

## BIROn - Birkbeck Institutional Research Online

Crinson, Mark (2023) 'Dem Rauch folgen. Architektur, Totalität und fossiler Kapitalismus'. In: Gleich, M. and Kamleithner, C. (eds.) *Medium unter Medien. Bauwelt Fundamente* 173. Basel, Switzerland: Birkhäuser, pp. 125-150. ISBN 9783035624502.

Downloaded from: <https://eprints.bbk.ac.uk/id/eprint/52085/>

*Usage Guidelines:*

Please refer to usage guidelines at <https://eprints.bbk.ac.uk/policies.html> or alternatively contact [lib-eprints@bbk.ac.uk](mailto:lib-eprints@bbk.ac.uk).

## Follow the Smoke: Architecture, Totality, and Fossil Capitalism

A major new town hall is finished and the engraving marking this moment turns away from what it celebrates, using the building instead as a perch from which to look down on the city around it. **(FIGURE 1)** Most of what we see was built in the previous half century; it is a panorama of institutions and new urban spaces, but it is also conspicuously in a state of care. Near us, a statue of Charity gestures to the distance, marking the task yet to be done. Beyond the buildings and their street-canyons, there is no sight of landscape, no sunny horizon or surrounding hills. Instead, a formidable barrier of lead-coloured smoke billows in mid-distance. Smoke as effluent, cloaking exposed surfaces, and smoke as contradictory medium, veiling perceptions, shaping the city and its bodies, reducing some while enriching others.

What might it mean to follow this smoke across the city, to treat it as a guide? Smoke and its drifting matters to larger ecological accounts of the fossil economy, but it also makes links between things otherwise apparently separate. Following the smoke allows us to construct an account that includes the coal mine, the smokestack and, in this case, the philanthropically endowed library made possible by their exploitation. (A fuller mapping would intersect more substantially with the colonial world of cotton plantations and exchanges.) It enables us to trace the spatial and sensory links that make the industrial city operate, that join different kinds of space, energy systems, and human labour, with the cultural claims of architecture.

In what follows, two forms of mapping from very different sources suggest a method. First, a literary genre as a way of thinking differently about how to describe alternative passages or 'lines of flight': a deterritorialization that is also a re-territorialisation. Second, something that is apparently a theory of culture, but actually an admonition or challenge to take totality seriously again. Then these forms of mapping are taken over into the main content of the essay, tracing the smoke itself, from coal to air pollutant. And then tracing it in its more subliminal and more

symbolic forms with the attempted exclusion of smoke at the doors of culture. Finally, the implications.<sup>1</sup>

### Things that circulate

The so-called ‘it-narrative’ or novel of circulation was a literary subgenre common in the eighteenth century. It offers some interesting angles on the problem of writing architectural and urban histories that record and relate conflicted narratives rather than register mere fragments of the city as *musée imaginaire*. In the it-narrative – novels about a watch, a doll or a teacup, many of them stories of money (a golden guinea, a rupee, a shilling, a bank-note) – an object is followed as if it were a character passing through layers of society and physical locations: high and low, the bawdy and the exotic. This passing is not that of the ingènu or the hardy traveler, tropic figures of the picaresque novel, instead it opens perspectives that may be made by humans but are not for them. The authors of it-narratives chose simple artefacts or wares, objects that represent exchange-value, but also value-less and bodiless ‘eyes’ like Tobias Smollett’s atom in *The History and Adventures of an Atom* (1769), that pass as much through various waste processes as high locations of state and faraway lands. These objects’ mobility, but apparent lack of agency, is used to cut through propriety, to allegorise folly, to satirize hierarchy and suspend convention. And what they often produce is a kind of mimicking of the values of circulation and exchange, seeming to explain them by putting them under different lights, shifting them from questions of ownership to the objects that are owned.

It-narratives have received critical attention for the way the portability of their objects relates a range of anxieties about an emerging world of consumerism. I am not interested, however, in understanding these novels as exemplifications of recent theoretical interest in the flattening of categories,<sup>2</sup> or even in relating their claimed denial of ontological difference to theories of climate change.<sup>3</sup> More compelling, as well as more historically apposite, is how the it-narrative’s pursuit reveals the human contradictions of the desire to exploit, as well as how this

desire is structured into a realm called culture. The genre reveals not a new landscape but one that is already there yet without the means in the conventional novel to represent it. As a result, the unrepresentable abstractions, specifically of exchange and capital flows, are given some form of representability. (Marx's analysis of how in the commodity-form relations between people take on the form of relations between things is directly relevant.)<sup>4</sup> It-narratives bypass those binaries deemed essential as much to the maintenance of the idea of the city as of the relation between industry and culture. This drawing together offers an alternative also to the delimitations of disciplinary notions of architectural and urban space, a 'partitioning of times and spaces, sites and functions'.<sup>5</sup>

