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idea journal

(extra) ordinary interiors:
practising critical reflection

vol. 18, no. 01

2021

the journal of IDEA: the interior design +
interior architecture educators association



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cover image

Lying motionless, listless. Consuming time; being present, each moment folds into another. Surfaces becoming expanses of inflections of hue. Normality expands into a stream of observing luminosity. Still image from video by Chora Carleton, 2021.

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this issue's provocation

(Extra) Ordinary Interiors calls for contributions from academics, research students and practitioners that demonstrate contemporary modes of criticality and reflection on specific interior environments in ways that expand upon that which is ordinary (of the everyday, common, banal, or taken for granted).

This theme has two agendas: First, the desire to amplify critical reflection as a key practice of the disciplines associated with this journal's readership. In short, to prompt interior designers, interior architects, and spatial designers to be more proactive and experimental in asserting their specialist knowledge and expertise as critical commentary. This asks authors to reconsider the role of critique and criticism in their scholarly and creative works, or, to demonstrate how to reflect critically upon a design and to locate the design's relation to material, political, social, cultural, historical and geographical concerns. Such an enterprise may reveal whether models of criticality centred on judgement, authority and historicism are relevant, constructive, insightful or generative, or, as Bruno Latour poses, have they 'run out of steam'?⁰¹ This exercise may prompt some to revisit key thinkers who pose new discursive, visual and temporal models for critical practice in this recent age of criticality. We draw your attention to *Critical Spatial Practice* by Nikolaus Hirsch and Markus Miessen, which asks for thinking "about 'space' without necessarily intervening in it physically, but trying to sensitise, promote, develop and foster an attitude towards contemporary spatial production, its triggers, driving forces, effects and affects... [to] speculate on the modalities of production and potential benefits of the role of 'the outsider.'"⁰²

We also look to Jane Rendell's introduction to *Critical Architecture*, which asserts that criticism and design are linked together by virtue of their shared interests in invoking social change.⁰³ Whether it takes written, built or speculative form, criticism is an action, which according to Roland Barthes, is a calling into crisis, a moment where existing definitions, disciplinary boundaries and assumptions about normativity are put into question.⁰⁴

The second agenda of this journal issue takes heed of the ordinary, and how, in its intense observation, what is normal or often taken for granted exceeds itself, becomes extra or more ordinary. Everyday spaces such as supermarkets, service stations, laundry mats, hardware stores, parks and four-way street intersections, and banal gestures such as washing the dishes, walking the dog or street sweeping become subject to critical scrutiny and introspection. Xavier de Maistre's *Voyage Around My Room*, Julio Cortázar's *Around the Day in Eighty Worlds*, and Virginia Woolf's *The Waves* are but a few historic examples that draw out critical depth and aesthetic meaning about ordinary interiors, interiors understood in the most liberal sense.⁰⁵ What new actions to the crisis of critical commentary lurk restlessly in ordinary interiors?

While a nostalgic or romantic response to this journal's theme may dwell on interior situations with no special or distinctive features, or explore the persistence and abundance of ordinary interiors, even commonplace spaces, noticed or not, it can not be denied that recent pandemic events world-wide have flung the many facets of everyday life into crisis, including long-standing notions of proximity, intimacy, hapticity, privacy, freedom and rights to access 'essential' services. For many, the world has become home and home has become an internal world, an interior contaminated or augmented by virtual technologies serving as lifelines to a previous highly social and diversified lifestyle. As the interior of one's domestic space finds coincidence with one's isolation bubble, many are finding that interiority and interiors are conflating to take on new meaning, new function, and new configuration. Ordinary scenes of dead flies on windowsills, sun rays pointing to poor house-keeping habits, mounting bags of uncollected rubbish and recycling, shuffling of mattresses, improvised work surfaces, revised chores rubrics, commandeering of the bathroom, and the commodity of headphones and adapters highlight an intensified condition.

Authors are prompted to practice a form of critical reflection on one (extra) ordinary interior.

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01 Bruno Latour. 'Why Has Critique Run Out of Steam? From Matters of Fact to Matters of Concern,' In *Critical Inquiry - Special issue on the Future of Critique* 30, no. 2 (2004): 25-248.

02 Nikolaus Hirsch and Markus Miessen, 'Architecture and Critical Spatial Practice,' 1 May 2020, criticalspatialpractice.org.

