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Infrastructural Narratives:
'Progress', Resistance and Refusal in London (1844-1885) and on the Uganda
Railway (1896-1904)

PhD Architectural History and Theory

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I, Miranda Critchley, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

ABSTRACT

In the early nineteenth century, new infrastructural networks seemed to promise social change. The railway, sometimes termed the 'iron missionary', was invested with the power to create common interests, bring the classes closer together without conflict, and deliver 'modernity' around the world, particularly to countries colonised by Britain. These narratives sought to naturalise infrastructural development as an agent of supposed 'progress', and political discourses from utopian socialism to liberalism adopted infrastructure as a means of spreading 'civilization', a concept that posited British agrarian capitalism as the ideal form of society. Through its associations with modernity and 'progress', infrastructure was mobilised as a justification for European colonial expansion and used as a cover for extraction.

This research will consider the visual and non-visual narratives of 'progress' and 'public good' associated with infrastructures in nineteenth century and examine the ways in which these narratives, along with their inverse ideas of delay and disruption, facilitated the displacement of urban working-class populations in the UK, the expropriation of land from indigenous populations under the British Empire, and the coercion and exploitation of labour. In particular, it will focus on railways in and around London from the mid 1840s to the mid 1880s and the construction of the Uganda Railway in East Africa, in the years 1896-1904. Focusing on these two different sites is an attempt to emphasise the extent to which ideas about infrastructure and the engineering profession were invested in and dependent on colonisation and imperial expansion.

Alongside an analysis of the ways in which alternating narratives of 'progress' and delay facilitated extraction, displacement and expropriation, this thesis will also consider how infrastructures and their supposed improving effects were resisted and disrupted. It will take a broad understanding of resistance, from varying forms of strike action to theft, deception, and what AbdouMaliq Simone calls 'stealth and supplement' to argue that infrastructural narratives have always been contested. Superficial, classist and racist understandings of their abilities to deliver 'progress' have been consistently challenged. Rather than opposing infrastructure, this thesis seeks to demonstrate that its effects are not inherent but always politically contingent.

IMPACT STATEMENT

Inside academia, I would like this thesis to encourage scrutiny of UK universities, including trade union fights for better working conditions and funding and immigration regulations that restrict who is able to undertake PhD research in the UK. I hope that the analysis the thesis provides of the connections between colonialism and infrastructural narratives of progress in the nineteenth-century will support continuing efforts to include histories of the British empire in both school and university curricula.

Outside academia, I hope that this research will provide a means to challenge common myths about the British empire, in particular the idea that railways were a 'benefit' or a 'gift' of colonialism. The account it provides of the exploitation of labour and the corresponding resistance contributes to histories of labour disruption upon which present movements of worker power and solidarity are built. The thesis also provides historical context for radical visions of infrastructure and discussions on infrastructure and 'progress', and it encourages the thorough analysis of narratives of progress and public interest.

These impacts have been brought about through a series of conference presentations, including regular meetings of the HERA-funded project of which this research was a part (Printing the Past: Architecture, Print Culture, and Uses of the Past in Modern Europe) and meetings with other projects funded in the same cycle. I have also included elements of this research in teaching, particularly in a module for first year architecture undergraduates at the University of Greenwich. This module aimed to contextualise the field of architecture and to encourage students to scrutinise architectural or infrastructural narratives of benefit and improvement, understand the limits of architecture's ability to effect change, and question who really benefits from development and regeneration projects in the UK.

CONTENTS

ACKNOWLEDGMENTS

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INTRODUCTION

In 1896, construction began on the Uganda Railway. It was called the Uganda Railway because Uganda was its destination, as historian Chao Tayiana points out: 'it was named after where it was going to, not where it was coming from' or where it travelled through.[1] It was a strategic railway, built to aid the British in their colonisation of east Africa, but other narratives were spun into its construction: it would provide peace and mobility for local people; it was 'a noble project for opening up Africa, for trade, civilization and the extinction of slavery.'[2] This last quote is from a report by Sir John Fowler, a successful engineer who worked on projects in London before becoming an armchair colonialist, making money from consulting on projects across the British empire. Fowler's assessment shows that the railway had taken its place in narratives of 'progress' or discourses of modernity. These narratives provided justifications for colonialism and its violence, for dispossessing indigenous populations, and for a belief 'in the inherent superiority of people whose cultural and economic practices bore resemblance to a burgeoning agrarian capitalism in England'[3]— what I would call white supremacy.

This idea of the connection between infrastructures and 'modernisation' has persisted and is now often the subject of research: Akhil Gupta, for example, is interested in infrastructure as an 'index of modernity and a symbol of development.'[4] This infrastructural symbolism is joined in the British imperial imagination with the idea that railways were a 'good' outcome of empire and a justification for it, an attitude often expressed in right-wing discussions of empire and British histories of the Uganda Railway: one prominent volume, for example, contains a foreword with the author's view that empire was 'on balance a good thing.' Along with the idea that railways were a 'gift' to colonised countries, there are often romanticised and sanitised narratives of their construction and use. A manuscript copy of the historian A. T. Matson's introduction to a book called *Most Courageous Railway in the World*

1   Anna Rose Kerr, interview with Chao Tayiana on 'British Subjects' podcast, 14 May 2019.
2   Sir John Fowler's report on the proposed railway, 89. Nairobi National Archives (NAN), PC/Coast/1/1/2.
3   Brenna Bhandar, *Colonial Lives of Property: Law, Land and Racial Regimes of Ownership* (Duke University Press, 2018), 7.
4   Akhil Gupta, 'The Future in Ruins: Thoughts on the Temporality of Infrastructure,' in Nikil Anand, Akhil Gupta, and Hannah Appel, eds., *The Promise of Infrastructure* (Duke University Press, 2018): 68.

manifests almost all of these ideas: that the railway was somehow a superlative achievement of courage rather than the result of the exploitation and coercion of African and Indian labour; that it was the most 'courageous in the world', another favourite Victorian superlative claim; that the railway was 'a triumph of human endeavour and resolution over the most daunting obstacles and setbacks'; euphemistic reference to the 'hardiness shown by the working gangs, of all races'; the claim that 'hardly any determined and sustained opposition' was encountered, save from the Nandi community; that 'the invasion of tribal homelands by the railway caused very little lasting bitterness, even over the acquisition of land.'[5] It is almost impressive that the author has managed to fit so many colonial myths, evasions and simplifications into such a short text, but these views are hardly unique—they exist in many of the accounts of the railway written from a white perspective, even more contemporary ones.

A similar argument that railways were engines of progress, a source of conflict-free 'development', was also present in the UK in key Victorian publications like the Illustrated London News and in political discourses that invested in the power of the network: the railway—the 'iron missionary'—was attributed with the power to create common interests and bring the classes closer together. These infrastructural narratives, or what a recent volume edited by Nikhil Anand, Akhil Gupta and Hannah Appel has called the 'promises of infrastructure,'[6] glossed over some of the realities of infrastructure networks and their construction: community anxieties about networks and connections to them, displacement, demolition, labour exploitation, and engineering's entanglement with violent imperialism and the development of racial capitalism, as it has been articulated in particular by Gargi Bhattacharyya.[7] In London, though also in other cities in the UK, these narratives failed to account for the way in which clearances for the construction of railways caused overcrowding in adjacent areas, or how demolitions created a sense of instability in the urban environment. In the postcolonial context, Kenny Cupers and Prita Meier's work on the visual culture of the Trans-African Highway argues that Afro-futurist imagery of the road, with tarmac stretching out from the Earth into

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5   A. T. Matson, 'Most Courageous Railway in the World: Introduction'. 1980. NAN MSS/10/5.

6   Anand, Gupta, and Appel, eds., *The Promise of Infrastructure*.

7   Gargi Bhattacharyya, *Rethinking Racial Capitalism: Questions of Reproduction and Survival* (London: Rowman & Littlefield, 2018).

space, 'proclaim[ed] Africa as the globe's future engine of development,'[8] while photographs by William Bell in Efua Sutherland's 1961 book The Roadmakers presented the highway as 'unifier, liberator, and integrator.'[9] Cupers and Meier contrast this visual imagery with the depiction of a 'Trans-Africa Road' in Ngugi wa Thiong'o's book *Petals of Blood*, where 'infrastructure is the means by which the Kenyan state becomes neocolonial,'[10] an 'exploitative and divisive' technology but nevertheless generative of 'the unpredictable, the unfinished, [and] the transgressive.'[11] Infrastructures bring with them narratives of 'progress' almost as a condition of their construction— it is often necessary to generate some kind of story of 'benefit', 'improvement', or 'modernisation' to mobilise the resources needed to build infrastructure. To secure investment, these narratives distort, gloss, and simplify, presenting infrastructural futures that rarely come to pass.

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This thesis is positioned at the intersection of a number of areas of scholarship. One group might loosely be called infrastructural studies, the broadness of which is captured in Brian Larkin's article 'The Politics and Poetics of Infrastructure'.[12] Larkin calls infrastructures 'conceptually unruly' and argues that it's not always clear where infrastructure begins and ends, but also that this conceptual broadness and unruliness allow for a more dynamic field.[13] Questions of the relationship between infrastructure and ideas of progress or modernity are now common in this area of work: in Splintering Urbanism, Stephen Graham and Simon Marvin ask how 'the ideals of 'progress' via planned, publicly regulated or monopolistic transport, telecommunications, energy and water networks' emerged, and how 'such notions become so closely wedded to the modern rationalities of urban planning, the elaboration of

8   Kenny Cupers and Prita Meier, 'Infrastructure between Statehood and Selfhood: The Trans-African Highway,' *Journal of the Society of Architectural Historians* 79:1 (2020): 67.

9   Ibid., 65.

10   Ibid., 61.

11   Ibid., 78.

12   Brian Larkin, 'The Politics and Poetics of Infrastructure', *The Annual Review of Anthropology* 42 (2013): 327-343.

13   Ibid., 329.

modern states, and practices and principles of modern urban consumption';[14] similarly, in The Promises of Infrastructure, the authors consider how infrastructures fail to live up to their promises and create a 'tension between aspiration and failure.'[15] These themes were also explored in Naveeda Khan's earlier article on roads and modernity in Pakistan, in which she examines the initial unpopularity of the M2 Motorway, which was supposed to 'revolutionise communication' and provide the 'chance to be modern'.[16]

The most formative texts in this field both acknowledge infrastructure's connection to narratives of modernity, but also emphasise the ways in which the relationship between infrastructure and progress was complex, contested, and 'mangled'—old technologies persisted despite the arrival of the new, and connection and technology were viewed with distrust, even fear.[17] At the same time, delays, disruptions and failures thwarted the 'completion' of infrastructural networks. In Christopher Otter's study of slaughterhouses and electricity, 'modernisation' was partial and strongly resisted; in Matthew Gandy's study of the Paris sewers, organic and holistic ideas about the city influenced the initial design of the sewer network, rather than concepts of modernisation.[18] These works suggest that the conception of an Enlightened city is more myth than reality: even Haussmann was not always working with ideas of rationality. In Disrupted Cities, Stephen Graham brings together studies that focus on what happens when the infrastructures that facilitate the circulation of people, power, water, waste and capital break down or are interrupted by 'technical malfunctions … wars, terrorist attacks, public health crises, labour strikes, sabotage, network theft, extreme weather, and other events usually considered to be "natural".'[19]
Of the works that emphasise fears of connection, Barbara Penner's article on

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14   Stephen Graham and Simon Marvin, *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition* (London: Routledge, 2001), 42.

15   Anand, Gupta, and Appel, eds., *The Promise of Infrastructure.*

16   Naveeda Khan, 'Flaws in the Flow: Roads and their Modernity in Pakistan', *Social Text* 89 24:4 (2006): 88.

17   See Christopher Otter, 'Cleansing and Clarifying: Technology and Perception in Nineteenth-Century London', *Journal of British Studies* 43:1 (2004): 40-64.

18   Matthew Gandy, 'The Paris Sewers and the Rationalization of Urban Space', *Transactions of the Institute of British Geographers* 24:1 (1999).

19   Stephen Graham, 'When Infrastructures Fail,' in Stephen Graham, ed. *Disrupted Cities* (New York: Routledge, 2010), 2.

sewer gas in the city is particularly important.[20] Penner investigates the fears that surrounded the sewer system, in particular the idea that noxious sewer gases could infiltrate homes via pipes and water closets. In this context, connection was understood as dangerous, even deadly. Rather than demarcating boundaries, like London Bridge in Dana Arnold's work,[21] 'modern technological systems did not respect existing social barriers, or worse, made them meaningless.'[22] In response to these anxieties, certain methods of representation were used to make the 'plumbed-in-world' visible and understandable.[23] The sanitary section, the term Penner gives to drawings that depicted the entry of sewer systems into the home, 'expose[d] infrastructure – normally encased in furnishings and embedded in walls – and … reveal[ed] how formerly discrete fixtures actually formed an interrelated network of pipes and water and air currents.'[24] Connective systems were approached with reluctance, fear and suspicion; but at the same time, techniques developed to allay these fears by making systems visible. Here, I investigate similar techniques in relation to railways, although they are not necessarily all visual: many involve the weaving of narratives of sanitised progress, a form of deception intended to derail resistance and suspicion.