### Things that link

To track the spaces traversed by the smoke of Manchester is to engage in what Fredric Jameson has called a 'cognitive mapping'. It is not just literally to 'follow' a particle or smut of smoke – as we might read in an it-narrative – but to indicate the necessary work of revealing and plotting the links, relationships, and routes of the totality that is fossil capitalism; to understand its symbolic economy as much as its structural interdependencies.<sup>6</sup> Cognitive mapping notably avoids the vertical episodic forms of a Foucauldian archaeology in favour of a horizontal and transgressively connective model of historical and material relationships. It also avoids the network analogy of Bruno Latour's theory of linkages, that seems to extend everywhere, and that describes 'assembling the social' as always in process yet without clear relation to power.<sup>7</sup> By contrast, cognitive mapping asserts that the politico-economic is a legible if uneven world, and that this world can be plotted and encompassed; to claim this as a totality brings it into our powers of cognition as a 'law of mutually interacting "coincidences" rather than one of truly rational organisation'.<sup>8</sup> Jameson's concern was particularly with the obfuscations of globalised finance capital, but equally ripe for cognitive mapping are the global entanglements of cotton and fossil fuel, and their particular spatial and material correlations.<sup>9</sup>

The shape of a whole is key: how socio-economic interests fluidly fashion larger global spaces; the connectedness of totality. To even think of a terrain of spatial history requires that it be figurable; to think of it as having coherence is to work across the demarcations that break up the field and thereby take it out of the figurable (this is a particular problem with notions of ‘architectural culture’, often still maintained in versions of media theory and new materialism as taken up in architectural history). To reach for the totality of a cognitive map is to enable something to come into visibility, typically for Jameson the ‘visibility of a class to itself’,<sup>10</sup> or the bringing into representation of something previously occluded; the visibility, for instance, of colonialism to itself, and indeed of ‘race’ as a colonial discourse to be mapped across the compartments of architecture.<sup>11</sup> Linking it-narratives and cognitive mapping is to allow for orientations or tracks that intersect with the circularity of the ‘commodity chains’ of production and consumption, but that also acknowledge or intercut what is disassociated from these chains (in this case that would be high art as much as waste).<sup>12</sup> Inevitably, then, part of what such mapping does is to reveal architecture as a ‘medium amongst media’; as something only constituted as a form of experience and knowledge from within a relation of things and practices.

### Smoke – an itinerary

The ultimate source for much of Manchester’s industrially-produced smoke was the south Lancashire coalfield. The space of subterranean workings is where our mapping starts, at the beginning of the carbon trail. The mines around Wigan were worked by leaving pillars of coal to hold up the tunnel roof with stalls or compartments between them – this was known as the pillar-and-stall system (as opposed to the longwall system which brought in stone walls or wooden supports).<sup>13</sup> **(FIGURE 2)** This first architecture of coal was tunneled into the ground and, after underground service roads had been dug, its apparently ordered spaces were made by extraction from the coal seams. The size of the pillars was critical: the larger the safer, the smaller

the more productive.<sup>14</sup> Their extractive removal was a matter of experience and luck. The troglodytic passages were shaped as a grid iron or, in a variation often found in Lancashire mines, in the form of paired passages differentiated between a ‘dip-level’ and a ‘rise’ or higher level, each enabling haulage and the ventilation of the complex.<sup>15</sup>

Mine representation is clearly a problem when it comes to underground workings, the effects felt in more ways than a simple scarcity of images. The less vernacular vocabulary used to describe mines – ‘galleries’, ‘chambers’, ‘roads’, ‘pillars’, ‘passages’, and ‘circulation’ – indicates the struggle to reconcile the precarious danger of the conditions with the reassurances of familiar forms of stability and predictability. The grid itself is a lure but also a deception. In the few images available we see ideal layouts, spatialized systems of extraction and movement that take as little account of local variations and modifications as they do of the conditions of work. More like marketing brochures than blueprints – and owing much to the sections through mines in Diderot’s *Encyclopédie* – mine layout diagrams imagine mole-eye subterranean cities without dwellings or sunlight, through whose schematic spaces pass the substances of coal, bodies, and air.

The diagrammatic representations of mining engineers often pointed to the causes of disaster. The Lancashire coalfield was notorious for gassy seams that caused frequent explosions. The pillars of these passages were also likely either to disjoint (to be ‘deranged by creep’, as one mining expert put it) and the chambers to fill up with crumbling coal from the roof, or the pillars to collapse because they were too weak (a phenomenon known as ‘thurst’). One inspector calculated the death rate in Lancashire and Cheshire mines for the years 1851 to 1853 as 215 lives per annum out of a total mining workforce of 38,000.<sup>16</sup>