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04 Roland Barthes, *Criticism and Truth*, translated and edited by Katrine Pilcher Keuneman (London and New York: The Althone Press, 1966).

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CO₂ interiors

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abstract

Are there any ulterior narratives that can be extracted from a close examination of coal mine interior spaces? To address this question, this article unpacks a selection of archival images that expose the covert narratives of colonialism and slow violence embedded in coal mining's (extra)ordinary interiors. With a focus on the Australian context, but also looking into instances from the UK, South Africa, Italy, and the Americas, we cross-examine images that include a 19th Century etching of young children pushing coal-filled carriages through steep mine tunnels, and a still from a 1950s animated film produced by the UK National Coal Board Film Unit. There is also an image of human tissue affected by black lung disease, and a photograph of a former Australian Prime Minister enacting the mythology of the alpha male explorer plunging into the unknown and forbidden depths of the planet. While working individually, these image/text hybrids also act as an assemblage that can be reshuffled to mirror the multiple and contested perspectives on coal mining that still exist. The result contrasts starkly with the imaginaries created by pro-mining industries and governments, which typically focus on the activity's technical and economic advantages to greenwash its multiscale and devastating effects. As such, 'CO₂ Interiors' amplifies our understanding of coal mining beyond its economic and environmental repercussions and well into its social, political, and cultural implications, especially the spatial ones. While the 2019 Australian federal election attests to an embedded mythology of coal mining that still seems impossible to restrain, 'CO₂ Interiors' recasts the false narratives of progress and solidarity that have been projected from within the coal mine's interior spaces. This assemblage of coal stories, yielding a performative reading that ultimately seeks to raise awareness and produce affect, is inconclusive. Instead, it is an accumulation of an ever-growing body of evidence that must be critically analysed and amplified to truly achieve a sustainable post-carbon future.

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of representation

Figure 01:

Robert Bénard after De La Rue,
*A mine: cross-section of a digging
equipment*, 1799. Etching. ©
Wellcome Collection, London,
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The interior spaces of a coal mine are the realm of a complex political landscape of resource extraction and human exploitation. Its history is inextricable from industrialisation, as well as from the discovery of what is still perceived as an endless bounty lying beneath the earth's surface. To find this treasure, humans have engaged in the most unusual form of conquest: the downward colonisation of unknown worlds, where space is not to be conceived of as being for habitation or domination but for the efficient extraction of inert matter. To do so entails the exploitation of a labour force persuaded to execute the noble task of powering a modern way of life that thrives above the surface. Like the atrocities committed in other colonising processes, the continued exploitation of human bodies and the natural environment is still invisible to the naked eye. Not even photography (modernity's technology of representation) can capture the full complexity of the stifling and labyrinthine coal mine interior spaces, leaving the daunting task to other visualisation techniques. The section, therefore, persists as the go-to instrument to represent the coal mine's impossible interiority. What else can we extract from reading these abstract, orthogonal representations? Along with a glimpse of the pragmatics and mechanics of extraction, we can also see deplorable environmental work conditions, as well as the conviction that plummeting downwards, deep into the underground, is the only alternative for humans to move forward.

of power**Figure 02:**

Walter Molino, *The Queen among the miners*, 1958. Cover illustration for *La Domenica del Corriere*.
Reproduced by permission ©
Fondazione Corriere della Sera,
Archivio Storico, Milan, Italy.

On the cover of the 13th of July 1958 issue of the Italian weekly supplement *La Domenica del Corriere*, a young Queen Elizabeth II is portrayed in pristine virginal white, emanating a kind of holy glow into the dark and stifling, Doctor Caligari-like, subterranean interior spaces of the Rothes Colliery in Scotland.⁰¹ Her gaze is of utter confidence, her posture, feminine and relaxed. The Monarch starkly contrasts with the rippling, testosterone-fuelled energy projected by the thirteen male bodies that surround her, whose attention appears both sexual and aggressive. Her coverings, protective of all her body but her face, contrast with the miners' half-naked skin, coated with a glistening mix of sweat and coal dust that is even more apparent against her unpolluted, crisp, and white apparel. While the aim of the Queen's dive into the dark and dusty underground seems to have been a meticulously fabricated media function to relate the Royal Family to the working class,⁰² the image — an illustration of real events — heightens the vast gender and class disparities that still exist in coal mining.⁰³