While the promises modernity and 'progress' attached to physical infrastructural networks are often a focus for research, studies of infrastructure are not only centred on 'reticulated systems of highways, pipes, wires, or cables.'[25] In his article on 'people as infrastructure', AbdouMaliq Simone extends 'the notion of infrastructure directly to people's activities in the city', where conjunctions and 'combinations of objects, spaces, persons, and practices … become an infrastructure—a platform providing for and reproducing life in the city.'[26] Huda Tayob develops Simone's conceptualisation in her work on pan-African

20   Barbara Penner, 'The Prince's Water Closet: Sewer Gas and the City', *The Journal of Architecture* 19:2 (2014): 249-271.

21   Dana Arnold, 'London Bridge and its Symbolic Identity in the Regency Metropolis: the dialectic of civic and national pride', in Dana Arnold, ed., *The Metropolis and its Image: Constructing Identities for London, c.1750-1950* (Oxford: Blackwell, 1999), 80.

22   Ibid., 265.

23   Ibid., 253.

24   Ibid., 258.

25   AbdouMaliq Simone, 'People as Infrastructure: Intersecting Fragments in Johannesburg', *Public Culture* 16:3 (2004): 407.

26   Ibid., 408.

markets in Cape Town, which recognises the 'infrastructural role' of mixed-use 'Somali mall' spaces in Bellville.[27] These analyses emphasise the how linkages between people provide the means of life for many inhabitants of the city, and that understanding infrastructure simply as material networks fails to account for much of urban life. For this thesis, Simone and Tayob's work helps to think through the ways in which alternative infrastructural forms—of resistance, information sharing, evasion, or theft—accompanied the physical construction of railways.

This positioning of the thesis with infrastructural studies rather than railway history is intentional, even if the use of the term in relation to the nineteenth century is somewhat anachronistic—as Davies points out, 'the term "public works", coined by Adam Smith in his *Wealth of Nations* to describe "one of the most basic enabling institutions of capitalism," was more commonly used at the time.'[28] Histories of the term infrastructure have shown that on whole, while the word was used in nineteenth-century French civil engineering, it gained popularity in English 'after Roosevelt's New Deal during the era of the Great Depression' and in the early 1950s in connection with NATO war mobilisation studies.[29] In using the term despite the fact that it wasn't deployed by engineers, trade unionists or writers at the time, I am following Davies in Imperial Infrastructure, who argues that 'infrastructure' nevertheless 'accurately isolates and identifies the importance of these projects, the uneven development of which both sustained and challenged the world-system during this period of high imperialism.'[30] Davies also suggests that the use of the term in a nineteenth-century context helps to draw attention to the fact that 'imperial infrastructures, through both their physical layouts and their associated ideologies, continue to shape the twenty-first-century world.'[31] As well as the idea that infrastructure allows connections to be drawn between the past and the present and a focus on

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27   Huda Tayob, 'Architecture-by-migrants: the porous infrastructures of Bellville', *Anthropology Southern Africa* 42:1 (2019): 49.

28   Davies, *Imperial Infrastructures*, 7.

29   Ashley Carse, 'Keyword: Infrastructure,' in Penny Harvey, Casper Brrun Jensen and Atsuro Morita, eds., *Infrastructures and Social Complexity* (London: Routledge, 2017). H. William Batt, 'Infrastructure: Etymology and Import', *Journal of Professional Issues in Engineering* 110:1 (1984); Michael Rubenstein, quoted in Davies, *Imperial Infrastructures*, 6.

30   Davies, *Imperial Infrastructures*, 7.

31   Ibid., 7.

relations with capitalism and its world systems, the term also signifies a move away from traditional railway history, which has often reproduced colonial ideas of 'progress' and 'civilization'.

But this is not to say that none of the more traditional works of railway history have been influential. H. J. Dyos's two articles on railway clearances and housing in London provide a key outline of the ways in which railway companies operated and the various attempts to track, record and regulate their displacement of the working classes, along with debates about workmen's fares and migration to the suburbs.[32] Similarly, John Kellet's book on railways and Victorian cities provides and important account of the impact of construction on cities and establishes the unusual privileges that railway companies were given: corporate form and the power to acquire property by compulsory purchase.[33] While the work of both Kellet and Dyos has been instrumental in forming this thesis, both have a narrow focus on either London or the UK and don't link the developments in railways, forms of land acquisition, and ideas of infrastructure, progress and public purpose to colonial developments.

Ian Kerr's Marxist history of railway construction in India, however, gives important insights into how colonial officials understood 'freedom' as Indian labourers' ability 'to sell their labour power in a market regulated by "the natural laws of supply and demand".[34] Kerr's designation of railway construction in nineteenth-century India as a 'capitalist enterprise, a fact not changed when the colonial government began to build and own railways' is also important in its suggestion that colonial railways were still capitalist projects, even when they were state-run.[35] Finally, works that explain the endlessly complicated processes and financing of railway construction have been invaluable too: R. W. Kostal's Law and English Railway Capitalism, for example, elaborates on methods of land acquisition and the relationships between railway capitalists and lawyers, which

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32   H. J. Dyos, 'Railways and Housing in Victorian London: I. "Atilla in London"', *The Journal of Transport History* 2:1 (1955): 11-21; H. J. Dyos, 'Railways and Housing in Victorian London: II. "Rustic Townsmen"', *The Journal of Transport History* 2:2 (1955): 90-100.

33   John R. Kellet, *Railways and Victorian Cities* (London: Routledge & Kegan Paul, 1979).

34   Ian J. Kerr, *Building the Railways of the Raj*, 1850-1900 (Delhi: Oxford University Press, 1995), 4.

35   Ibid., 5.

was integral for an industrial enterprise that was 'legislated into existence.'[36]

While this thesis draws on infrastructural studies and railway history, it is also firmly situated within histories of colonialism and imperialism. In terms of the relationship between empire and metropole, it draws on Tania Sengupta's work on 'papered spaces,' which emphasises how 'British colonial governance in India was built upon global technologies of writing.'[37] These written regimes and 'paper practices', Sengupta argues, show the 'patchiness and fragility' of the colonial state 'alongside its schemes of overarching and abstract modes of control.'[38] Many of the decisions relating to the Uganda Railway were decided by the Railway Committee, which was chaired by Sir Percy Anderson of the Foreign Office and managed by Sir Francis Langford O'Callaghan, who had recently retired from the public works department of India.[39] Both Anderson and O'Callaghan were based in England and, in this sense, the Uganda Railway was built on paper correspondence—the Chief Engineer frequently had to write to England to consult on decisions and report on 'progress'.

Antoinette Burton's understanding of the field has also been influential in terms of its outline of how British historians have begun to consider how 'imperial culture' functioned in the UK. Historians, Burton argues, are now 'working to understand the impact of imperialism on both dominant and oppositional discourses and to shed a longstanding cultural amnesia about the impact of whiteness of English/British history and in turn on its historiography.'[40] Similarly, Burton also mentions the importance of the involvement of white women in the 'imperial enterprise', a consideration that is also relevant to studies of engineering and infrastructure, even as it appeared to be dominated by white masculinities. Women such as Florence Whitehouse, the wife of the

36   R. W. Kostal, *Law and English Railway Capitalism* (Oxford: Oxford University Press, 1997): 110.
37   Tania Sengupta, 'Papered spaces: clerical practices, materialities, and spatial cultures of provincial governance in Bengal, Colonial India, 1820s-1860s', *The Journal of Architecture* 25:2 (2020): 111-137.
38   Ibid., 113.
39   Ian J. Kerr, 'O'Callaghan, Sir Francis Langford', *Oxford Dictionary of National Biography* (online edition). https://doi.org/10.1093/ref:odnb/35282 (accessed 7 September 2021).
40   Antoinette Burton, 'Rules of Thumb: British History and "Imperial Culture" in Nineteenth- and Twentieth-Century Britain', in Stephen Howe, ed., *The New Imperial Histories Reader* (London and New York: Routledge, 2010), 45.

Chief Engineer of the Uganda Railway, accompanied her husband on various surveying trips, and wives were often used in propaganda and for ceremonial occasions, such as the laying of the final piece of track. In Florence Whitehouse's diaries, we see how she participated in and benefited from empire and the role it allowed her. Burton also emphasises that we cannot let a focus on white women's role in empire to marginalise women of colour, and again this is an important assertion in relation to this thesis, which seeks to give space to east African women's role in resistance, but also the particular vulnerabilities they faced.[41]

As well as examining gender and attempting to demonstrate the relevance of empire to any study of engineering and infrastructure in the UK in the nineteenth century, this thesis also focuses heavily on anti-colonial resistance and resistance to the construction of the Uganda Railway in east Africa, along with resistance to the narratives of progress put forward by industrial capitalism in London. Emphasising resistance and agency have been important points for more recent imperial history. In his study of imperial networks in South Africa and Britain, Alan Lester quotes Gayan Prakash's assertion that black and brown people subject to colonialism were able to shift 'the terrain of engagement by occupying and carving out positions placed in between the powerful command of authority and the powerless silence of the victim'. He goes on to elaborate how actions by Xhosa subjects 'complicated colonial visions and … inflected colonial discourses,' ensuring that the nature of British colonialism 'failed to conform to any of the scenarios held out by various colonial interests.'[42]

More recently, in her book *Insurgent Empire: Anticolonial Resistance and British Dissent*, Priyamvada Gopal has argued for the importance of recognising that resistance was part of empire from its beginnings, but also that 'Britain's enslaved and colonial subjects were not merely victims of its crises of conscience, but rather agents whose resistance not only contributed to their own liberation but also put pressure on and reshaped some British ideas about freedom and who could be free.'[43] To Gopal, the key point is 'the relationship between anticolonial resistance in the periphery and the emergence of … dissent in the metropole':

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41   Ibid., 44-45.
42   Alan Lester, 'Imperial Networks: Creating Identities in Nineteenth-Century South Africa', in Stephen Howe, ed., The New Imperial Histories Reader (London and New York: Routledge, 2010), 143.
43   Priyamvada Gopal, Insurgent Empire: Anticolonial Resistance and British Dissent (London: Verso, 2019), 5-6.

Gopal cites Chartists such as Ernest Jones, who was inspired by the Indian uprising of 1857.[44] Gopal's work urges us to acknowledge that influence went 'in both directions': radical figures in British politics learnt from anticolonial resistance. Studies that focus on labour resistance, particularly in colonised countries, have also been useful in understanding how resistance might manifest in different ways. Piet Konings' work on labour resistance in Cameroon, for example, provides a broad interpretation of what counts as resistance beyond the formal, collective strike, while Jane L. Parpart's study of women's role in strikes in mines on the Zambian Copperbelt emphasises the importance of looking beyond the male worker in analyses of labour struggles.[45]

Working with literature on colonialism and imperialism also helps to identify the fact that infrastructure construction was also closely linked to the development of a market in land and debates about the ownership of real property. In *Colonial Lives of Property*, Brenna Bhandar argues that colonialism was fundamentally concerned with the seizure and commodification of land, and links 'the commodity logic of abstraction that finds expression in a system of landholding that is premised on the erasure of prior interests in land' to 'another form of abstraction, related to the racial classification of human life.'[46] Studies of the development of the property market in the UK, such as Desmond Fitz-Gibbon's *Marketable Values*, indicate how processes for surveying and selling land and the professions involved—solicitors and surveyors—developed as railway companies' demand for land increased.[47] Fitz-Gibbon labels these ideas about property as 'the practices and technologies required to convert land into a marketable commodity', and explains how these technologies were developed, exported and experimented on in colonial government—an argument that is also central to Bhandar's work. Both Bhandar and Fitz-Gibbon emphasise that the idea of land as a commodity had to be enforced—Bhandar, for example, argues that we must see both race and property as 'historically

44   Ibid, 6.
45   Piet Konings, *Labour Resistance in Cameroon: Managerial Strategies and Labour Resistance in the Agro-Industrial Plantations of the Cameroon Development Corporation* (Leiden: African Studies Centre, 1993); Jane L. Parpart, 'The household and the mine shaft: gender and class struggles on the Zambian Copperbelt, 1926-64', *Journal of Southern African Studies* 13:1 (1986): 36-56.
46   Bhandar, *Colonial Lives of Property*, 29.
47   Desmond Fitz-Gibbon, *Marketable Values: Inventing the Property Market in Modern Britain* (Chicago and London: University of Chicago Press, 2018). [ebook].