There was, then, little reassurance in the mine’s grid, much as there was little protection from smoke in the expanding grids of the city above. Modernity’s much-recounted affiliation for the grid is made notably fraught here, less a ‘mediatization of space’,<sup>17</sup> of unconstrained order and control, than an unequal relation between profit and life, an always eroded ideality. In the

mine-grid's crossing points or doubled passages, then, a ruinous instability – the endangerment of labouring bodies subordinated to the primacy of the movement of coal – marks smoke's life from its beginning.<sup>18</sup> The specification of passages was key to the operation of the whole: circulation (of air) was designed into the system, interconnecting with the larger operation of collecting and transporting coal. Mine ventilation plans take this to a further level of abstraction, creating near topologies of flows and circuits.<sup>19</sup> But, despite mining's technological advances in the previous century, little changed (unlike textile manufacture) across the nineteenth century: while steam-driven pumps and fans were present by the mid-decades, the miners still hacked at the coalface with picks and shovels.<sup>20</sup>

In the heart of the Lancashire coalfield, Wigan was increasingly important as one of Manchester's ring of satellite towns. Since the 1830s the three Gidlow pits, just north of Wigan, had been owned by the textile company Rylands & Sons to provide coal for cotton manufacture at its Gidlow Mill.<sup>21</sup> As Andreas Malm has demonstrated, steam power flourished not because it was cheaper than water (it wasn't) but because it allowed industrialists like Rylands to move their mills to the towns and thus, with a more readily available and replaceable workforce, to control their workers more easily.<sup>22</sup> Rylands & Sons was one of the most successful Victorian businesses, from 1860 onwards the single largest textile firm in the world, whose founder, John Rylands, was Manchester's first multi-millionaire. The key to Rylands & Sons' success was not managerial style or technological innovation, but instead its marketing skills, its accounting systems, its portfolio built up through constant acquisitions and prudent diversification while grounding itself on the domestic market, and its 'vertical integration' of the disparate elements of cotton textile manufacture and its ancillaries in a company system.<sup>23</sup> Indubitably large in its combined capacity, Rylands & Sons was also remarkably differentiated in its operations even within one industry. Securing the supply of cheap local fuel by the owning of mines, as well as their railway spurs and their onward connections to the main line, was typical. But the Gidlow collieries were as liable to the dangers of subterranean construction as any, Rylands' prudence not extending that far. In

1859 an older lower level of working collapsed under the weight of those above, flattening the buildings on the surface, eroding the grid. The collapse was blamed on misjudging the size of the pillars.<sup>24</sup>

After it was hewn and brought to the surface, the coal of the Gidlow pits was loaded onto wagons and pulled by steam engines from the mine to the Gidlow Mill nearby. This mill, much celebrated in manufacturing circles when finished in 1865, was designed by the specialist mill architect George Woodhouse.<sup>25</sup> All of what contemporaries remarked on – its size, its state-of-the-art machinery, its fireproofing, and the added single-storey sheds learnt from recent Indian mills designed by William Fairbairn (an interesting example of colonial technological advances feeding back to Britain) – offered refinements of scale and speed in the relationship of cotton and coal.<sup>26</sup> **(FIGURE 3)**

Although essential, coal was kept in the marginal spaces of the mill. The objective was to get it into the building as directly as possible, combust it, and then convey its waste out rapidly. Its route in was the railway track; its exit, in the form of the carbonaceous matter of smoke, was via the high but primly Italianate chimney that dominated the area, its only acceptable entry into a domain that had some claim to be conventionally architectural.

Gidlow's coal fed eight boilers and it was in the boiler room, marked on the mill's exterior by a tower, that the vital energy transfer occurred. The process is described in a diagram of a rectangular steam boiler in Thomas Tredgold's then still standard *The Steam Engine: Its invention and progressive development* (1827).<sup>27</sup> **(FIGURE 4)** Tredgold's plate shows movements across vessels and through passages. Coal is shoveled through a fire door onto a grate above an ash pit. Set ablaze, the inflamed coal's current of fumes passes around the boiler, heating its water before passing up a chimney. Water enters the boiler itself by pipes, and steam leaves the boiler via a pipe which conveys it to the steam engines. That is the end of the coal: it has created steam which will impel the engines as the prime movers of industrial process; it has been



transformed into ashes and smoke; and, its thermal energy exhausted, coal's waste is now expelled from the mill in one architectural flourish and returned, apparently, to nature.

Coal and smoke were thus done with as far as Rylands & Sons were concerned, the power they released coursed through the mill, energizing what Marx called that 'vast automaton'.<sup>28</sup> And this elaborates further the point about boilers, that to make distinctions between architecture and machine or architecture and engineering in the mill is more or less redundant. Coal, steam, labouring bodies, and mechanical power all circulate, all are geared to the same end in the mill. At least that was the theory as the contemporary industrial philosopher Andrew Ure floridly conceived it, with the 'benignant power of steam' at the centre, summoning 'myriads of willing menials... [assigning] the regulated task'.<sup>29</sup> Having fulfilled its task and left the complex machine-architectural organism that gave it birth, the waste continued on.