of myths

In Britain, the heroic role of coal in everyday life was conveyed through propaganda films produced by the mining industry, which at times engaged representational myths directed at the family and the familiar. Animated cartoons like *King Coal* (1948), commissioned by the National Coal Board Film Unit, presented the dark matter of coal anthropomorphised into a protective fatherly figure — a monarch emerging from the depths of the coal mine commanding an army of men to restore the comforts of modern life.⁰⁴ Based on the lyrics of *Old King Cole* (the traditional British nursery rhyme), the film starts with a sequence that can only be described as one of epicurean subterranean life: King Coal, sitting comfortably on his carved-

out throne, smokes from a pipe and drinks from a bowl while entertained by his 'fiddlers three.' The location is a dimly lit cavernous space, propped up by wide columns and arches reminiscent of religious interiors. However, in another sequence where the monarch poses with a pick and a lamp inside a vertical space, we learn that we are somewhere deep into the underground, travelling upward inside a coal mine elevator. At the epicentre of the carbon-based development of Western society, King Coal's lair recasts the coal mine from a space of dirty and hazardous work into one of worship, class disparity, entertainment, and hedonism.

Figure 03:

Jules Pinschewer, *King Coal*, 1948.
Film still. Reproduced by permission
© British Film Industry Archive,
London, UK.

of politics

Figure 04:
Eduardo Kairuz, Diagram
of The Chamber, House of
Representatives, Parliament of
Australia, 2021. Digital drawing.
Reproduced by permission ©
Eduardo Kairuz.

While the interior spaces of the coal mine have often been idealised in images that perpetuate the myth of a subterranean world of prosperity,⁰⁵ they are also spaces dedicated to a ruthless form of capitalist exploitation. The politics and economy of the underground, just like in other production spaces of late capitalism, are dictated high above the Earth's surface, in CEO offices, executive boardrooms, shareholder meetings, and other seats of power. Having developed the infrastructure of coal extraction, as well as its subsequent unionisation and privatisation, it is not casual that the performance of 'coal politics'⁰⁶ finds its home in the colonial facsimile of the British House of Commons.⁰⁷ The Australian Parliament House is the atmospheric opposite to a CO₂ interior. However, at times, this clean and formal environment of protocol seems to be dedicated to maintaining a polluted, carbon-dependent culture. Inside the walls of this almost sacred political space, on the 8th of February 2017, the current Australian Prime Minister, Scott Morrison — then Treasurer — brandished the dirty matter of the underground while taunting the Opposition, 'Don't be afraid, don't be scared, it won't hurt you; its coal.'⁰⁸ Morrison's uncanny performance was exacerbated by the close examination of his outstretched hand, menacingly grasping the infamous lump of coal.⁰⁹ The traces of a material that usually leaks, rubs, stains, and distributes itself through the air and across surfaces, were somehow contained. Glossed over, in order to leave no trace, no fingerprints adhered to Morrison's lump of coal and no dust could be traced back to the subject's hands. The cuff

and skin of the former Treasurer's right hand remained white, sparkly clean, sanitised from the apparently dirty secrets of government-coal industry relations.

of risk

Figure 05:

Siebe Gorman & Co. Ltd, cage for reviving canary, with oxygen cylinder, 1914. Photograph reproduced by permission © Science and Industry Museum, London, UK.

On 30 December 1986, the UK Government announced that canaries would be phased out from all the country's mines giving way to more sophisticated and cheaper electronic gas detectors.¹⁰ Before this announcement, with their bodies strapped and buckled up with breathing apparatuses, miners had been descending into the depths of the coal mine escorted by these feathered companions who played the role of live alarm systems.¹¹ In addition to portability, it was the canary's specific lung capacity that made it an ideal methane and carbon monoxide gas detector.¹² The tiny golden songbird, whose signs of distress warned miners of the presence of invisible and odourless lethal atmospheric conditions, would simply drop unconscious, if not dead. With apparent compassion, the technologists of coal mining designed a bird resuscitation system, which was nevertheless also a system of bird incarceration.¹³ The cage is an interior within a CO₂ interior — a carceral double interior that is consistent with coal mining's double exploitation of both vital and inert resources. Simultaneously, the canary in the coal mine signals conditions of risk and disparity, with the latter not regarding social status, class, or gender, but the necropolitics that we humans keep imposing on other species.

of violence

Figure 06:

Yale Rosen, *Coal Workers
Pneumoconiosis —
Anthracosilicosis*, 2012. Microscopic
image. Reproduced by Creative
Commons License (CC BY-SA 2.0)
© Yale Rosen.