Image source: http://lojascomhistoria.pt/lojas/pavilhao-chines

1. The Lisbon Conference

In January 2019, I presented at a conference in Lisbon called 'Colonial and Postcolonial Landscapes: Architecture, Cities, Infrastructures'.[1] I'd hesitated before applying: I was worried from the website that it would be a collection of white Europeans reflecting on 'Africa'—not unlike the European Conferences of the nineteenth century. Although some of the panels and papers were important and produced meaningful conversations, others seemed to exemplify the risks of studying colonial infrastructures without a clearly articulated and considered anti- or decolonial methodology. The keynotes and the framing of the conference by its organisers were points of

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1 Unfortunately, the conference website is no longer functional.

contingent rather than natural; and as being produced by and through complex interrelations between capital, science, and culture', while Fitz-Gibbon elaborates on the ways in which the marketability of land was always debated, and traces calls for the outright nationalisation of land and the rejection of the legitimacy of the market in it. Studies of compulsory purchase, such as Stephen Gadd's history of its development in England and Wales from 1530-1800, add to the work of Bhandar and Fitz-Gibbon by illustrating the ways in which infrastructure development has long allowed for the expropriation of land, and how this process was linked to ideas of the 'common good' or 'common weal' ideology.[48] In his study of the impact of railways on Victorian cities in the UK, Kellet also quantifies the railway companies' acquisition of land: by 1890, the principal companies were the owners of up to 10 per cent of central land in most cities, 'and indirectly influenced the function of up to twenty per cent.'[49]

Understanding how infrastructures and the engineering profession fitted within these imperial networks and currents of resistance is already the subject of a number of studies: Dom Davies's *Imperial Infrastructures* looks at literary representations of colonial infrastructures, while Casper Andersen's *British Engineers and Africa* examines the close intertwining of engineering and imperialism and the 'diasporas, identities and networks that developed as the British engineering profession established connections on the African continent in the period 1875-1914.'[50] Andersen establishes that 'the professional life of a late-Victorian engineer was one in which the empire was present not only in abstract visions of "civil engineering, commerce and civilization" but also as a pivotal factor in the business and career opportunities for growing sections of the profession in this period.'[51] This thesis will build on these two studies and their firm positioning of nineteenth-century engineering and infrastructural discourses within colonial histories, but it will also draw on Davies's insistence that this work should be anti-colonial in its politics. This point is important to assert because imperial nostalgia often seems to haunt studies of colonial infrastructure, even those that emphasise the ways in which infrastructures

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48   Stephen Gadd, 'The Emergence and Development of Statutory Process for the Compulsory Purchase of Land for Transport Infrastructure in England and Wales, c.1530-1800', *The Journal of Legal History* 40:1 (2019): 1-20.

49   Kellet, Railways and Victorian Cities, 2.

50   Casper Andersen, *British Engineers and Africa, 1875-1914* (London: Routledge, 2015) [ebook].

51   Ibid.

tension: in the discussion following one introduction, Samia Henni had to interject to point out that an organiser had quoted from her book without attribution, and the next day, a number of speakers walked out of a session honouring a Portuguese colonial architect.[2]

The issues here exist as layers that build upon each other: you peel back one problem to reveal more. Next layer: the funding for the project that hosted the conference went to a Portuguese Institution that then brought in partner institutions in Angola and Mozambique, rather than the other way around.[3] Next layer: the conference took place at the Calouste Gulbenkian Foundation, created in 1956 by Calouste Sarkis Gulbenkian, whose wealth came from exploiting Iraqi oil. Next layer: alongside the conference, an exhibition ran showing Gulbenkian's links with modernist planning and architecture in Iraq and their disappointment at having to leave the country following the nationalisation of oil in 1972. The exhibition read like propaganda for both the Foundation and the oil company. This was the context of the conference: all the issues that exist before the papers are even presented.

That these problems emerged in a conference on infrastructure wasn't completely surprising: European histories of infrastructure often seem to lend themselves to neo-colonialism. In one panel, a white Dutch investment banker who researched railways in his spare time spoke about the railway in São Tomé, which he described as a lush and verdant

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2 The book quoted from was Samia Henni, *The Architecture of Counterrevolution: The French Army in Northern Algeria* (gta Verlag).
3 'R&D Projects. Confirmed Projects Database Queries'. https://www.fct.pt/apoios/projectos/consulta/vglobal_projecto.phtml.en?idProjecto=139366&idElemConcurso=8848 (accessed 20 August 2020).

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facilitated colonial violence and extraction.

Working towards the anti-colonial requires the scrutiny of methodology and positionality, particularly in relation to the silences of the colonial archive. In her discussion of colonial agency and historical silences, Gopal examines how 'archives are both constructed and interpreted so as to foreground the agency of white, Western, male actors' and produce narratives that 'make sense' to Western readers.[52] Ideas that don't make sense in this framework—'like conceptions of freedom not determined by capitalist definitions'—are left out. The archive often seems to be inescapably the preserve of one perspective, that of the colonist, the capitalist, the manager and not the worker, and what Christina Sharpe calls an accumulation of 'erasures, projections, fabulations, and misnaming.'[53] Without acknowledging these silences and distortions and seeking some form of alternative method or reading, infrastructural histories can often prioritise the dominant point of view, even if the politics they claim to espouse are the opposite, or they reference the violent extractions of colonialism.

Saidiya Hartman's work has addressed the silences in the archive of Atlantic slavery and ways of doing 'more than recount[ing] the violence that deposited these traces in the archive.'[54] More recently, in *Wayward Lives, Beautiful Experiments*, Hartman uses her method of 'close narration', 'a style which places the voice of the narrator and character in inseparable relation, so that the vision, language and rhythms of the wayward shape and arrange the text' to tell the lives of black women in the United States at the turn of the twentieth century.[55] Hartman mines the archives and collects the pieces that they offer, but in the telling the position is shifted and the gaze reflected back on the reformers and social scientists who thought they were documenting 'urban poverty' in the nineteenth century. A woman:

> *watches them from the third-floor window of the alley house where she stays, laughing at their stupidity. They take a picture of Lombard Street when hardly no one is there. She wonders what fascinates them about*

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52   Gopal, *Insurgent Empire*, 11.
53   Christina Sharpe, *In the Wake: On Blackness and Being* (Durham and London: Duke University Press, 2016), 12.
54   Saidiya Hartman, 'Venus in Two Acts', *Small Axe* 26 12:2 (2008): 2.
55   Saidiya Hartman, *Wayward Lives, Beautiful Experiments: Intimate Histories of Social Upheaval* (New York and London: W. W. Norton & Company, 2019), xiii-xiv.

clotheslines and outhouses. They always take pictures of the same stuff.

island. That he worked on his research outside of his paid job was not the issue—the problem is the closeness to neo-colonial banking and finance systems and the control of capital. Later, Huda Tayob pointed out that the present participle in the title of the exhibition linked to the conference—'Colonizing Africa'—seemed on the nose; there wasn't sufficient distance between the nineteenth century and the twenty-first or between the ideologies of colonialism and its academic study in European research projects. Even when we focus on extraction and indentured labour or emphasise that railways were used to further imperial expansion, the framework is still European power. And it's not like these discussions didn't happen in the nineteenth century: we are rehearsing the same points that opponents of imperial expansion made in the 1890s.

But other scholars are using infrastructure differently. Tayob's work, for example, which she presented in the same panel as the Dutch investment banker, draws on AbdouMaliq Simone's concept of 'people as infrastructure' and uses the framework of infrastructures to focus on cross border migrants and pan-African markets in Cape Town.[4] The focus on white Europeans and colonialists that often comes with studies of infrastructure is disrupted: instead, Tayob is interested in how infrastructure has facilitated the movement of migrants and the development of informal infrastructures, which always exist alongside the formal. But again, this is another layer: neo-colonial work

Hartman articulates her position in 'A Note on Method': 'It is a narrative written from nowhere, from the nowhere of the ghetto to the nowhere of utopia.'[56] She takes 'the power and authority of the archive and the limits it sets on what can be known' and forms a 'counternarrative liberated from judgement and classification'. This method involves speculation, what Hartman calls 'pressing at the limits' of archival documents and imagining what might happen outside of them.[57]

In 'Stubborn Shadows', Nicole Simek writes of another methodology, one of opacity as it was articulated by Édouard Glissant: 'perpetual concealment' as a form of resistance.[58] In *The Poetics of Relation*, Glissant had called for 'the right to opacity', which he describes as 'subsistence within an irreducible singularity'. At the same time as demanding this right, he suggests ways of helping to achieve it: 'for the time being, perhaps, give up this old obsession with discovering what lies at the bottom of natures.'[59] Opacity is a form of resistance, a means of refusing to be reduced, a 'degeneralization',[60] but also an idea that necessarily has an impact on how research might be conducted: what would it mean to reject an 'obsession with … what lies at the bottom of natures'? In this sense, it can both conceptualise a form of existence and operate as a method. Some writers have interpreted opacity particularly in reference to visual traditions: to Zach Blas, it 'exposes the limits of schemas of visibility, representation, and identity that prevent sufficient understanding of multiple perspectives of the world and its peoples.'[61] For others, it describes a means of existing outside the dominant system: in his article on 'Urbanity and Generic Blackness', for example, AbdouMaliq Simone describes opacity as 'a reflection of the indifference of

4 Huda Tayob, 'Architecture-by-migrants: the porous infrastructures of Bellville', *Anthropology Southern Africa* 42:1 (2019): 46-58; Huda Tayob, 'Opaque Black Infrastructures: Transnational Trading in southern Africa', paper presented at Colonial and Post-Colonial Landscapes Conference, January 2019; AbdouMaliq Simone, 'People as Infrastructure: Intersecting Fragments in Johannesburg', *Public Culture* 16:3 (2004): 407 – 429.

56   Ibid., xiii.
57   Ibid., xiii-xv.
58   Nicole Simek, 'Stubborn Shadows', *symploke* 23:1-2 (2015): 363-373.
59   Édouard Glissant, *The Poetics of Relation*, trans. Betsy Wing (Ann Arbor: The University of Michigan Press, 1997), 189-190. I was introduced to Glissant's work through the decolonial reading group at the Bartlett, and our discussions there of the Poetics of Relation and opacity have helped formulate my methodology in this thesis.
60   Ibid., 62.
61   Zach Blas, 'Opacities: An Introduction', *Camera Obscura* 92 31:2 (2016): 149.

appears alongside the anti- and decolonial at an infrastructure conference.

Ola Oduku's report on the conference refers to further incidents: apparently, in an untranslated session in Portuguese 'some divisive views were aired relating to whether colonization in Lusaphone Africa was a success.'[5] On the final night, two colleagues and I ended up in a bar decorated with colonial kitsch: maps of empire, toy soldiers, imperial propaganda.[6] Halfway through our drink, we looked up and saw that a whole group of senior academics from the conference had joined us. There couldn't have been a more fitting location for the conference afterparty.

residents to be fully understood or recognised.'[62] There is also a depth to opacity, a sense that what it describes is a volatile accumulation: Simone begins with Gilssant's description of the beach in southern Martinique and its 'subterranean existence', liminal and 'constantly shifting'.[63] For Simone, this movement without record or concern is partly what produces opacity: 'all of the flailing, rubbing against, working through, classes and caresses, promiscuous mixing and friction that keeps bodies, times, memories and cultures moving, without having to always take a reading of position of imagining the source of problems or potentials.'[64]

Opacity has been a useful concept for this thesis because as scholars of colonial photography and mapping have emphasised, the desire to make people, land, and 'progress' visible was a key element of the colonial project—a theme I elaborate on in chapter four. But opacity does not simply relate to the visual, it also implies 'an unknowability' in a broader sense,[65] a counter-framework to a colonial form of knowledge production that sought to define and solidify on the basis of a lack of understanding, unequal structural relationships and coercion. For Simek, Gilssant's opacity shows us instead that 'absolute transparency is unattainable and undesirable': unlike colonial officers, we should not assume a right to know or to see everything.[66] Reading Hartman alongside Glissant seems to provide a means of negotiating these boundaries to retrieval and reconstruction: although Hartman seeks to retrieve 'minor lives from oblivion' and to 'reconstruct the experience of the unknown, we can read a resistance to transparency and firmness in her emphasis on the wayward and the fugitive, but also in her reflection on the limits of knowability that remain even with a speculative method.

For both Hartman and Glissant, race is at the centre of their work and critical to their methodologies. In this thesis I also take race as a focus, considering racial property regimes as elaborated by Brenna Bhandar and racial capitalism as it appears in Bhattacharyya's *Rethinking Racial Capitalism*, but I also work with formulations of blackness more specifically, as they have been developed

5 See Ola Uduku, 'Conference Report: Colonial and Post-Colonial Landscapes: Architecture Cities Infrastructures', https://transnationalarchitecturegroup.wordpress.com/2019/01/20/conference-report-colonial-and-postcolonial-landscapes-architecture-cities-infrastructure/ (accessed 18 August 2021).
6 The bar was Pavilhão Chinês on Rua Dom Pedro V.