The unusually high chimney at Gidlow, of 204 feet and separated from the main building, released smoke far away from possible local litigants simultaneously making a point about the company's sense of social obligation. This architectural grandiosity, with its elements of base and capital and its pronounced lip just below its summit, was not uncommon. Such designs made a point about the mill-owner's civic-mindedness, his projection of an understanding that what the mill was doing was not just a matter of profit but of culture, even at the moment of waste's expulsion. But tall chimneys had another purpose, more technical, less often remarked; they increased the draught to the boilers, so improving the intensity of combustion and making the whole operation more efficient.<sup>30</sup>

#### A smoke-shaped architecture

By this point coal has been extracted, refined and transformed within a sequence of shaped passages, technologies, vessels and vehicles into smoke. These might be understood as some kind of 'media complex': they create an energy system, they bring together bodies and materials, they re-shape the world.<sup>31</sup> But as a cognitive mapping, matters like unintelligibility, waste, and

denial – let alone the exploitative drive itself – need to be reckoned in, to have their cognitive aspects laid bare. On leaving Gidlow’s chimney, smoke was released to the prevailing winds, wafting eastwards and northwards, mingling with the smoke from the many domestic fires of Wigan and Manchester and settling in the city’s hollow/basin. In the words of one contemporary, ‘air currents meet the gaseous products of combustion, mixed with minute material particles, and are hindered or directed in their course thereby, and move forward, dirty, irregular, and scattered’.<sup>32</sup> Industrial chimneys alone in Manchester numbered well over 500 by 1843, and would double by 1890, while domestic consumption of coal was more than double that of London per capita.<sup>33</sup> As smoke left Gidlow and other mills, its particles and sulphur dioxide gas dropped, draped and encrusted in a kind of industrial melanism, blackening trees, acidifying soil, destroying plants.

Architecture in Manchester – meaning as much those who built, designed, laboured, experimented, and taught, as the materials and technologies worked with – was suffused with smoke awareness. Carbon pervaded the streets, blackening what had been light, falling upon brick and stone, and infiltrating ornament. Within three years of completion in 1864, the polychrome Assize Courts (architect – Alfred Waterhouse) had lost all its external colour.<sup>34</sup> Such evidence was among the many inklings for architecture of a qualitatively new epoch of environmental pollution, which we now understand to have had its onset with the accelerating adoption of steam power as industrialists secured their energy sources both from competitors and from the collective actions of their workforces.<sup>35</sup> Indeed, if steam power and its human proprietors were the central dynamic in the rapid agglomeration of buildings and facilities that constituted the industrial city, they were also the cause of its grimy coating and vitiated air.

Manchester’s architects, in common with many of its scientists, were highly aware of smoke’s negative effects and searched for ways to mitigate them. As stone and brick were seen to crumble, and mortar to swell out and become porous, alternatives had to be found.<sup>36</sup> Walls were opened up with larger expanses of glass to allow more light; architectural colour was taken

away from exteriors; deeply stained glass was avoided; terracotta and tile were more often used as facing materials, and such self-cleansing materials as glazed bricks, mosaic and enameled iron were advocated.<sup>37</sup> As Caen stone, Bath stone, and limestones were all vulnerable, so alternative stones were examined for their ability to resist smoke's effects, with granite, porphyries and most sandstones preferred.<sup>38</sup> Ornament was rendered more broadly so it could still be read from afar when clogged with soot, and there was an awareness that the more sheltered parts of exteriors, where dirt accumulated, were more affected by decay.<sup>39</sup>

### Philanthropy's place

The design of one Manchester building, in particular, was marked by a high level of obsession with the exclusion of smoke. It is, in several ways, complementary with the mill and mines at Gidlow, and not just because all were built by the same family. **(FIGURE 5)** This was the library endowed by John Rylands' widow, Enriqueta Rylands, to memorialise her late husband, and it was filled with the precious book and manuscript collections she added to her husband's largely theological collections. Its site is in Deansgate, a slum-ridden and semi-industrial area often described as one of the most insalubrious in Manchester, 'with narrow and loathsome streets, and close courts defiled with refuse'.<sup>40</sup> The area was often smoke-suffused, the 'murky mass like a shroud' over the city.<sup>41</sup> (In 1890 life expectancy for men in Deansgate was estimated at 28.78 years.)<sup>42</sup> Locating the Rylands Library here was an act understood as philanthropic in at least two ways. First it was a cleansing and purging of dirt and poverty from the immediate environs, and second it was the arrival of a gift that if paid for from the world of polluting industry would nevertheless be redolent of a different world altogether – quiet and clean, pre-industrial, religious, scholastic.