Unlike the spectacle of the overburden blast — the massive mining detonations that may see a mountain top literally severed to reveal its interior seams through an open cut — the violence of coal mining is meted out on the body indirectly. This violence can be as subtle as it is crippling, slow, silent, and stealthy. A microscope can zoom into a human lung sample, exposing the effects of what is known as coal workers' pneumoconiosis, or black lung disease. This lethal illness is the result of the prolonged exposure to coal dust and its slow accumulation in the minuscule interior spaces of the human body, in this case, the lungs.¹⁴ The occurrence of this irreversible condition, once curbed thanks to the development of new mining technologies, emerging medical imaging systems, and strict workplace regulations, has seen an alarming resurgence in countries with large levels of coal extraction and consumption, including China, the United States, and Australia.¹⁵ The visual hyper-proximity provided by the microscopic image reveals a facet of coal mining that remains out of sight, and in which the decay of the human body becomes pattern, abstraction, texture. The violence of coal mining is usually captured in aerial photographs of open-cut mines, in which the external scarring on the landscape is commonplace.¹⁶ Conversely, a microscopic image can portray a different kind of scar, which is nevertheless closely related. An incision that extracts a small sample from the human body is evidence that the violence of coal mining is also inflicted, slowly, in its own extraordinary interiors. The image depicts the cementation of a soft and porous tissue, the clogging and clotting of an otherwise vital interiority.

of staging

Dressed in suspiciously pristine mining attire, this photograph depicts former Australian Prime Minister, Tony Abbott; a conservative politician who, in 2013, infamously proclaimed, 'Coal is vital for the future energy needs of the world ... Coal is good for humanity.'¹⁷ Although Abbott seems to listen with attention to his coal miner companion, his focus seems to be somewhere else, ahead, deep into the horizon — a horizon that is actually not too distant, considering that the two men are in the narrow tunnels of the Metropolitan Colliery in New South Wales. The Prime Minister's heroic posture and reflexive gaze hark back to countless images of powerful and visionary patriarchs, embodying the Enlightenment ideal

of mankind as an unyielding manifestation of progress. The donning of mining apparel becomes a signifier of kinship and equality, activated through what seems to be a staged opportunistic event. Nevertheless, coal dust — or rather the lack of it — gives the former Prime Minister's act away. Just like the Queen's virginal jumpsuit, the patriarch's crisp hi-vis vest and unpolluted P2 dust mask starkly contrast to the miner's dusty attire, as well as to the dark interior space of the environment. This image implies the reality of an exploited labour force that is manipulated when convenient, and which is later forgotten by a class-based socio-political system that seems unable to resolve the perpetuation of disparity.

Figure 07:

Reuters/Tim Wimborne, *Australia's conservative federal Opposition Leader, Tony Abbott, talks to a coal miner in the Metropolitan coal mine at Helensburgh, 2011.* Photograph. Reproduced by permission © Reuters/Tim Wimbone.

of monsters

Figure 08:

Raimond Spekking, *Bucket-wheel excavators 288 and 258 in Garzweiler surface mine*, 2012. Photograph. Reproduced by Creative Commons License (CC BY-SA 4.0) © Raimond Spekking (via Wikimedia Commons).

The violence that mining inflicts on the planet is much more complex and widespread than we think. Historically, the 19th century technologies of coal extraction began with a mining pick, swung by a human body in a continuous machine-like motion.¹⁸ Similarly, mining today depends on a simple, almost primitive act. The seismic refraction survey is a standard method used to estimate the geological properties of what lies beneath the Earth's surface.¹⁹ Only one human being is needed to blow a single sledgehammer hit on a metal plate, equipped with sophisticated sensors and strategically positioned in a predetermined point in space. But even if the nomenclature of mining is one of blowing, hitting, breaking, crushing, blasting, pulverising, and grinding, the activity remains senseless to its own dangers, just like the ricochets extended from the hard rock face through the arms and down the spine of a pickaxe miner. From the pickaxe to the sledgehammer blow, the technologies of coal mining have advanced relentlessly, reaching the creation of menacing mammoth machines. Beneath and above the Earth's surface, beasts like the Bagger 288 bucket-wheel excavator — soon to be fully automated — eat and process the planet itself as part of a narrative of continuous growth, extraction, and obliteration.²⁰ These are the future class-war machines, which slowly but steadily will make mining labour redundant. Remotely, as invisible to us as the unmanned aerial combat vehicles (or drones) that hover high above the ground, these machines will also produce casualties. But their casualties will not be instantaneous — therefore not spectacular — but the result of a dilated conflict that enacts