62   AbdouMaliq Simone, 'Urbanity and Generic Blackness', *Theory, Culture and Society* 33: 7-8 (2016): 4.
63   Ibid., 1.
64   Ibid., 2.
65   Blas, 'Opacities', 149.
66   Simek, 'Stubborn Shadows', 372.

by Hartman, Glissant, and Simone, alongside other theorists, including Tina M. Campt, who works with fugitivity as theorised in black feminism to study photographs of black men and women, and Christina Sharpe, whose book In the *Wake: On Blackness and Being* (2016) examines Black being in the wake of ongoing histories of violence and dispossession—'the past not yet past.'[67] In addition to these notions of blackness and the formulation of racial regimes and hierarchies within and by capitalism, I also consider whiteness or alternatively 'Europeanness', which appears in railway sources as an earlier term to designate whiteness. This consideration of whiteness draws on literature that examines how white identities were 'developed over time' as 'the product of culture inventing new ways to create great inequality and oppression,'[68] but also writing that shows how knowledge of the volatilities of whiteness was often a tool of survival for people of colour. As Lauren Michele Jackson argues, 'nonreciprocal expertise about white behaviour, white history, white ethnics, and white sociality has always been mandatory for nonwhites in America', and this knowledge should be recognised as the root of studies of whiteness, especially by a now disciplined field that is less likely to include the work of people of colour.[69] In critical whiteness studies, scholars investigate how whiteness both 'invokes power relations' and 'represents normality, dominance, and control.'[70] As those who study whiteness often emphasise, identifying it as a topic of study has to go alongside what Sara Ahmed calls 'the refutation of nominalism' and the assertion of 'the idea that race is not real'[71]—a necessary step to avoid 'giving credence to racists' who believe that 'race' is an essential, scientific truth. But these refutations also need the acknowledgment that whiteness is 'material and lived'—as Ahmed puts it, it affects what bodies 'can do'.[72] In this thesis, I build in particular from Kehinde Andrew's work on whiteness as a distortion of reality or a 'psychosis' to try to conceive of whiteness or Europeanness as a

67   Christina Sharpe, *In the Wake: On Blackness and Being* (Durham and London: Duke University Press, 2016), 13. I was introduced to this text by Huda Tayob.

68   Daniel C. Blight, ed., The Image of Whiteness: Contemporary Photography and Racialisation (London: SBPH Editions and Art on the Underground, 2019), 13-14.

69   Lauren Michele Jackson, 'What's Missing from White Fragility', *Slate*, 4 September 2019. https://slate.com/human-interest/2019/09/white-fragility-robin-diangelo-workshop.html (accessed 6 September 2019).

70   Steve Garner, Whiteness: An Introduction (London and New York: Routledge, 2007), 9.

71   Sara Ahmed, 'A Phenomenology of Whiteness', Feminist Theory 8:2 (2007): 150.

72   Ahmed, 'A Phenomenology of Whiteness', 150.

limitation of the possible.[73] As well as whiteness as limit, unsurprisingly, I also consider the violence caused by the defence and extension of whiteness and connect whiteness to regimes of visuality, where the line of sight was only ever intended to be one way. In one example, a railway official uses force against three Africans in the Mombasa Police who looked into his wagon while his wife was 'at her toilet'. 'Such is rather more than any European here would be expected to tolerate,' he wrote in a letter of complaint: whiteness was not to be scrutinised.[74]

Finally, this thesis also draws on existing studies of the specific sites on which I focus. Henry Gunston's article on the planning and construction of the Uganda Railway gives a simple narrative of the reasons for the railway's construction, its planning stages and the progress of construction, largely using British sources and photographs.[75] Neera Kapila's book *Race, Rail and Society* provides a thorough account of the context of the Uganda Railway's construction and the resistance to it and the contributions of Indian labourers to the construction, along with photographs and reproductions of archival material. Kapila records the railway's coercive labour practices but also the connection between the construction of the railway and the colonial government's decision to encourage white settlement in Kenya.[76] Existing histories have often focused on labour and forms of resistance: similarly, Samuel Ruchman elaborates on the exploitation of labour during the construction of the railway and argues that these practices continued after the railway was 'completed', while Tiyambe Zeleza places resistance to these practices (in the form of desertions and communal revolts) at the beginning of the history of labour struggles and strike movements in colonial Kenya.[77]

With its focus on the later period in the railway's history and the fact that

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73   Kehinde Andrews, 'The Psychosis of Whiteness: The Celluloid Hallucinations of Amazing Grace and Belle', *Journal of Black Studies* 47:5 (2016): 435-453.

74   Preston to Crauford, 1897. NAN PC/Coast/1/1/20.

75   Henry Gunston, 'The Planning and Construction of the Uganda Railway', *Transactions of the Newcomen Society* 74:1 (2004): 45-71.

76   Neera Kapila, *Race, Rail and Society: Roots of Modern Kenya* (Nairobi: East African Educational Publishers, 2009).

77   Samuel G. Ruchman, 'Colonial Construction: Labour Practices and Precedents Along the Uganda Railway, 1893-1903', *International Journal of African Historical Studies* 50:2 (2017): 251-274. Tiyambe Zeleza, 'The Strike Movement in Colonial Kenya: The Era of General Strikes', *Transafrican Journal of History* 22 (1993): 1-23.

Kenyan perspectives on the railway are often missing or actively erased, Tayiana Chao's work is also crucial to any study of the Uganda Railway: Chao's project 'Save the Railway' has produced a photographic record of stations on the railway, but also a means of understanding and collecting how the railway features in Kenyan histories and what it symbolises to people who worked on it, lived near it, or used it to travel through the country. Unlike much of the literature on the railway, which focuses on construction, Chao is interested in the railway's use and 'what it meant to communities.'[78] Her work also includes the Museum of British Colonialism (MBC), a 'transnational, anti-racist and anti-colonial organisation' that collects digital resources on the lived experiences of British colonialism.[79] One of the MBC's key projects provides resources on the Mau Mau Uprising, including 3D models and maps of colonial detention camps, oral histories, and fieldwork diaries.[80]

There are other histories of the Uganda Railway that I have referred to, but I will not include them here because they haven't influenced the framing or theorisation of the thesis—they are sources on imperial nostalgia and the persistence of racist narratives of progress, so I see them as texts to be analysed and deconstructed rather than part of a literature with which I want to build. For London, H. J. Dyos's work, as I've mentioned, has been useful in elaborating the systems of accounting for the demolition of housing, while Richard Dennis's article on 'Making the Underground Underground', which looks at the ways in which the Metropolitan and District line was represented to emphasise lightness and openness, also articulates the particular fears that surrounded underground railways. More importantly, Dennis provides an example of how the District Line acquired and sold land: while claiming it needed more space for ventilation shafts (to allay fears of a lack of air underground), the company was also 'disposing of its own private land at a substantial profit.'[81]

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78   'British Subjects: The Uganda-Kenya Railway'. https://www.museumofbritishcolonialism.org/ourblog/2019/5/15/british-subjects-the-uganda-kenya-railway (accessed 24 August 2021).

79   https://www.museumofbritishcolonialism.org/themuseum (accessed 24 August 2021).

80   https://www.museumofbritishcolonialism.org/resources (accessed 24 August 2021).

81   Richard Dennis, 'Making the Underground Underground', *The London Journal* 38:3 (2013): 203-225.

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'As to ordinance survey, [the area] wants such a complete survey made that an intending settler in Europe could walk into an office and choose a site by a map.'[82]

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Shaped by these different literatures, the key aim of this thesis is to examine and deconstruct these narratives of 'progress' and 'modernity' that posited railways as the answer to 'development': to understand how and why these narratives developed and the forms they took, what kinds of expropriations and displacements they enabled, and the numerous ways in which they were resisted and contested. As will emerge in the following chapters, these narratives were constantly questioned and disrupted: locating this resistance and in turn where simplistic narratives of progress persisted is thus a key task. This thesis is not anti-infrastructure: it recognises that people need and have a right to clean water, safe and efficient forms of transport, and means of communication. It also supports calls for what Mimi Sheller has termed 'mobility justice': as 'colonial legacies of fragmented sovereignty and borders have left a highly variegated terrain of social protection and vulnerability', mobility justice demands an end to inequalities to transport access, to the sexual harassment of women, queer and trans people, to police shootings and mass incarceration.[83] Instead of opposing infrastructures, I seek to question how infrastructures, and railways in particular, have been held up as a form of 'progress' or 'modernisation' in and of themselves, without assurances that their benefits will be available to everyone, and that their development will not be part of colonial capitalist logics, built upon the extraction of resources and wealth from colonised countries and the generation of climate disaster.

Alongside these questions, the thesis also has a methodological aim: to work towards a way of writing about colonial infrastructure from the metropole that doesn't reproduce the extractive logics of colonialism—a challenging project

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82   Report of the Land Committee, Presented to His Majesty's Commissioner, East Africa Protectorate (Nairobi: Printed at the Uganda Railway Press, 1905). In Casper Andersen and Andrew Cohen, eds., *The Government and Administration of Africa, vol. 4: Urban and Rural Land* (Routledge, 2017). [ebook].

83   Mimi Sheller, *Mobility Justice: The Politics of Movement in an Age of Extremes* (London: Verso, 2018).

when we acknowledge that 'the fall of formal empires did little to change the logic of Western universities,' and this thesis is written from UCL in London, a university that still has a long distance to go in acknowledging and addressing its involvement in colonialism and particularly in the development and continued memorialisation of eugenics and its founders.[84] In this thesis, I look at historical contours of knowing and not knowing, the processes by which people are made visible and invisible to the state and within regimes of power, and the idea of whiteness as a structure that limits the possible—a violent restriction of imaginaries. But I also necessarily reflect on how those dynamics feature within my own work as a white researcher based in London, and in turn I encourage the white readers of the thesis to think of how your own whiteness is at work when you read this. Influenced by Saidiya Hartman, Édouard Glissant, and Christina Sharpe, this thesis aims to proceed with a method of selective scrutiny, speculation and opacity. In doing so, it is important to recognise that Hartman and Sharpe have articulated the significance of audience and that writing with black women in mind brings the freedom of not having to explain to the outside.[85] This articulation in turn requires the acknowledgement that as a white reader, I am necessarily positioned as part of the outside.

As Hartman and other scholars have explored, the archive is 'inseparable' from the power dynamics of slavery and colonialism.[86] It privileges the perspectives of colonial and railway officials, whose motives and ways of thinking are laid out for scrutiny. Other characters are less knowable from the archive, even as they may be visible in colonial photography or the subject of memos, reports and letters. Like Hartman, I seek to bring rebellion and refusal to the fore, but I cannot define and delineate the rebels in the same way as the officials: they dwell here with their right to opacity, their right to assert that they do not have to be fully known by me. This desire to assert open-endedness, as Simek puts it, also extends to the images and illustrations I include in the thesis:[87] the decision not

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84   'Introduction', Gurminder K. Bhambra, Dalia Gebrial and Kerem Nisancioglu, eds., *Decolonising the University* (London: Pluto Press, 2018). Just prior to the submission of this thesis, UCL issued a public apology for its history and legacy of eugenics: https://www.ucl.ac.uk/news/2021/jan/ucl-makes-formal-public-apology-its-history-and-legacy-eugenics (accessed 29 January 2021).

85   'Wayward Lives, Beautiful Experiments: In Conversation with Saidiya Hartman,' Birkbeck Centre for Law and Humanities, 31 May 2019.

86   Hartman, 'Venus in Two Acts', 11.

87   Simek, 'Stubborn Shadows', 369.

to include unedited colonial maps, for example, is an attempt to frustrate the desire to see a landscape or a terrain laid out clearly.

These boundaries of knowability and unknowability also reflect my own limitations as a researcher—my lack of language skills and knowledge to adequately situate material and to fill in the spaces left by the archive. This PhD research was funded through a European research grant and the original project proposal did not include a focus on the colonial dimension of infrastructural progress narratives.[88] If anything, I hope this thesis shows that these projects should always view British history in its expanded, imperial context and that funding must be available on this basis to researchers and scholars outside of Europe. Current funding and immigration regulations in the UK often mean that research positions are inaccessible to those who do not already have British citizenship. This clearly restricts the quality of research, the potential scope of projects, and reinforces colonial dynamics of knowledge production.

Alongside the main text, this thesis will also include a series of microhistories. These shorter pieces examine particular examples, both historical and contemporary, in detail as reflections on method and practice in the discipline of architectural history. Taking inspiration from Rosalind Gill's work on 'breaking the silence' in academia, some of these histories follow Gill's prompt to ask 'what it would mean to turn our lens upon our own labour processes, organisational governance and conditions of production'.[89] The microhistories consider how the conditions in which we do our research and live our lives influence what and how we can write and sometimes, they try to consider the motivations behind my research, or what I think is at stake in and around the formulation of my PhD thesis. These reflections do not always make it into academic work, although they often do in work written by Black feminists—Christina Sharpe's *In the Wake*, for example, begins with 'the personal', in her case as a means to 'position' her work and, after Saidiya Hartman, to look at 'one's own formation as a window onto social and historical processes'.[90] Other pieces give space to sources or stories that I don't want to include or do not fit neatly into the main

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88   https://heranet.info/projects/hera-2016-uses-of-the-past/printing-the-past-architecture-print-culture-and-uses-of-the-past-in-modern-europe/ (accessed 20 July 2021).