Ventilation was central to the library's design, just as it had been to the Gidlow mines and even the Gidlow mill's boilers and chimney. Indeed, the library is a kind of inversion or antithesis of a mine. Its rockface to be picked at are the bookcases, either added to the walls

(rather than extracted to form walls) or freestanding within rooms like the pillars of coal and stalls or compartments between them.<sup>43</sup> The deposit of past mental labour accumulates here, we might say, in this site of addition, while physical labour is expended or consumed in that other site of extraction. To juxtapose the ground floor plan of the Rylands library with a diagram of a coalfield with paired passages and a pillar and stall grid is absurd to a certain kind of architectural history, a pseudo-isomorphism at best. But if there is anything forced about this coming together then that is only the product of a certain need to keep them separate. Library and mine are both products, after all, of the same industrial complex; the beginning and the end of it. (Famously, Francis Bacon had metaphorically linked the speculative aspects of natural philosophy with the work of mining.)<sup>44</sup> Together, they stand for the birth and after-life – or really, half-life – of smoke; its entering into productive life as coal, its transmutation into waste, and its exclusion, or attempted exclusion, from another kind of life dependent upon it but disowning, even disavowing it.

Smoke's negative presence ties the library to the production of cotton, begging the question of what a library is. Before it can be a 'selection mechanism', a collecting and ordering of contents,<sup>45</sup> it has had to keep out other bodies of material. So, is it another byproduct? A mere appendix? Or is it a terminal point where the radically unstable properties of waste are set aside and those of culture – learning, tradition, theology – made to work their transcendence? 'The entire proposal', Rylands' architect Basil Champneys wrote, 'has originated in the desire to preserve the valuable works from injury.'<sup>46</sup> This injury was the threat from the very smoke that had helped create the wealth expended on the library's books.

Champneys and his various consultants wrestled with this problem of smoke exclusion on a number of levels, while also using the idea of the pollution-free building to charge the library's remarkable spatial drama. It was the library's ventilation that took most time to resolve, and the eventual solution was a combination of bespoke technologies based on filtering and moving air. Drawn in by electric fans low down on the building, air was sprayed with water,

passed over hot water pipes, and drawn through jute or hessian screens, while foul or 'vitiating' air was taken out via extract flues connected with two exhaust chambers in the roof. Air circulation was vital if mildew and mould were not to damage the books.<sup>47</sup> Inevitably, the weakness was that the building could never be kept sealed even if windows were airtight (delivery entrances, for instance, were only partially protected by screen doors), which may be one reason for the elaborate spatial sequences between the main entrance and the reading room itself. The ineffectiveness of even these methods was all-too-quickly demonstrated when, as early as 1907, barely eight years after completion, the beautiful stone vaulting over the reading room was smoke-stained.<sup>48</sup> The precious books themselves, however, were provided with some of the most hermetically sealed containers in the history of bookcase design, precision-made glass caskets with seals between doors and frames made airtight by rolls of velvet packed with wool.<sup>49</sup>

But there was something more than matters of convenience and conservation in this attempt to exclude smoke, and more too in these various doors than what Bernhard Siegert has called an 'ontic operation' or 'door logic'.<sup>50</sup> The nuisance of smoke was actually the politics of smoke: who made it; who profited; who was to suffer its effects. In the library that politics was re-made into the poetics of smoke first through the building science and then through the enshrined role of architecture – the ornament and the sequence of spaces that make the entrance route so extraordinary. Smoke enculturated. If it enabled human culture, then it also required an artistic cultural response to assert learning and refinement. This started with the placement of the entrance right on the pavement, where it was guarded by two short towers stepping back from the street line. The library thus sat implacable within a hostile world; both castellated and intricate, defensive and precious. On entering, visitors' progress was shaped around a sequence of experiences, symbolically discarding the smutty city before entering the purified library precinct. Visitors pass through relatively narrow doors into an entrance space, a kind of decompression or detoxifying chamber which expands suddenly upwards like a lofty forest, with the ceiling held above by tall slender columns yet still compressed into small vaulting bays.

**(FIGURE 6)** A set of reception spaces follow, through which visitors are compelled to turn and turnabout, seeing and passing various screens, trellises and trceries; these create an ambience – more symbolic than functional – of being screened and even filtered, of levels of admittance. The visitor turns left and left again, up stairs and under stone canopies, fan vaults and an otherworldly stone lantern high above. The movement spirals upwards and then turns into the sudden tall volume of the south tower, the outside world now long abandoned. Finally, the visitor arrives in the reading-room, suspended above street level and held within a layered casket of corridors on all sides. **(FIGURE 7)**

Enriqueta Rylands (whose own family wealth was based on slave-worked sugar plantations in Cuba)<sup>51</sup> was concerned that, despite her husband's considerable collection of theological texts, the library should not be seen narrowly as an evangelical foundation or even a kind of missionary establishment. It would instead stand for the cultural in Matthew Arnold's sense of 'sweetness and light' (thus also denying Arnold's charge of philistinism thrown at the industrial bourgeoisie). The library is envisaged, then, as the sphere of the non-alienated. It embodies the transition from the industrial into the cultural so that the cultural transcends the realm of the commodity, the factory, the working day, the office and its ledgers, the 'faith in machinery',<sup>52</sup> the mine and the mill, and their various surpluses and wastes – in short, everything that Rylands & Sons had created and mastered.