spatial and ideological antagonisms. In order to extract coal (a matter produced in the deep time)²¹ even the gigantic technologies that we have created can appear flimsy. The uncanny machine in the photograph, one of the largest ever built, could be a child's toy or a prop for a sci-fi movie.

of bodies

Figure 09:

Great Britain Commissioners for Inquiring into the Employment and Condition of Children in Mines and Manufactories, *The condition and treatment of the children employed in the mines and colliers of the United Kingdom carefully compiled from the appendix to the first report of the Commissioners with copious extracts from the evidence and illustrative engravings* (no. 7), 1842. Reproduced under Creative Commons License (Public Domain Mark 1.0) © The British Library.

The violence that coal mining inflicts on the body begins at the scale of the systematic abuse exercised on indigenous peoples through colonialism and indentured labour.²² The exploitation of bodies in the pursuit of mineral profits would power the coal mining industry not long after the abolition of slavery.²³ Mining has thus deliberately operated in total darkness — out of sight and out of mind — a strategy that has been perpetuated from the early days of coal extraction at an industrial scale. Back then, the dimensions of the CO₂ interiors were more suited to badgers and moles than upright bipedal creatures. The cramped and enclosed confines of those early-day coal mines, no more than 75 cm high, made children's compact and flexible bodies ideal for the eleven to twelve-hour shifts typical at the time.²⁴ Trappers, hurriers, getters, and crushers are some of the names given to the roles that mining bosses assigned to children.²⁵ Such exploitation of minors might seem a thing of the past; however, today, child labour remains rampant in the extractive industries of some developing countries.²⁶ In the same way that the needs and desires for the modern comforts brought by coal would allow for the wilful ignorance of its production methods, so too is our ever-growing need for cobalt and other precious metals that are necessary to satiate our relentless obsession with smartphones, laptops, and an ever-growing list of electronic gadgets. For example, in the mines of the Democratic Republic of Congo, it is estimated that 40,000 children work in the most precarious conditions.²⁷

of skins**Figure 10:**

David Goldblatt, *Bathroom attached to the office of the General Manager with 'dirty' bath and 'clean' bath for his use after he had been underground. New Kleinfontein Gold Mine, Benoni, May 1967*, 1967. Photograph. Reproduced by permission © The David Goldblatt Legacy Trust and Goodman Gallery, London, UK.

The French philosopher, Bruno Latour, has described our relationship with planet earth as dermatological.²⁸ There is no globe, Latour claims, in contrast to traditional representations of our planet as a sphere.²⁹ He argues that we comprehend it within what he calls 'the critical zone,' or the area we inhabit at the limit between the planetary solid and the cosmological void.³⁰ So, too, can the inhabitable interiors of the coal mine be understood as seeding and spreading within this planetary skin. These quasi-domestic spaces appear above the underground as a kind of conduit from one world to another. The cross-section portrays a single line — a groundline — that separates the dark from the light in mining. However, the reality is not that kind of ultra-sharp line but rather a relatively wide strip with fuzzy edges. Halfway between the miners' ascent from the tunnel to their descent from the small aeroplanes flying them in and out, the skin of coal mining is the equivalent to purgatory. Today, this planetary skin is not only temporary but equipped with spaces designed for short-term accommodation, services, and entertainment.³¹ Also, as its labour is heavily subject to filth and coal dust, new forms of domesticity have emerged on it. In 1967, the South African photographer David Goldblatt captured this space dedicated to the ritual of cleaning, ablution, and refreshment.³² However in this space, the act of bathing is not straightforward but hierarchical, sequential, and segregated with dirty and clean tubs. The gritty second skin that coats the miner's body with a thick layer of coal dust must be first scrubbed and scoured off as a daily purification routine. Not the lungs,

though. The skin becomes another refrain of the landscapes of extraction, a dermatological territory that is also subject to dirt, pollution, and slow degradation.

of maps**Figure 11:**

George F. Becker, *Comstock mine maps. Number VI*, 1882.
United States Geological Survey.
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Rumsey Map Collection, David
Rumsey Map Centre, Stanford
University Libraries, CA, USA.