89   Rosalind Gill, 'Breaking the Silence: The Hidden Injuries of Neo-Liberal Academia', in Flood, R. and Gill, R, eds., *Secrecy and Silence in the Research Process: Feminist Reflections*. London: Routledge, 2009.

90   Sharpe, *In the Wake*, 8.

Poster: Sayan Skandarajah

2. A Decolonial Reading Group

The idea of holding a Decolonial Reading Group at the Bartlett was first suggested by Huda Tayob, former PhD student and current Senior Lecturer at the University of Cape Town. As organised by Huda, a group of us met to discuss possible themes and texts, then started our first session with Achille Mbembe's *Critique of Black Reason* and Aimé Césaire's

chapters. Constructing a PhD thesis often requires a narrowing of focus, so that important but tangential or associated themes and narratives get left out. Some microhistories follow the lines that fell outside of the main subject of the thesis.

These pieces can be read as interruptions or supplements to the main text; their themes emerge from each chapter, but sometimes they run in a different direction. In doing so, they take their logic from the subject matter: the narratives of the thesis generate their own oblique narratives that exist if not counter to the main argument, then at a slant to it. Writer Bryony Quinn formulates the oblique as a method that 'allows for tangential associations between ideas, theory and images';[91] this is what these microhistories attempt to achieve from their position outside of the main text. When I write critically of white European approaches to histories of infrastructure in these pieces, it is not to claim a false distance from this positionality: I am obviously implicated within these structures.

Finally, I also aimed to establish a methodology of citation in this thesis, drawing on Sara Ahmed's writing on citation and feminist politics. In *Living a Feminist Life*, Ahmed writes of citation as 'feminist memory' and references as 'feminist bricks: they are the materials through which, from which, we create our dwellings.'[92] In this book, Ahmed has chosen not to cite any white men: this policy, Ahmed writes, allows her to give more space to the feminists who have influenced her thought. I cannot follow Ahmed in this thesis and not cite white men, but I take from her work the idea that citation is political and can be a practice, rather than the uninterrogated enactment of an academic norm. In light of this, throughout this thesis I had intended to work with a system of referencing that tried to take into account and acknowledge the less easily definable factors that help issues and thoughts coalesce—conversations, friendships, or twitter accounts, all of which may help more with the formulation of ideas and positions than simply sitting alone with a text and reading. These paths of influence are not always easy to attribute to a single item that can be referenced: sometimes something clicks after a series of conversations, spread out across message threads or from conversations in person. Often, these influences are noted in the acknowledgments and not

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91   Bryony Quinn, 'Oblique / Oblike'. https://www.b-q.xyz/ (accessed 20 August 2020).
92   Sara Ahmed, *Living a Feminist Life* (Durham and London: Duke University Press, 2017), 15-16.

Discourse on Colonialism.[1] Other themes included feminisms, with texts by Alexis Pauline Gumbs and Maria Lugones, and territories, with extracts from Dipesh Chakrabarty's *Provincialising Europe* and Walter Mignolo's writing on (de) coloniality, border thinking and epistemic disobedience.[2]

In addition to Huda, a number of other researchers and practitioners contributed to and led these sessions: Thandi Loewenson, Rosa-Johan Uddoh, Adam Walls, Maria Venegas Raba, Diana Salazar, Saptarshi Sanyal, and Nathaniel Telemaque, although this list is not exhaustive. The discussions in this group helped to form the arguments in this thesis and as a result, the group is a key, ongoing citation: in the group, we discussed texts that influenced my methodology and approach, including Glissant's *Poetics and Relation*, Brenna Bhandar's *Colonial Lives of Property*, and Gargi Bhattacharyya's *Racial Capitalism*. It is not always easy to accurately attribute the influence of colleagues and peers, but it is clear to me that this research would have been different, and less theoretically-grounded, without the support of this reading group.

1 Achille Mbembe, *Critique of Black Reason* (Duke University Press, 2017; Aimé Césaire, *Discourse on Colonialism*, trans. Joan Pinkham (NYU Press, 2000).
2 Alexis Pauline Gumbs, *M Archive: After the End of the World* (Durham: Duke University Press, 2018); Maria Lugones, 'Towards a Decolonial Feminism,' *Hypatia* 25:4 (2010): 743-759; Dipesh Chakrabarty, *Provincialising Europe: Postcolonial Thought and Historical Difference* (Princeton, NJ: Princeton University Press, 2008); Walter Mignolo, 'Geopolitics of sensing and knowing: on (de)coloniality, border thinking and epistemic disobedience,' *Postcolonial Studies* 14:3 (2011): 273-283.

elsewhere or throughout the thesis, and I wanted to try to move this form of acknowledgment into the system of citation. This citational aim has been difficult to achieve, and it does not feature as much as I would have liked: keeping track of the ephemeral requires a more robust system of notetaking and recording than traditional methods of citation.

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Working with this methodology, this thesis takes two main areas as its object of study. The first is the construction of railways in London (occasionally drifting outwards along the tracks) from the second railway mania in the mid 1840s to the 1880s, ending with the report on the Housing of the Working Classes in 1885. This period and location are good for examining narratives of progress, improvement and public purposes because the railway mania and the sheer number of applications for the construction of routes in and into London prompted attempts to consider which lines would bring more benefit; and, as H. J. Dyos argues, the late 1830s and early 1840s brought an increase in the scale of demolitions as railways came closer into the centre of London.[93] The following decades allow us to trace the impacts of some of the decisions about railway construction and the mitigation of its urban effects, including displacement and overcrowding, and the railway companies' dogged evasion of regulation, along with the construction of the first underground railways.

The second area, as already mentioned, is the construction of the Uganda Railway from 1896 to 1904, when the railway committee published its final report (with a few journeys into later decades to trace the railway's wake).[94] This example is similarly appropriate for a study of infrastructure and narratives of progress and public purpose because as I've already begun to suggest, the railway was unquestionably strategic and yet it was still cast as a project of progress and civilization: it shows clearly the ways in which a military project could be re-presented and sanitised through an infrastructural lens. Another important aspect of the Uganda Railway is that it did generate an element of controversy in London: expensive and beset with delays, it prompted discussions in Parliament of the value of railway projects and of colonial ventures more broadly, although

93   H. J. Dyos, 'Railways and Housing in Victorian London: I. "Atilla in London", *The Journal of Transport History* 2:1 (1955): 11.
94   Sharpe, *In the Wake*.

it did little to challenge colonial logics and disruptions and delays were often managed and hidden in reported narratives.

These two areas are not directly comparable, and a straightforward comparison is not the aim: the time periods do not overlap, and the contexts of the railways are different. In the UK, I focus largely on railways in an urban setting, whereas in Kenya, outside of Mombasa, the railway largely moved through rural communities (although, of course, this does not mean there was 'nothing there' or that railway building in this context did not involve destruction and demolition—another colonial fantasy that erased the complexities of existing communities and terrains). One aim in bringing together these two areas is to connect discourses: to consider how ideas of improvement and 'progress' were expressed in narratives and images of infrastructure. It is too narrow to think only of the metropolis, especially in a period when the idea of a 'civilising mission' was being mobilised in justification for imperial conquest and exploitation and British engineers were being sent on construction projects across the world.[95] Narratives of improvement and progress were mobilised in the UK, but they arguably worked most violently and potently in the British Empire and as a justification for colonisation. As Dominic Davies puts it, across the British Empire, infrastructure functioned as a 'measure of "modernity"'—'a marker of Europe's "right to rule" for colonial administrators, travel writers, financial speculators and capitalist investors alike.'[96]

If, as Kosselleck argues, narratives of progress sought to rationalise, they also sought to legitimise: infrastructure building laundered the extension of imperial power into a 'humanitarian' mission, especially in the context of European activity in Africa after the Brussels Conference in 1890, which had declared railways 'the most effective means of fighting the inland slave trade.'[97] But beyond the specifics of infrastructure and progress, it's also that to look at London in the second half of the nineteenth century can only be to look at empire too: the context for development or 'improvement' in London

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95   See Casper Andersen, *British Engineers and Africa, 1875-1914* (Abingdon: Routledge, 2016).

96   Dominic Davies, *Imperial Infrastructure and Spatial Resistance in Colonial Literature, 1880-1930* (Oxford: Peter Lang, 2017), 7.

97   Mark Graham, Casper Andersen, and Laura Mann, 'Geographical imagination and technological connectivity in East Africa', *Transactions of the Institute of British Geographers* 40:3 (2015): 335.

was that the city was 'the central point of the commerce of the world', 'the seat of Government and Legislation of this vast empire', and a place for the 'accumulation of wealth'[98], extracted, stolen, seized, imported.[99] Nineteenth-century engineers, politicians, even trade unionists could not discuss engineering and the construction industries without considering empire: there is no reason a historian should ignore these connections.

In connecting discourses on 'improvement' via railways in London and the Uganda Railway, I am also attempting to address an issue that Zeynep Çelik raises in her essay on 'Colonialism, Orientalism and the Canon': while there is endless focus on nineteenth-century urban planning in the imperial metropolis—cities such as London and Paris—destructive urban rationalisation schemes in France's colonial cities are less often studied, even when 'in the colony it was acceptable to practice what was not allowed at home.'[100] I want to consider the narrative of infrastructural improvement in both London and Kenya as a response to this oversight, but in part also to engage critically with the popular argument that Britain's approach to infrastructure was decentralised, the opposite of developments in France, where railway routes were centrally planned.[101] While this argument goes a certain way in relation to the histories of railway construction in the United Kingdom, it makes no acknowledgement of the way in which Britain governed its empire: in the 1890s in Kenya, for example, the railway existed as a 'quasi-governmental authority': it 'maintained a military police force, courts, medical institutions, control of some land policies and urban developments, and extensive power over the lives of subordinates and labourers, including local African populations and Indian workers.'[102]

98   *First Report of the Commissioners appointed by Her Majesty to inquire into and consider the most effectual means of Improving the Metropolis and of providing increased facilities of communication within the same*, 27 January 1844, 3.

99   For a discussion of the relationship between British and Imperial history, see Antoinette Burton, 'Rules of Thumb: British History and "Imperial Culture" in Nineteenth and Twentieth-Century Britain', in Stephen Howe, ed., *The New Imperial Histories Reader* (London and New York: Routledge, 2010): 41-54.

100   Zeynep Çelik, 'Colonialism, Orientalism and the Canon' in Iain Borden and Jane Rendell, eds., *InterSections: Architectural Histories and Critical Theories* (London and New York: Routledge, 2000), 164.

101   See, for example, Frank Dobbin, *Forging Industrial Policy: The United States, Britain and France in the Railway Age* (Cambridge: Cambridge University Press, 1994).

102   Ruchman, 'Colonial Construction', 251.
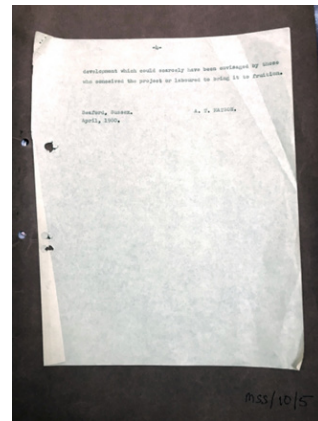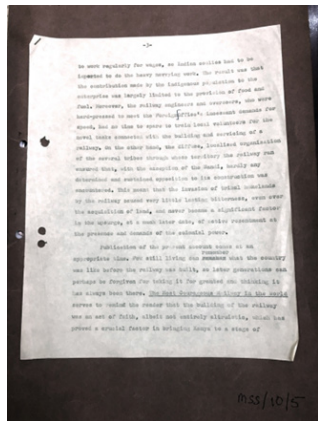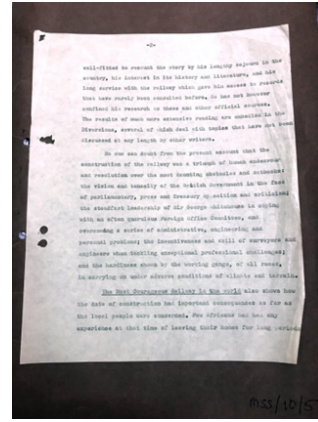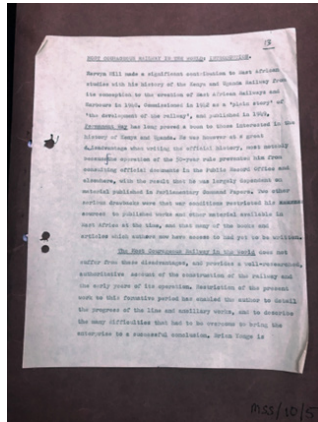
3. *The Most Courageous Railway in the World*

Considering the way in which the British Government handled infrastructure in London and the wider UK only gives a warped and partial sense of its approach. As mentioned above, the importance of empire in any account of nineteenth and twentieth-century Britain history has already been argued for by Burton and others: it is no longer sufficient to consider this period without accounting for empire and its influences.[103]

Brenna Bhandar's study of land policy and property law, as well as analyses of other colonial governmental processes such as the development of police forces, are able to trace a clear 'imperial boomerang effect' between the colonial context and the imperial 'motherland', that is, where processes and policies tested and developed in colonised countries were later used back in Britain. The wider relationship between the Uganda Railway and railways in London and England, however, isn't as neat.[104] Construction in Mombasa started in the late 1890s and many of the officials and engineers working on the railway had experience on other railway projects, both in Britain and across the empire. It was often the case that processes were imported wholesale from other colonial contexts, particularly India, but there isn't a clearly defined way in which practices developed on the Uganda Railway were implemented back in Britain.