Along the way to the reading-room, extensive sandstone surfaces flaunt their exposure to air. A repeated carved motif is of wind rustling organic forms, a motif that is as much wave-like as leaf-like. **(FIGURE 8)** Plants were often taken as the measure of smoke's bad effects, their stunted 'blanched and sickly' forms used in analogy with the blighted physiques, life expectancy and 'deterioration of race' of urban slum dwellers.<sup>53</sup> 'Lovely architecture', John Ruskin had written in 1865, was only possible in 'cloudless air', by contrast with the 'black air' that 'renders all ornament invisible in distance, and then chokes its interstices with soot.'<sup>54</sup> The very existence of ornament – its legibility, its articulation of the free or 'savage' expression of the craftsman, in

Ruskin's terms – was testament to a continuing non-modernity, to a resistance against all that industrial modernity stood for and produced. The library's leaf ornaments, furthermore, also thematize air as free and purified, circulating the building with the ascending visitor. (This, it needs saying, is neither a programmatic figuring of the symbolic attributes of smoke and purification, nor is it a jump into the purified spaces of a health-obsessed modernism.) Gothic Revivalists were always concerned with sourcing such motifs, and Champneys no doubt meant to remind his visitors of the crockets on the gables of St Mark's Venice – that city which was a type for Britain's imperial state, but also one which was mediievally-distant from the disturbing newness of industrial forms. In Ruskin's words, those Venetian crockets had a pre-industrial vitality about them: '[they] appear to consider themselves at greater liberty even than the finials, and fling themselves, hither and thither, in the wildest contortions'.<sup>55</sup> They were part of those crests of arches on the upper part of St Mark's that, in one of his most famous lines, Ruskin had described as crests that 'break into marble foam, and toss themselves far into the blue sky in flashes and wreaths of sculptured spray'.<sup>56</sup>

We are far here from the Gidlow pits and mill, or so Champneys and Enriqueta Rylands would have it, and as the Ruskinian motifs would conspire to testify. But perhaps the craftedness of the Rylands ornament, its breezy organicism, might better be understood as bearing a false testimony: that, despite the deskilling of industry and the replacement of human energy with fossil fuel energy, the product of craft would still survive; those who caused its demise were also those who would safely preserve it. The ornament is also associated with the Victorian idea that culture, the library itself, was a 'stream of fresh and free thought', a 'pursuit of perfection', a place completely apart from the world of coal and cotton and machinery that belonged, so Matthew Arnold had said, to that non-cultural zone of the 'vast residuum'.<sup>57</sup> Smoke has been banished from this other world of the library, where a purer air flutters its stone plants, much as industry has been confined to the world of the utilitarian, the quotidian, the unfeeling and

unthinking. We are back to the delusions of Victorian humanism: the transcendence of culture, the turning away from the mechanical, gimmicks, and general horribleness of much of life.

### The moral

For Ruskin, lecturing in 1865, Manchester was the site of a transformation of people into things (inverting, we might say, the ingredients of it-narratives): '[a city which is] mere crowded masses of store, and warehouse, and counter... all chief magnitude of edifice is to enclose machinery; [a city] in which the streets are not the avenues for the passing and procession of a happy people, but the drains for the discharge of a tormented mob, in which the only object in reaching any spot is to be transferred to another; in which existence becomes mere transition, and every creature is only one atom in a drift of human dust, and current of interchanging particles, circulating here by tunnels underground, and there by tubes in the air; for a city, or cities, such as this no architecture is possible.'<sup>58</sup> Ruskin's 'happy people' have themselves become like smoke, drifting and transiting and circulating to no purpose, with no value.

The ironies at the Rylands library are barely implicit; the hypocrisies of this attempt to accumulate cultural capital in plain sight. Whatever the moral here, to trace this smutty story – the cognitive map by which smoke crosses and contaminates the city, but also the library that seeks to deny it – is to reconnect the psychic to the social and the economic. There is not some separable typological convenience we could call the 'architecture of smoke (or coal)', nor a simple correspondence. The architecture is, instead, as much the subterranean grid as the carved crocket, as much the sealed bookcase as the belching chimney or the damp coalface. In fact, there is more than an analogical relation between the boiler suspended in flues being heated by currents of smoke and the library sealed from the industrial pollution that also sustains it. This is, of course, not only to reveal the marks of labour, of conflict and violence, within the library, but to show something of the library as a technology of filtering and new movement, a complex of disavowal.