Mapping is essential to coal mining. Along with the section, the map is another instrument necessary to create and navigate these complex underground spatial networks. Within the mine, the horizontal condition is subordinated to the vertical. The spaces that are progressively carved out from within the mine are not the result of the need for a territorial distribution or organisation. Instead, such conditions are simply the consequence of the very act of extraction, which also serves as a means of human, technological, and material circulation. The documents representing these networks bear similarities to urban maps, as they also include roads, blocks, and open spaces. Nevertheless, in early underground coal mines, the circulation pattern was unpredictable, as the direction of its pathways followed the presence of the material soon to be extracted.³³ This subterranean *dérive* resulted in patterns reminiscent of cities, not only regarding form but also to the events that occur within them. In the CO₂ interiors, there are vehicles dangerously moving at speed, artificial lights, noise, fumes, animals, waste, etc., just like in any other city. And while fewer and fewer, there are also humans operating machines, managing work, eating lunch, drinking coffee, etc. These interiors are rarely mentioned in the discussion around global warming, perhaps because they are at the opposite end of the planetary scale that we usually invoke in these conversations. In their dark and silent remoteness, these interior spaces are inevitably outside of our perception. Scale is a notion that is always difficult to perceive, but never more so than in the oppressive confines of these subterranean urban-like spaces.

of atmospheres

Figure 12:

Nok2566, *FlyAsh (SEM) 750X*, 2016.
Microscopic image. Reproduced
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The space of climate transformation that has heralded the Anthropocene is inherently amorphous and scale-less. Likewise, the relationship between what happens inside the coal mine and its multiplying effects on the Earth's surface is difficult to quantify. If we were to begin the additions needed to understand this magnitude, we would have to begin with measuring a particle of coal dust suspended in the air or caught inside the body of a miner suffering from black lung disease. At this point, to simply follow the small particles that accumulate to a scale that may result in atmospheric collapse is one trajectory, but we can also look at other material concerns. The toxic legacy of coal mining has little respect for territorial boundaries. Its dispersion occurs across different mediums and materials, from water and soil to air. Further, it occurs across different timescales, from contemporary contamination into the future. Another inherent characteristic of coal mining is its porous territoriality, a notion in which the limits of the mining operation are indiscernible, diffuse, always falling beyond the representational frame. Typical aerial photographs of open-cut mines are reminders of what spills outside of the frame. Taken from long distances and extreme heights, in these photographs forms become abstractions, ambition becomes geometry, desertification becomes pattern, erosion becomes texture, pollution becomes sfumato. What spills outside the frame of those images is not only polluted water and soil, but the form of the Anthropocene itself.