Similarly, the Uganda Railway doesn't function as a straightforward, direct comparison to the British railway projects I consider. The Uganda Railway was developed by the colonial government, not a private company, and construction began decades later in a different context, with different labour forces and conditions. Nevertheless, I think the two contexts of the thesis provide necessary insights into each other. The Uganda Railway shows particularly clearly how narratives of 'progress' were manipulated by the colonial government to present infrastructure as emancipatory at the same time as infrastructure construction entrenched racism and extractive economies at the expense of east Africans. In turn, depictions of unruly labour in London and across England more broadly show how domestic narratives of infrastructural progress acknowledged disruption in a way colonial narratives did not.

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103   Burton, 'Rule of Thumb', in Howe, ed., *New Imperial Histories*.

104   Brenna Bhandar, *Colonial Lives of Property: Law, Land and Racial Regimes of Ownership* (Duke University Press, 2018). For the development of colonial police forces, see Randall Williams, 'A State of Permanent Exception: The Birth of Modern Policing in Colonial Capitalism', *Interventions* 5:3 (2003): 322-344.

The histories of colonial railways often follow repeated and established narratives, which we see in reports from the time of construction as well as more recent accounts. In the National Archives in Nairobi, I read an introduction to a history of the Uganda Railway that managed to articulate many of these narratives in only four pages—an achievement in the efficient communication of racist, colonial stereotypes.[1]

The author of the introduction: A. T. Matson, a 'historian' whose work was criticised in 1973 for exhibiting 'cultural bias and ethnocentrism' and including 'questionable', generalising information.[2] The book Matson introduces, which I haven't read, is by Brian Yonge, an estate surveyor for East African Railways.[3] Its title gives us the first colonial narrative: *The Most Courageous Railway in the World*. Obsession with world domination in all conceivable fields and the 'bravery' of white colonialists are common nineteenth-century British narratives that stretch into the present: these patterns are recognisable in the speeches and writing of Prime Minister Boris Johnson as well as nineteenth-century reports in publications such as the *Illustrated London News*.

Matson's introduction takes on the tone of the book's title, celebrating the railway's construction and the efforts of its engineers and managers. Matson writes of *difficulties overcome. A triumph of human endeavour and resolution over the most*

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1 A. T Matson, 'Introduction to The Most Courageous Railway in the World by Brian Yonge'. National Archives Nairobi, MSS/10/5.
2 Bob J. Walter. Review: Nandi Resistance to British Rule 1890-1906 by A. T. Matson. The International Journal of African Historical Studies 6:4 (1973): 705-708.
3 Brian Yonge, 'Uganda Road History and Wakamba', *Kenya Past and Present* 8:1 (1977): 19-26.

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The first chapter of the thesis looks at railways and narratives of progress as they were articulated in the *Illustrated London News*, which followed metropolitan 'improvements' and infrastructural developments closely. This analysis will focus on what infrastructure was supposed to do: the kind of 'progress' or future it was supposed to bring about, and who that future would benefit. It will also begin to tease out another picture of railway development, tracing how railways and their labourers were positioned as sources of disruption.

The second chapter of the thesis looks at the processes through which land was acquired for railway building, and how a narrative of 'public purpose' was used to dispossess Africans and evict working-class tenants in London. This chapter follows Brenna Bhandar's work in *Colonial Lives of Property*, where she argues that 'property laws and racial subjectivity developed in relation to one another'[105] and examines the ways in which the English common law of property became emblematic of 'civilized life and society'—'a central fixture in philosophical and political narratives of a developmental, teleological vision of modernization that has set the standard for what can be considered civilized.'[106] In this chapter, I try to bring infrastructure and the railways into this mix: I look at the procedures that were established to facilitate the purchase of land for railways in the UK, the concept of public interest that was cited and formulated in this process, and how these procedures then travelled to Kenya with the construction of the railway in the 1890s. What I try to trace is how the railway accelerated colonial processes of land acquisition and was involved in the construction of racial hierarchies, whereby white Europeans were recognised as landowners, and Africans simply as occupiers of land. In this chapter, railway construction is viewed as a technique of displacement which varied in method and outcome according to context.

As well as following the development of these laws, I'm also interested in Bhandar's arguments about subjectivity—the idea that property law forms racial subjects at the same time as it governs the appropriation of real property.

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105   Brenna Bhandar, *Colonial Lives of Property: Law, Land and Racial Regimes of Ownership* (Duke University Press, 2018), 2.
106   Ibid., 4.

daunting obstacles and setbacks. Steadfast leadership. Vision and tenacity.

This language sanitises railway construction, turning forced labour, anti-colonial resistance and strikes into *exceptional professional challenges*. It depicts colonisers as skilful heroes. It transfers agency for the death of labourers away from railway officials to the environment and creates the false idea that experiences of suffering, hardship and violence from labour conditions were not racialised.

The hardiness shown by the working gangs, of all races, carrying on under adverse conditions of climate and terrain.

Indentured labour is unnamed but also rationalised as necessary due to time constraints and local labour shortages; resistance, meanwhile, is minimised and erased.

With the exception of the Nandi, hardly any determined and sustained opposition to … construction was encountered. This meant that the invasion of tribal homelands by the railway caused very little lasting bitterness, even over the acquisition of land, and never became a significant factor in the upsurge, at a much later date, of active resentment at the presence and demands of the colonial power.[4]

Later in the week, I spend a day in the archive going through records of disputes over railway land. As I explore in chapter three, disagreements over seizure of land for the railway and the boundary of railway land continued into the 1920s; Matson and Yonge obviously have no interest in following these

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4 Italics are used to denote quotations from A. T. Matson's introduction.

Here, I'm looking at the way in which processes that acquired land for railways rendered some people visible to the state and others invisible through surveying and accounting. These practices were part of the process of liberal government as Patrick Joyce describes it – forms of knowing and not knowing the governed. In addition to considering the individual, I also think about how railways and their relations with land also constituted a similarly racialised and classed view of the 'public' through notions of public utility, advantage or interest. These reflections on visibility and invisibilty are rooted in discussions of opacity in decolonial literature: first, AbdouMaliq Simone's suggestion that 'when property regimes act as the predominant forms of seeing the city, of rendering all that takes place as visible within the optics of transparency, indifference requires opacity, just as opacity is a reflection of the indifference of residents to be fully understood or recognised.'[107] Simone consequently charts subterfuge, stealth and supplement, processes in which I'm interested too: where did deception enter into these processes, both as part of and in response to colonial appropriation? The other key reference for any consideration of visibility and opacity is the work of Eduard Glissant, who poses opacity as a form of resistance to colonial knowledge and government.

The third chapter considers delays to the construction of the Uganda Railway and the different ways in which these delays were reported and managed. In this chapter, I try to trace how, once construction had started on the Uganda Railway, delay and crisis were normal modes of operation that facilitated some developments but not others—the input of greater amounts of money and labour, for example, but not the provision of adequate medical facilities or sufficient investment in labourers' housing. Delays indicate what was valued—when they were figured in terms of increased estimates for the cost of building, for example, we see how the lives of Indian and African labourers were viewed only in terms of the monetary cost of their labour, and how these calculations were based in racialised value judgments—but they also show the extent to which colonial officers and engineers relied on and framed the period of construction as a time apart, a diversion from the 'normal', where the supposedly temporary nature of arrangements allowed for exploitative practices that nevertheless continued beyond the years of construction. From a focus on delays, we also learn more about the ways in which infrastructure projects managed information: we see that the construction of the railway involved a

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107　　　Simone, 'Urbanity and Generic Blackness', 4.

disputes.

Other histories of the Uganda Railway follow similar lines. Earlier in my research, I had ordered Charles Miller's *The Lunatic Express* to read at the British Library and struggled to make it through the prologue, which retells the story of chief engineer George Whitehouse's arrival in Mombasa in a writing style so weighed down by tropes and clichés that I stopped reading after a few paragraphs.5 I flipped through to the author's note at the end, where Miller explains that his own opinions on empire have influenced the book and states his position: 'for the record, I think that the British Empire, with all its horrendous failings, was on balance a good thing. I mourned its passing.'6

Artist Rosa-Johan Uddoh works with Black feminism and the surreal, often using these approaches to reflect on racism and colonialism in British popular culture. In her piece 'Don't Sunbathe', set during the COVID pandemic, Matt Hancock, Secretary of State for Health and Social Care, announces that sunbathing is not allowed and then morphs into the Monopod, a creature of Orientalist discourse who had the 'ability to curl their giant foot over their regular sized bod[y], in order to self-shield [itself] from the hot Oriental Sun.'7 When I think of railway historians mourning the British Empire and praising the 'courage' of colonialists Uddoh's work comes to mind: I imagine an elaborate mourning ritual with historians weeping over the corpse of Empire. *The Railway Historians' Lament*. In another of her works, Uddoh, dressed as a piece of chicken,

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5 Charles Miller, *The Lunatic Express* (Head of Zeus, 2016). [ebook].
6 Ibid, 'Authors Note'. [ebook].
7 Rosa-Johan Uddoh, 'Don't Sunbathe'. https://breakline.studio/projects/don-t-sunbathe (accessed 24 August 2020).

dual process of rendering lives and labour as calculations on the one hand, and the construction of a narrative on the other: the Railway Committee's final report presents what it calls a 'narrative of the advance of the rails'. Calculations are re-formed from tables of numbers into a story of 'progress' and 'advancement'.

Dwelling on labour resistance in the context of construction reemphasises the centrality of labourers and labour politics to infrastructure, but also helps draw attention to the small and larger ways in which empire and its infrastructural projects were subverted, sabotaged and impeded. Introducing infrastructural temporality as a frame to this resistance allows us to see that engineers' projections of the future didn't allow for unruliness of labour or for the existence of non-capitalist structures—a nineteenth-century version of Mark Fisher's capitalist realism, where alternatives to neoliberalism are impossible to imagine. In fact, we might suggest that delays and disruption were manufactured by limitations to white colonial ideas of the future: anything outside of their narrow vision of the possible was framed as a surprise, an unforeseeable event, separate from the narrative as they saw it unfolding. Finally, this chapter confronts the difficulties of using the colonial archive to understand labourers' motives and actions and allows for different possibilities in the interpretation of sources: a complaint from a colonial officer that labourers were working too slowly could be evidence of coercive and exploitative expectation of labour, or could reflect organised resistance, a lack of interest in following the colonial state's demands, or both at the same time. Similarly, allegations of theft and deception might have been trumped up charges, or an example of the ways in which labourers and employees threw the colonial state's own methods back at them: theft as a denial of legitimacy and authority. What is clear from the archive is that evasion and resistance were common threads in the response to colonial attempts to establish legitimacy.

The final chapter examines photographs of the construction of the Uganda Railway and railways in the UK. Here, I explore the emergence of engineering photography as a genre and challenge the idea that engineering photographs were 'faithful images' of construction sites with no 'hidden meaning'[108]—

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108   Both these descriptions appear in Michael Collins, *Record Pictures: Photographs from the archives of the Institution of Civil Engineers* (Göttingen: Steidlmack, 2004). Bizarrely, this book has no page numbers.

interweaves reflections on racism and colonialism in Britain with the passage of a piece of chicken through the digestive system, ending with a mournful song to mark the chicken morsel's passing.8 British popular culture provides rich source material for Uddoh's work because it is in turn ridiculous and unspeakably violent, just like Miller's book.