- 
- <sup>1</sup> For a more extended discussion of these issues see Mark Crinson, *Shock City: Image and Architecture in Industrial Manchester*, London: Paul Mellon Centre for Studies in British Art, 2022, Chapter 5.
- <sup>2</sup> Mark Blackwell (ed.), *The Secret Life of Things in Eighteenth Century Fiction*, Lewisburg: Bucknell University Press, 2007; Jonathan Lamb, 'The Implacability of Things', *The Public Domain Review*, 2012, <https://publicdomainreview.org/2012/10/03/the-implacability-of-things/> (accessed, 1 November 2021).
- <sup>3</sup> See Adam Trexler, 'Integrating Agency with Climate Critique', *symploke*, 21, 2013, 226-235. For a critique see Andreas Malm, *The Progress of this Storm: Nature and Society in a Warming World*, London: Verso, 2018, 78-118.
- <sup>4</sup> Karl Marx, *Capital: A Critique of Political Economy* (1867), trans. Ben Fowkes, Harmondsworth: Penguin, 1976, vol. 1, 164-5.
- <sup>5</sup> Jacques Rancière, *Dissensus – On Politics and Aesthetics*, trans. Steven Corcoran, London: Continuum, 2010, p. 119.
- <sup>6</sup> Fredric Jameson, *Postmodernism, or the Cultural Logic of Late Capitalism*, London: Verso, 1991, 50-52.
- <sup>7</sup> Bruno Latour, *Science in Action: How to Follow Scientists and Engineers through Society*, Cambridge, MA: Harvard University Press, 1987, 180; Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network Theory*, Oxford: Oxford University Press, 2007.
- <sup>8</sup> Georg Lukács, *History and Class Consciousness – Studies in Marxist Dialectics*, trans. Rodney Livingstone, London: Merlin, 1971, 102.
- <sup>9</sup> For oil and cotton see: Carola Hein (ed.), *Oil Spaces: Exploring the Global Petroleumscape*, London: Routledge, 2021; Sven Beckert, *Empire of Cotton: A New History of Global Capitalism*, London: Allen Lane, 2014.
- <sup>10</sup> Fredric Jameson, *Signatures of the Visible*, New York and London: Routledge, 1992, 37.
- <sup>11</sup> Mark Crinson, '“Compartmentalized World”: Race, Architecture, and Colonial Crisis in Kenya and London', in Irene Cheng, Charles L. Davis, and Mabel O. Wilson (eds.), *Race and Modern Architecture: A Critical History from the Enlightenment to the Present*, Pittsburgh: University of Pittsburgh Press, 2020, 259-276.
- <sup>12</sup> Alberto Toscano and Jeff Kinkle, *Cartographies of the Absolute*, Winchester: Zero Books, 2015, 191-2.
- <sup>13</sup> Roy Church, assisted by Alan Hall and John Kanefsky, *The History of the British Coal Industry Vol. 3 1830-1913: Victorian Pre-eminence*, Oxford: Clarendon Press, 1986, 336.
- <sup>14</sup> Thomas Farrimond, 'On the Working of Coal Mines, Drainage of Gases, and Their Effect on Under and Over-Lying Seams', *Transactions of the Manchester Geological Society*, 2:8, May 1860, 89-94.
- <sup>15</sup> Matthias Dunn, *A Treatise on the Winning and Working of Collieries*, Newcastle: Matthias Dunn, 1848, plate XII figure 1.
- <sup>16</sup> Joseph Dickenson, 'Statistics of the Collieries of Lancashire, Cheshire, and North Wales', *Memoirs of the Literary and Philosophical Society of Manchester*, 12, 1855, 75.
- <sup>17</sup> Bernhard Siegert, '(Not) in Place' in *Cultural Techniques: Grids, Filters, Doors and Other Articulations of the Real*, trans. G. Winthrop-Young, New York: Fordham University Press, 2015, 97-120.
- <sup>18</sup> For fires and fatal accidents in the mines around Wigan in just one year see: *Manchester Guardian*, 6 January 1859, 24 August 1859, 24 September 1859, and 28 September 1859.
- <sup>19</sup> Dunn, *A Treatise*, Plate XIX fig 1.
- <sup>20</sup> Raphael Samuel, 'Workshop of the World: Steam Power and Hand Technology in Mid-Victorian Britain', *History Workshop Journal*, 3, Spring, 1977, 21.
- <sup>21</sup> John Rylands Library Special Collections RYL/1/3/1.
- <sup>22</sup> Andreas Malm, *Fossil Capital: The Rise of Steam Power and the Roots of Global Warming*, London and New York: Verso, 2016.
- <sup>23</sup> D. A. Farnie, *John Rylands of Manchester*, Manchester: John Rylands Library, 1993, 14-17, 45.