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authors biography

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notes

- 01 On 30 June 1958, Her Majesty Queen Elizabeth the II visited the Rothes Colliery, near Kirkcaldy in Fife, Scotland. The event was documented extensively by the media and widely disseminated across different platforms. See Miles Oglethorpe, 'Losing Our Mines: Scotland's Coal Mining Legacy,' *Historic Environment* 28, no. 1 (2016): 86–96; 'Rothes Colliery,' *Canmore: National Record of the Historic Environment* (Scotland), <https://canmore.org.uk/site/70464/rothes-colliery>.
- 02 The UK National Coal Board intended for the Rothes Colliery to be a superpit, with a lifespan of 100 years and an output of over 5,000 tons of coal per day. This ambitious mining operation was supposed to supply the UK with a surplus of energy in the post-war period. A substantial number of workers to operate the mine and develop new housing was necessary. The visit by the Queen consolidated the importance of this mine as an investment in the future of Scotland and beyond. See Miles Oglethorpe, *Scottish Collieries: An Inventory of Scotland's Coal Industry in the Nationalised Era*, (Edinburgh: Royal Commission on the Ancient and Historical Monuments of Scotland and the Scottish Mining Museum Trust, 2006); 'Rothes Colliery,' *Northern Mine Research Society* (Britain), <https://www.nmrs.org.uk/mines-map/coal-mining-in-the-british-isles/scotland/kirkcaldy/rothes-colliery/>.
- 03 See Sanjay Sharma, 'The Impact of Mining on Women: Lessons from the Coal Mining Bowen Basin of Queensland, Australia,' *Impact Assessment and Project Appraisal* 28, no. 3 (2010): 201–215.
- 04 This visual representation is unfolded throughout Pinschewer's film in subtle ways. However, it is most clearly depicted in scenes where scores of men, presented as black silhouettes, stop their activities to attend King Coal's call for help. See Jules Pinschewer, dir., *King Coal* (1948), British Film Industry Archive, film, 03'12".
- 05 In Australia, coal and prosperity are terms that have been bounded into a notion that underscores a long history of trade, politics, and culture. This notion has been repeatedly echoed by the media, where political and industrial voices influence the public perception of coal's value — albeit in financial, social, and humanitarian terms. See Giorel Curran, 'Coal, Climate and Change: The Narrative Drivers of Australia's Coal Economy,' *Energy Research & Social Science* 74 (2021): 101955.
- 06 We use the term 'coal politics' to synthesise the enmeshing of historical, mythic, and political issues with economic and material ones, shaping Australia's appalling record of climate inaction. For more, see Simon Copland, 'Anti-Politics and Global Climate Inaction: The Case of the Australian Carbon Tax,' *Critical Sociology* 46, no. 4–5 (July 2020): 623–41; David Holmes 'The Fossil-fuelled Political Economy of Australian Elections,' *The Conversation* (Melbourne), June 22, 2016, <https://theconversation.com/the-fossil-fuelled-political-economy-of-australian-elections-61394>.
- 07 The colonial markings across Australia mirrored those of Great Britain's, from an emphasis on resource extraction and industrialisation powering the growing commonwealth nation into prosperity to the political and spatial domain of parliament.
- 08 On 8 February 2017, Australian Prime Minister, Scott Morrison (then in the role of Treasurer), made this controversial declaration while brandishing a lump of coal in Parliament. See Katharine Murphy, 'Scott Morrison Brings Coal to Question Time: What Fresh Idiocy Is This?,' *The Guardian* (Australia), February 9, 2017, <https://www.theguardian.com/australia-news/2017/feb/09/scott-morrison-brings-coal-to-question-time-what-fresh-idiocy-is-this>.
- 09 Murphy, 'Scott Morrison Brings Coal to Question Time: What Fresh Idiocy Is This?'
- 10 See '1986: Coal Mine Canaries Made Redundant,' *British Broadcasting Corporation*, https://news.bbc.co.uk/onthisday/hi/dates/stories/december/30/newsid_2547000/2547587.stm
- 11 See Christal Pollock, 'The Canary in the Coal Mine,' *Journal of Avian Medicine and Surgery* 30, no. 4 (December 2016): 386–391.
- 12 Pollock, 'The Canary in the Coal Mine,' 387–390.
- 13 Lewis Pollard, a curator in the Science and Industry Museum in Manchester, describes the device used to resuscitate canaries created in 1896 as his favourite item in the museum's collection. See Lewis Pollard, 'Exploring our Collection: The Canary Resuscitator,' *Science and Industry Museum Blog*, <https://blog.scienceandindustrymuseum.org.uk/canary-resuscitator/>.
- 14 See Graeme R. Zosky, et al., 'Coal Workers' Pneumoconiosis: An Australian Perspective,' *Medical Journal of Australia* 204, no. 11 (2016): 414–418.
- 15 See Robert A. Cohen, 'Resurgent Coal Mine Dust Lung Disease: Wave of the Future or a Relic of the Past?,' *Occupational and Environmental Medicine* 73, no. 11 (2016): 715–716; Matt Peacock, 'Black Lung: Queensland Underground Coal Mines Warned to Reduce Dust Levels Below Safety Standards,' *Australian Broadcasting Corporation News*, December 23, 2015, <https://www.abc.net.au/news/2015-12-23/black-lung-warning-for-queensland-coal-mines/7051490>.
- 16 This is evidenced by a relatively new trend emerging within the discipline of landscape photography, represented by eminent photographers like John Gollings and Edward Burtynsky. See Virginia Rigney, 'Shaping the Country: John Gollings' Open Cut Mines Series,' *Artlink: Contemporary Art of Australia and the Asia-Pacific* 33, no. 4 (2013): 26–29; Edward Burtynsky, *Australian Minescapes* (Welshpool: Western Australia Museum, 2009).
- 17 On 13 October 2014, former Australian Prime Minister Tony Abbott made these controversial remarks at the opening of the Caval Ridge Coalmine near the town of Moranbah, Queensland. See Gabrielle Chan, 'Tony Abbott Says "Coal Is Good for Humanity" While Opening Mine,' *The Guardian* (Australia), October 13, 2014, <https://www.theguardian.com/world/2014/oct/13/tony-abbott-says-coal-is-good-for-humanity-while-opening-mine>.
- 18 See *The Condition and Treatment of the Children Employed in the Mines and Colliers of the United Kingdom. Carefully Compiled from the Appendix to the First Report of the Commissioners ... With Copious Extracts from the Evidence, and Illustrative Engravings* [Preface Signed: W.C.] (United Kingdom: William Strange, 1842), 5.
- 19 See R. F. Goossens and D. J. Buchanan, 'The Role of Seismic Surveying in Coal Mining Exploration,' *Mining Science & Technology* 1, no. 4 (1984): 253–267.