I've kept the discussions of these texts separate from the main chapters of the thesis because these books are not what I want to build my work on: they are not the building blocks that I have chosen.9 But they still need to be acknowledged. In his article 'Imagining Colonial Soldiers', Kerguro Macharia writes about Kenyan soldiers in World Wars I and II, imagining their lives, gestures, embraces and promises: 'to meet as free people, to remember the joy of fraternity, to keep secrets, to pursue joy'.10 Between these reflections on official accounts and fraternity and intimacy, we hear that Macharia has found one book that covers 'the trauma young Africans conscripted into colonial armies faced, but it is by Elspeth Huxley', who was also the author of another 'very racist' book, *Flame Trees of Thika*. For Macharia, this means her work on Kenyan soldiers is not worth engaging with. 'I prefer not to give her space in my brain', he concludes, and the book and its author aren't mentioned again.

instead, I trace the colonial narratives present in the images and in the practice of photographing engineering projects and focus. Consequently, this chapter considers visual narratives and their role in ideas of modernity or 'progress', and the ways in which these visual narratives are shaped through the presences and absences in the frame. More widely, it explores photography as a colonial and knowledge generating practice and wonders how this dynamic can be disrupted in the study of photography, taking inspiration from artists and their distortions of colonial images. Picking up on ideas of visibility, invisibility and opacity in the second chapter, here I think through what it meant to be 'visible', or what photographers and the colonial government sought from making people, landscapes, and construction sites visible. Finally, drawing on Saidiya Hartman's *Wayward Lives, Beautiful Experiments*, the chapter moves outside the frame of the image, bringing into play what we can't see in the photograph, and speculates on ways in which we can read resistance in these images of construction. In doing so, the chapter attempts to weave the photographs into a different narrative, one that contradicts and opposes their original purpose as evidence of 'progress'.

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8 Rosa-Johan Uddoh, 'Chicken Morsel/Belly of the World'. https://www.rosajohanuddoh.com/chicken-morsel-belly-of-the-world-2 (accessed 24 August 2020).

9 For the idea of references/citations as building blocks or 'bricks', see Sara Ahmed, *Living a Feminist Life* (Durham and London: Duke University Press, 2017): 16.

10 Keguro Macharia, 'Imagining Colonial Soldiers', *Popula*, 12 February 2019. https://popula.com/2019/02/12/imagining-colonial-soldiers/ (accessed 24 August 2020).

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NARRATIVES
'Progress', Communication, Empire and Disruption in the Illustrated London News

'The distinction between … what is officially accepted, and what is widely known and experienced by actual individuals, is very far from being merely emptily formal; it is the discrepancy between the two that allows ordinary social reality to function.'[109]

In August 1852, the *Illustrated London News* ran a review of a book on the history of railways called *Our Iron Roads*.[110] The review began with bold claims about the railways. Next to the invention of printing, they were the 'mightiest engine of modern civilisation'. The 'free [social] intercourse' they allowed for 'promoted kindly feeling' and 'knit together social ties which bound man to man.' The railways were 'man's proudest conqueror over time and space', bringing 'delights for the wearied spirit', 'healthful influences for the fainting and languid frame', and an immeasurable increase 'in the sum of human happiness.' 'Daily and hourly,' railways contributed to 'human advancement'.[111]

Halfway through, the review switched tone. Instead of stories of the railway's great improvement of humankind, the reader is informed that mistakes were made: the government offered no facilities for development and money that should have been spent on construction was used to bribe landed proprietors. There was a vast 'waste of capital' in unsuccessful bills and unsuccessful opposition to successful bills, along with health consequences for passengers and engineers alike. People sickened and died from exposure to the weather in open third-class carriages because money had been spent on compensating aristocrats rather than giving poorer passengers safe conditions. The price of 'railway mania' could also be read in the health impacts of long hours of work with insufficient rest.

The author of the review didn't attempt to reconcile their latter doubts about the impact of railways with their initial certainty of the 'happiness' brought about by railway development. This complexity of the response to railways has featured in later historical analysis: in their essay collection *The Railway and Modernity* (2007), for example, editors Matthew Beaumont and Michael

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109   Mark Fisher, *Capitalist Realism*, 17.
110   Frederick S. Williams, *Our Iron Roads: their History, Construction, and Social Influence* (London: Ingram, Cooke, and Co., 1852). Reviewed in ILN, 28 August 1852, 170.
111   *ILN*, 28 August 1852, 170.

Freeman specifically attempt to address the difficulty of the railway's position in modernity. This desire to frame the railway (and infrastructure more broadly) as part of the history of modernity has been a focus for decades now, but it has led to different interpretations or emphases. For Beaumont and Freeman, it is crucial to foreground the railway as a site of contradiction, in line with Marshall Berman's articulation of a 'paradoxical' modernity, where we are offered 'adventure, power, joy, growth, transformation of ourselves and the world' alongside the threat that everything we have and know will be destroyed.[112] Similarly, many authors pose the relationship between infrastructure and 'progress' or modernity as complex, contested, and 'mangled': in their texts, old technologies remain alongside the arrival of the new, and connection and technology were not always welcomed but viewed with distrust and even fear.[113]

For others, an analysis of infrastructure and modernity requires a greater focus on narratives of 'progress' and Enlightenment ideals, instead of the ways in which these ideals were only partially implemented or feared and resisted. Maria Kaika and Erik Swyngedouw, for example, trace the way in which water infrastructure became an emblem of 'progress': in their article 'Fetishizing the Modern City: The Phantasmagoria of Urban Technological Networks', they argue that modernity celebrated technological networks, which became urban fetishes, 'compulsively admired and marvelled at, materially and culturally supporting and enacting an ideology of progress.'[114] Kaika and Swyngedouw analyse infrastructures using Marx's commodity fetishism, but they also link infrastructure to ideas of 'freedom and emancipation': according to their account, 'the amelioration of city and society became part and parcel of a quest for equality and freedom through reason and progress.'[115] Early infrastructures carried promises of widespread social change: 'being connected to technology

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112   Marshall Berman, *All That Is Solid Melts Into Air: The Experience of Modernity* (London: Verso, 2010): 15.

113   See Christopher Otter, 'Cleansing and Clarifying: Technology and Perception in Nineteenth-Century London', *Journal of British Studies* 43:1 (2004): 40-64; Matthew Gandy, 'The Paris Sewers and the Rationalization of Urban Space', *Transactions of the Institute of British Geographers* 24:1 (1999); Barbara Penner, 'The Prince's Water Closet: Sewer Gas and the City', *The Journal of Architecture* 19:2 (2014): 249-271.

114   Maria Kaika and Erik Swyngedouw, 'Fetishizing the Modern City: The Phantasmagoria of Urban Technological Networks', *International Journal of Urban and Regional Research* 24:1 (2000): 122.

115   Ibid.

meant in itself emancipation', and networks 'became the revered technologies introduced to serve the "public good".[116] These ideas, they argue, were common and foundational: 'during early modernity,' they summarise, 'the technological dream of a universal justice under the equalizing and totalizing powers of technology was widely held.'[117]

In their account of the formation of networked, standardised cities, Graham and Marvin make similar statements: both infrastructure and urban planning were 'constructed as key elements of the broader project of modernity, as Enlightenment ideals of universal rationality, progress, justice, emancipation and reason were applied to all areas of social life.'[118] Services such as roads, telephony and water systems were 'often heralded as the very deliverers of benefits for all, promising an emancipatory future of linear, absolute progress.'[119] Brian Larkin cites different Enlightenment ideas in his analysis, suggesting that infrastructure 'has its conceptual roots in the Enlightenment idea of a world in movement and open to change where the free circulation of goods, ideas, and people created the possibility of progress.'[120] Patrick Joyce emphasises the idea of 'freedom': in his book on Liberalism and the modern city, he argues that aim of nineteenth century urban improvements was to 'remove all impediments' to the liberal subject's exercise of freedom.[121] In this analysis, the 'condition of possibility' of freedom becomes the underpinning of the 'political economy of infrastructure', even if these promises or possibilities of freedom did not always come to pass.[122] It is generally agreed, then, that modern infrastructures often operate within narratives that promise 'progress' through circulation, movement and freedom for the liberal subject.

While studies of incomplete and partial infrastructural modernities are often specifically located, dealing closely with particular case studies, studies of narratives of progress are often broader. Although Kaika and Syngedouw do use the specific example of urban water networks, they don't include a close analysis

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116   Ibid., 124-5.
117   Ibid., 129.
118   Graham and Marvin, *Splintering Urbanism*, 41.
119   Ibid., 47.
120   Larkin, 'The Politics and Poetics of Infrastructure', 332.
121   Patrick Joyce, *The Rule of Freedom: Liberalism and the Modern City* (London and New York: Verso, 2003): 11.
122   Ibid, 12.

of progress narratives: we are not given the context for technological dreams of 'equality and freedom' and the often-contradictory settings in which these imaginaries of infrastructural progress appeared and were mobilised. This means that it is not always clear how these narratives of freedom and emancipation operated. What were the boundaries of these technological dreams? How did they incorporate or address the inevitable failures, disruptions and contestations of new networks?

Ideas of progress and communication have been studied closely in the French context, for example by Armand Mattelart and Pierre Musso. While Mattelart studies 'the invention of communication', Musso focuses on the formation of network ideology and the shift from a hierarchical, tree-like way of conceptualising society to a reticular vision of progress. He begins with the Saint Simonians, in particular Michel Chevalier, who he credits with creating the modern idea of the territorial network. Through Chevalier's work, the technical object became the 'symbol of universal association', its creation equated with a 'radical change of society'. Here, communication did mean equality and democracy: like Mattelart, Musso quotes Chevalier's belief that networks could reduce distances geographically and between the classes—that they equated to 'real, positive and practical freedom.'[123] More interestingly, Musso takes his analysis beyond the Saint Simonians to include the anarchists Proudhon and Kropotkin. For these thinkers, centralised communication routes produced centralised societies. The network only had potential for social revolution under certain political conditions of organisation and regulation. Musso's analysis of Saint Simonianism and anarchist thought introduces the difference between those who celebrated networks as the answer to social issues, and those who advocated for networks as part of wider political change and reorganisation.[124]

In this chapter, I am interested how these narratives played out in popular British print culture. I draw on existing work on infrastructures and modernities to analyse railway imaginaries in the *Illustrated London News* from 1842, when the publication was first published, to the early 1900s, when it reported on the

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123   Armand Mattelart, *The Invention of Communication*, trans. Susan Emanuel (Minneapolis: University of Minnesota Press, 1996), 106.

124   Pierre Musso, 'Network Ideology: From Saint Simonianism to the Internet', in José Luis Garcia, ed., *Pierre Musso and the Network Society: From Saint-Simonianism to the Internet* (Switzerland: Springer, 2016).

completion of the Uganda Railway. I analyse the narratives of progress that surrounded railways—as Kaika and Swyngedouw put it, the ways in which emerging infrastructures were 'compulsively' celebrated as 'glorious icons' and enactments of 'the modern promise of progress'[125]—but also narratives of their disruption. I consider how different railway narratives functioned together, and the extent to which larger concepts of progress, infrastructure and communication were influenced by the reality of 'mangled' and contested infrastructural modernities. In particular, I am interested in what kinds of disruption were accommodated into railway narratives (in particular, visual narratives) and which kinds were not represented.

In part, this draws on Raymond Williams' analysis of Jane Austen and her depiction of wealth. Austen's eye for 'a house, for timber, for the details of improvement,' Williams argues, 'is quick, accurate, monetary'; but 'money of other kinds, from the trading houses, from the colonial plantations, has no visual equivalent; it has to be converted to these signs of order to be recognised at all.' Similarly, processes of agricultural labour are left out of Austen's narrative: land 'is seen primarily as an index of revenue and position; its visible order and control are a valued product but the process of working it is hardly seen at all.'[126] In this analysis of Austen, Williams draws our attention to the ways in which certain visual narratives are more prominent than others, and how this discrepancy can hide the ways in which wealth and signs of supposed order are built from colonial, racial and capitalist extraction. Here, I attempt to apply this approach to representations of the railways: what is hidden and what is foregrounded in the railway's representation in nineteenth-century print culture?

In my use of the term railway narratives, I mean the ideas attached to the railways in the nineteenth century: the worlds and futures that the railways evoked, and the particular concepts contemporaries drew on to describe or understand the impacts of railway development. Through narratives, I focus on the stories that were told about railways—the ways in which they were represented both visually and in text. The *Illustrated London News* is particularly

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125   Kaika and Swyngedouw, 'Fetishizing the Modern City', 121.
126   Raymond Williams, *The English Novel from Dickens to Lawrence* (London: Vintage Books): 14-15 [ebook]. I first saw this quote from Williams tweeted by Jane Hu (@ hujane).

appropriate for its use of illustrations, its consistent concern with metropolitan 'improvements' and infrastructure construction, but also because it emerged in the context of Chartist disruptions across England in the 1830s and can be read in part as an attempt to make sense of or render both legible and manageable 'perceived social tumult.'[127] In his book on the *Illustrated London News,* Peter Sinnema terms this the 'constant dilution of potential trauma': 'ultimately', he argues, 'cultural shock, a reaction to the spread of the railway, is anticipated and attenuated by the illustrative schema of the ILN.'[128]

The paper was founded by Herbert Ingram, who initially made his money through the sale of the laxatives Parr's Life Pills and had the idea for an illustrated paper when he noticed that newspapers sold better when they either reported crime or carried illustrations. The ILN brought him 'huge profits … wealth and influence' and, in 1856, he became the Liberal Member of Parliament for Boston in Lincolnshire.[129] Ingram was involved in infrastructural schemes in his local area: he supported and funded Boston's waterworks and railway schemes, and before his death had plans for the 'radical improvement of the port and sea channel.'[130] Ingram's life therefore gives an indication as to the political leanings of the ILN. In his social history of the 'mass reading public', Richard Altick explains that the ILN was an 'exception' to the rule that 'the most popular weekly newspapers were all to the left of centre politically.'[131] Like its proprietor, the ILN often supported 'social reform', but it was highly weary of disruption or disturbance; in July 1842, for example, an article entitled 'The Preservation of Domestic Peace' claimed that the Anti-Corn Law League exercised 'too fierce, dangerous and illegitimate a power' that risked filling the soul of 'the enduring pauper … with a malignity that shall threaten to break forth into revolt.'[132] Generally, the ILN positioned infrastructure development and metropolitan improvements as a means of avoiding this kind of revolt and agitation, and while

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127   Michael Freeman, *Railways and the Victorian Imagination* (New Haven and London: Yale University Press, 1999), 9.