- <sup>24</sup> Farrimond, 'On the Working of Coal Mines', 91.
- <sup>25</sup> Evan Leigh, *The Science of Modern Cotton Spinning*, vol 1, Manchester and London: Palmer & Howe, Simpkin, 1873.
- <sup>26</sup> William Fairbairn, *Treatise on Mills and Millwork*, London, 1863, vol. 2, 172.
- <sup>27</sup> Thomas Tredgold, *The Steam Engine: Its invention and progressive development*, rev. edition, London: John Weale, 1838, vol 1, 328.
- <sup>28</sup> Marx, *Capital*, 502.
- <sup>29</sup> Andrew Ure, *The Philosophy of Manufactures*, London: Charles Knight, 1835, 18.
- <sup>30</sup> Stephen Mosley, *The Chimney of the World: A History of Smoke Pollution in Victorian and Edwardian Manchester*, London and New York: Routledge, 2008, 128.
- <sup>31</sup> On 'media complex' see Reinhold Martin, *Knowledge Worlds: Media, Materiality, and the Making of the Modern University*, New York: Columbia University Press, 2021, 1-2, 12-13.
- <sup>32</sup> J. W. Graham, as quoted in E. T. Cook, *The Life of John Ruskin, vol. 2, 1860–1900*, London: George Allen, 1911, 471.
- <sup>33</sup> Mosley, *Chimney of the World*, 18-19.
- <sup>34</sup> *Manchester New Town Hall – General History and Detailed Description of the Building*, Manchester: John Heywood, 1877, 5.
- <sup>35</sup> Timothy Morton, *Hyperobjects: Philosophy and ecology after the end of the world*, Minneapolis: University of Minnesota Press, 2013, 7; Malm, *Fossil Capital*, 63.
- <sup>36</sup> Robert Angus Smith, 'On the Air of Towns', *Journal of the Chemical Society*, 11, 1859, 232.
- <sup>37</sup> A. H. Davies-Colley, 'Facing Materials for a Smoky Town', *British Architect*, 7, 9 February 1877, 87; *Manchester New Town Hall*, 7.
- <sup>38</sup> 'Mr Brooke', 'Stone as a Building Material for Manchester', *British Architect*, 7, 2 March 1877, 129; Augustus Voelcker, 'On the Injurious Effects of Smoke on Certain Building Stones and on Vegetation', *Journal of the Society of Arts*, 12:583, January 1864, 146-53.
- <sup>39</sup> Voelcker, 'On the Injurious Effects', 149.
- <sup>40</sup> James Phillips Kay, *The Moral and Physical Condition of the Working Classes Employed in the Cotton Manufacture in Manchester*, London: Ridgway, 1832, 36.
- <sup>41</sup> John Edward Morgan, *The Danger of Deterioration of Race from the too Rapid Increase of Great Cities*, London: Longmans, Green and Co., 1866, 29.
- <sup>42</sup> John W. Graham, *The Destruction of Daylight – A Study in the Smoke Problem*, London: George Allen, 1907, 5.
- <sup>43</sup> A link between clerks using pens and hewers using picks is made in J. Leifchild, 'A Traveller Underground', in *Our Coal and our Coal-Pits: The People in Them, and the Scenes around Them*, London: Longman, 1853, 132.
- <sup>44</sup> Allan Sekula, 'Photography Between Labour and Capital', in Leslie Shedden (ed.), *Mining Photographs and Other Pictures, 1948-1968*, Halifax N.S.: The Press of the Nova Scotia College of Art and Design, 1983, 204.
- <sup>45</sup> Martin, *Knowledge Worlds*, 4.
- <sup>46</sup> John Rylands Library Special Collections, JRL/5/2/5/13.
- <sup>47</sup> Catherine Bowler and Peter Brimblecombe, 'Environmental Pressures on Building Design and Manchester's John Rylands Library', *Journal of Design History*, 13:3, 2000, 185.
- <sup>48</sup> *Ibid*, 185.
- <sup>49</sup> John Rylands Library Special Collections, JRL/5/2/1/1/2-3.
- <sup>50</sup> Siegert, 'Door Logic, or, the Materiality of the Symbolic: From Cultural Techniques to Cybernetics', in *Cultural Techniques*, 192-205.
- <sup>51</sup> Raul Ruiz, 'Mrs Rylands's Cuban Origins', *Bulletin of the John Rylands Library*, 85:1 (2003), 121-126.
- <sup>52</sup> Matthew Arnold, *Culture and Anarchy* (1869), Cambridge: Cambridge University Press, 1932, 49.
- <sup>53</sup> Mosley, *Chimney of the World*, 103.
- <sup>54</sup> John Ruskin, 'The Study of Architecture in our Schools' (1865), in John Ruskin, *On the Road*, vol. 1, Orpington: George Allen, 1885, 378.
- <sup>55</sup> John Ruskin, *The Stones of Venice Vol. III, The Fall* (1853), New York: Publishers' Plate Renting Co., 1903, 13 (Chapter 1, section 14).
- <sup>56</sup> *Ibid*, *Vol. II, The Sea Stories* (1853), 71 (Chapter 4, section 14).
- <sup>57</sup> Arnold, *Culture and Anarchy*, 6, 51, 105.
- <sup>58</sup> Ruskin, 'The Study of Architecture', 378.