rivers of Hades endured. Now was the time to banish the watery road to death.

Disraeli's speech came with a solution: he introduced a Metropolis Management Amendment Act that created the Metropolitan Board of Works (MBW) and gave the board unfettered authority to undertake a vast overhaul of the city's sewers. The bill was enacted into law with near-lighting speed—it took only eighteen days—and Parliament gave the board 6.5 million pounds for the undertaking. Out of shit, treasure arose: recognition that public works and infrastructure were necessary to sustain modern urban life. Almost immediately after Disraeli's bill passed, London was saved from the Great Stink in the most British way imaginable—the sun gave way to overcast weather, and it rained for days.

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The MBW appointed Joseph Bazalgette as chief engineer of the overhaul. Bazalgette designed a series of large, intercepting combined sewers—their width accounted for the swelling population, and then some. Bazalgette broke ground a few days after the plan was approved. The bending shape of the

Thames presented a bit of a problem for the engineer; in order for his plan to work, the river would need to be narrowed and large pumps would have to be built throughout the city. He built the Victoria, Albert, and Chelsea embankments in a period of six years, reclaiming 3.5 miles of land from the river. The Embankment served to narrow the river, to make her tide run smoother and faster, and to keep the sewage from pooling and standing in the middle of the city. The embankments also invited Londoners to stroll along them—to walk, as it were, on the river, engaging in a conquerors' dance over filth and disease.

Bazalgette also built a series a pump houses that did the work gravity would not, forcing the waste to navigate the uneven terrain of the city. Pumping stations were erected at Abbey Mills and Crossness and, unlike the nondescript pumping stations that litter most urban landscapes, Bazalgette's were elaborately designed with intricate, organically shaped iron work. Crossness's Moorish-inspired ironwork slyly winked at the pilgrims who flocked to behold modernity's Mecca.

Bazalgette's project took nearly twenty years to complete. Cholera was to break out in the city once more, but afterward was nearly banished. His system wasn't perfect, of course; it didn't separate the sewage or recapture the river's water—it only pushed the shit out to the ocean and hoped for the best. In later years, engineers would jokingly call a quick fix a "Bazalgettianism," but for those who endured the summer of the Great Stink, he would remain a hero: a man who, according to the *Builder*, was the "deadliest foe" of "the malignant spirits whom we moderns called cholera, typhus, and smallpox." For his effort, Bazalgette would be knighted by Queen Victoria—one of many women widowed by Britain's disease-ridden water.

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Perhaps the history of modernity can be written as our triumph over our own bodies—or at least our bodies' refuse. We have distanced ourselves from our waste as it rushes invisibly beneath our cities, and so have come to imagine that our not seeing or smelling actual waste means that it does not exist. We stroll on embankments along the Thames or the Seine, or watch our children play in parks along the East River, and think these waterways beautiful despite their polluted realities. That is the paradox of the urban dweller's modernity, a form of denial that depends on a particular perception of the clean and hygienic, and demands a kind of sensory amnesia.

That our urban pastoral can be interrupted by unwanted odor or the bodily secretions of others speaks to modernity's otherwise safe distance from shit. We banish it at every chance, flush it underground, invoke it as insult, and police its presence in polite conversation. Its smell is terrifying because it reminds us how tenuous urban triumph is. Perhaps the Great Stink is an urban madeleine of sorts—not the sweet-smelling spongy cake that Proust envisioned, but a foul-smelling, deformed inversion of it. It invades the senses, creating memories of sensory revulsion. It reminds us of how quickly our smart city existences can devolve into primitive conditions.

Maybe it's this sensory fear that has led Londoners to begin fixing Bazalgette's fatigued sewer system before the Thames mutinies yet again. Bazalgette's system was designed to serve only four million; today the population of London numbers eight million. He designed his system to protect the comfortable corners of Victorian homes, to keep them dry and guard them from their own waste. To do so, he ensured that any overflow from the sewers would go directly to the Thames; there are nearly fifty raw sewage floods into the river each year. That the Thames—or any river—should have to bear the weight of modernity, of commerce and urban expansion, is a compromise that we're willing to bear. We only ask that it do so submissively.

Bibliography

William Cohen and Ryan Johnson, eds., *Filth: Dirt, Disgust, and Modern Life* (Minneapolis: University of Minnesota Press, 2004).

Alain Corbin, *The Foul and the Fragrant: Odor and the French Social Imagination*, trans. Miriam L. Kochan, Roy Porter, and Christopher Prendergast (Cambridge, MA: Harvard University Press, 1986).

Stephen Halliday, *Sir Joseph Bazalgette and the Main Drainage of London* (London: London Guildhall University, 1997).

Dominique Laporte, *History of Shit*, trans. Nadia Benabid and Rodolphe el-Khoury (Cambridge, MA: The MIT Press, 2002).

Henry Mayhew, *London Labour and the London Poor* (London: Penguin Classics, 1986).