- 20 See Robert Malone, 'The World's Biggest Land Vehicle,' *Forbes*, March 12, 2007, https://www.forbes.com/2007/03/12/bagger-vehicle-tractor-biz-logistics-cx_rm_0312vehicle.html?sh=66865c3aa1b3.
- 21 John McPhee, the celebrated American writer, pioneer of creative nonfiction, introduced and applied the term 'deep time' to encapsulate the concept of geological time. See John McPhee, *Annals of the Former World* (New York: Farrar, Straus and Giroux, 1998), 29.
- 22 See Frank Stevens, 'Aboriginal Labour,' *The Australian Quarterly* 43, no. 1 (March 1971): 70-71.
- 23 *The Condition and Treatment of the Children Employed in the Mines and Colliers of the United Kingdom*, 39.
- 24 *The Condition and Treatment of the Children Employed in the Mines and Colliers of the United Kingdom*, 4.
- 25 *The Condition and Treatment of the Children Employed in the Mines and Colliers of the United Kingdom*, 36.
- 26 See for example, 'Learning More about Child Labour in Mining,' *International Labour Organisation*, <https://www.ilo.org/ipec/areas/Miningandquarrying/MoreaboutCLinmining/lang-en/index.htm>; Annie Kelly, 'Apple and Google Named in US Lawsuit Over Congolese Child Cobalt Mining Deaths,' *The Guardian* (Australia), December 16, 2019, <https://www.theguardian.com/global-development/2019/dec/16/apple-and-google-named-in-us-lawsuit-over-congolese-child-cobalt-mining-deaths>.
- 27 See Dylan O'Driscoll, *Overview of Child Labour in the Artisanal and Small-scale Mining Sector in Asia and Africa*, K4D Helpdesk Report (Brighton, UK: Institute of Development Studies), 6; Robin McKie, 'Child Labour, Toxic Leaks: The Price We Could Pay for a Greener Future,' *The Guardian* (Australia), January 03, 2021, <https://www.theguardian.com/environment/2021/jan/03/child-labour-toxic-leaks-the-price-we-could-pay-for-a-greener-future>.
- 28 See Bruno Latour, *Facing Gaia: Eight Lectures on the New Climatic Regime* (Cambridge: Polity Press, 2017), 78.
- 29 See Bruno Latour and Christophe Leclercq, eds., *Reset Modernity* (Karlsruhe: ZKM | Zentrum für Kunst und Medien, 2016), 50.
- 30 See Bruno Latour, 'Some Advantages of the Notion of "Critical Zone" for Geopolitics,' *Procedia Earth and Planetary Science* 10 (December 2014): 3-6.
- 31 See for example, Ben Creagh, 'A Swift Answer to a More Comfortable FIFO Lifestyle,' *Australian Mining*, August 4, 2017, <https://www.australianmining.com.au/features/swift-answer-comfortable-fifo-lifestyle/>.
- 32 See David Goldblatt and Nadine Gordimer, *On the Mines* (Germany: Steidl, 2012).
- 33 For example, see the 'Illustration Showing the Chronology of Coal Mining,' *Making Sense of Mines*, National Coal Mining Museum, https://www.ncm.org.uk/system/uploads/image_content/image/968/The_Development_of_Mining-colour-cmyk.jpg.