128   Peter W. Sinnema, *Dynamics of the Pictured Page: Representing the Nation in the Illustrated London News* (Abindgon: Routledge, 2018): [ebook].

129   Isabel Bailey, 'Ingram, Herbert'. *Oxford Dictionary of National Biography* [Online Edition]. 2004.

130   Ibid.

131   Richard D. Altick, *The English Common Reader: A Social History of the Mass Reading Public, 1800-1900* (Ohio State University Press, 1957), 344.

132   'Preservation of Domestic Peace', *ILN*, 23 July 1842, 161.

it supported certain reforms to improve the lives of the working classes, it often espoused a firmly hierarchical view of society.

When it comes to railway narratives, as Sinnema argues, the publication is particularly useful because it was founded at 'roughly the same time as the British railway solidified into a national system for the transportation of both goods and passengers.'[133] While Sinnema isolates two 'subdivisions' of railway representations in the ILN—'disaster by accident, and new possibilities for the exploration of scenic locations'—I identify four different themes in the ILN's railway narratives and ask a number of different questions of the sources (both text and illustrations). What powers were attributed to railways? What visions of infrastructural progress can we read in the ILN? And how did narratives and representation deal with disruption and upheaval? With this final question, I am particularly interested in narratives around labour and labour unrest—how did strikes feature in depictions of railway disorder and disruption?

* * *

Many railway histories emphasise the development of railway infrastructure as a cause of turmoil and upheaval, both in terms of changes in perception— for example, Wolfgang Schivelbusch's argument that railway travel changed 'thought, feeling and expectation'—and the disruption of material conditions.[134] While railway companies in Britain attempted to calm fears about the dangers of railways by hiring artists to depict steam engines and railways as picturesque, an attitude of anxiety often prevailed.[135] In his account of railways and the Victorian imagination, Michael Freeman investigates 'cataclysmic perspectives' on the coming of railways in Britain. For some, steam locomotion seemed 'supernatural'; large excavations caused disturbances, and the speed of trains was shocking.[136] Alongside this depiction, Freeman explains how celebrations of new lines and stations were used to 'distract attention from the appalling social consequences of contemporary capitalist development.'[137] Consequently,

133   Sinnema, *Dynamics of the Pictured Page* [ebook].

134   Wolfgang Schivelbusch, *The Railway Journey: The Industrialisation of Time and Space in the Nineteenth Century* (Leamington Spa: Berg, 1986), xiii.

135   Paul Fyfe, 'Illustrating the Accident: Railways and the Catastrophic Picturesque in The Illustrated London News', *Victorian Periodicals Review* 46:1 (2013): 61.

136   Freeman, *Railways and the Victorian Imagination*, 13.

137   Ibid., 30.

with railway development, we can trace quite clearly the ways in which forms of representation were used to make upheaval and inequality seem normal and acceptable.

Similarly, Paul Fyfe, drawing on Francis Klingender, examines the way in which the picturesque style was used in representations of industrial sites to 'reimagine the political, material and ideological disruptions of industry in terms of political harmony.'[138] In particular, he looks at how the style was used to depict accidents in the ILN, arguing that it allowed 'artists and engravers to depict broader uncertainties and violent disruptions associated with railway construction and travel': the industrial picturesque, he argues, was a means of 'coming to terms with modernity.'[139] Fyfe suggests that these images are interrogative: the 'catastrophic picturesque', as he terms it, questioned 'the inscrutable forces and manifold instabilities of the nineteenth century railway at its apex.'[140] But he also reveals how the ILN encouraged its readers to analyse images of accidents from the perspective of the 'aesthetic critic', appreciating the 'picturesque appearance' of 'melancholy scenes'.[141] Disruption and disaster were aestheticized and distanced from the viewer: the ILN's scenes could be viewed safely away from any danger.

While Fyfe focuses on images in the ILN, in this chapter I will also consider how the publication represented the railway in text: which concepts and frameworks it drew on to try to report the impacts of railway development and which stories were reported and how. Unsurprisingly, the ILN followed developments in railways closely, with columns on 'the Railway Progress', 'Railway Facts' and 'Railway Intelligence', which often included brief, one or two sentence-long updates on many different railway construction projects, along with more in-depth illustrated reports on railways from across the world. Railways, their construction, financing, engineering and the new experiences and ways of seeing they opened up were certainly important topics for the ILN, which in part was simply a reflection of how much news the railway generated, particularly in periods of intense speculation and construction. In October 1845, for example, one article reasoned that readers would be interested in accounts of

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138   Fyfe, 'Illustrating the Accident', 61.
139   Ibid., 64.
140   Ibid., 71.
141   Ibid., 76.

the 'progress' and planning of different lines because 'railways now occupy such a prominent position in the public mind.'[142]

"CIVILISATION" AND "COMMUNICATION"

One mode in which the ILN depicted railways was through a focus on the idea of communication, which was often in turn connected to the spread of 'civilisation'. Communication was getting quicker—'nothing is more characteristic of the age we live in than the desire which everywhere prevails of increased rapidity of communication and multiplied facilities of intercourse', declared an article on the overland mail. The 'empire of commerce' and its 'never-ceasing movement' combined with the 'necessities of business to quicken the emotions of men, and urge on the wheels of life in their revolutions with accelerated velocity.' This increased speed supposedly had a social effect, bringing people together and reducing the barriers between them:

> *the bonds which unite to each other the great families of mankind are being drawn closer and tighter; the barriers of time and space, which one opposed to their union obstacles apparently insurmountable, are lessened, if not altogether removed; and those pioneers of society, the courier and the steam packet, are annually spreading wider the circle of civilization, preparing new triumphs for humanity.*[143]

The openings of new railway lines were similarly often heralded as landmarks in 'civilization'. In 1846, for example, the opening of the Bury and Ipswich Railway was declared 'an important era in civilization': 'it is impossible to witness such a scene – the commemoration of so great a stride in inventive skill and high convenience – without believing that countless benefits must be dated from this period,' the ILN report claimed.[144]

This narrative—that increased communication spread 'civilization' outwards from the metropole—was common in representations of the railway and is an example of the ways in which railway narratives were often inherently colonial. Another consequence of the spread of the railways in this narrative

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142   'The Railway Progress', ILN, 18 October 1845, 249.
143   'The Overland Mail', *ILN*, 11 March 1843.
144   Opening of the Bury and Ipswich Railway, *ILN*, 12 December 1846, 337.

is peace: an article on the first six-hour passage from London to Boulogne, for example, celebrated the supposed peaceful and civilising consequences of the railway: 'That which Nelson upheld at the expense of fleets, and which Bonaparte attempted to achieve at the cost of millions of men and money, will be indestructibly accomplished by merely facilitating to its utmost bounds the social intercourse of the two nations.'[145] A 'highway of death' would become a 'path of peace'; the railway, in 'conjoining two mighty nations', made 'their common interests identical' and promised 'the happiness of ages and generations'—defined, by the ILN, as 'political peace and commercial prosperity.'[146] These benefits also applied within England: the inhabitants of villages and towns in the south-east:

> *were once segregated from each other, fearful of intercourse, and hostile to its extension, strangers to London and to each other, and to a man sworn enemies of their near neighbours the French; but now, the railroad – "the soldier of society", the iron missionary – has banded town to town and kingdom to kingdom in one great fraternity, and by becoming, as it were, the mediator of human prejudices, has so far succeeded in its purpose as already to have made the class interests of many towns the common interest of all. The rude fishermen of Folkestone, the sturdy farmers of Ashford, the aristocracy of Tunbridge, the peasantry of Edenbridge, the high churchmen of Hever, of Headcorn, of Chiddingstone … each party dwelling in an isolation of its own, is now forced to mingle, to exchange opinions, to exchange produce, and the consequence is, that provincialism is gone, or going, and as London so Folkestone, and, as universal man should be, so are the once divided and consequently ignorant and impoverished neighbours of the line.*[147]

This idea that the railway vanished barriers, even borders, was repeated: one column in 1845 reported that a new branch railway to Warsaw would 'have the effect of abolishing the line of demarcation between Poland and Russia.'[148] According to these accounts, division and isolation were the only obstacles

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145   'Celebration of the First "Six Hour" passage from London to Boulogne', *ILN*, 5 August 1843, 92.
146   Ibid.
147   Ibid.
148   'The Railway Progress', *ILN*, 25 October 1845, 259.
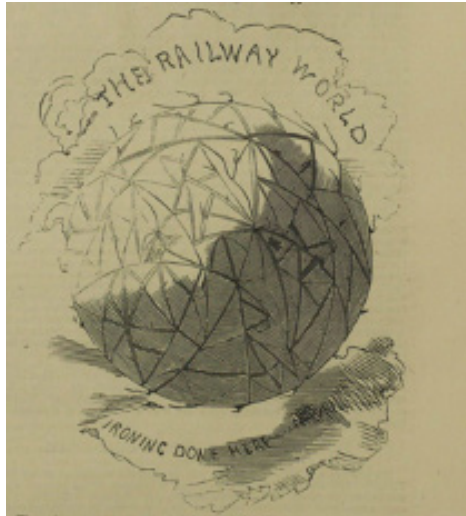
'Railway Mania', ILN, 18 October 1845, 252.

to progress and improvements would occur naturally with the exchange of opinions and produce and the creation of common interests amongst social groups, classes and nations. In this process, the railway was a 'mediator', facilitating the peaceful resolution of disputes and the unification of society. Exchange was presented as the answer to division, an account supported by the suggestion that before the railway, the classes were geographically separate: aristocracy in Tunbridge, peasantry in Edenbridge, churchmen in Hever. Responsibility for change was handed over to a non-human agent.

One function of these narratives was to suggest that the benefits of railway development in Britain were collective: new lines would benefit communities as a whole, not just shareholders of railway companies and compensated landowners. Articles that marked the opening of a new railway line or station particularly emphasised this idea, and in turn were also emphatically celebratory. They were often illustrated with images that correspond closely to Fyfe's description of the 'industrial picturesque': the emphasis was on harmony and celebration, rather than on disruption, difficulty, or fear of change. In 1854, for example, the ILN reported on the extension of the South Wales Railway into Pembroke, 'forming another link in that great chain of railway communication which has already done so much for the Principality.'[149] The article reported that for the inauguration of the extension, the Mayor of Haverfordwest provided a 'magnificent banquet', inviting the directors of the South Wales, Great Western, and Vale of Neath Railways; the Eastern Steam Company, the Australian Direct, via Panama, Steam Screw Navigation Company, and the mayors of surrounding towns. Apparently 'following the example of the Mayor', 'the leading inhabitants resolved to make the celebration as general as possible. They not only decorated their houses and establishments in the gayest manner, but subscribed liberally for a plentiful dinner to 2000 persons of the poorer classes in the town and district.'[150] The opening of the line was celebrated in the report as a source of communication, trade, commerce and prosperity.

Such celebrations were not confined to the opening of new railway lines. One report from 1845 details how the railway station at Swindon was 'put to a novel use, namely, appropriated to the pleasures of dance.'[151] The 'country gentry of

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149   'Haverford West Railway – Imposing Demonstration', *ILN*, 7 January 1854, 12.
150   Ibid.
151   'Country News,' *ILN*, 18 January 1845, 35.

Berkshire, Wiltshire, Somersetshire, and Middlesex' were in attendance and the 'splendid rooms' of the station, lit by 'elegant chandeliers filled with wax candles' and decorated by artificial flowers and laurels, 'seemed one blaze of light and beauty,' the ILN reported. This article and similar reports of railway celebrations provide an example of the role of railways in what Kaika and Swyngedouw call the 'theatre of accumulation and economic growth.'[152]

While railway celebrations were happily reported and illustrated, in turn, the lack of celebration of new railways was criticised: when the ILN reported on the opening of the Chertsey branch of the South Western Railway, the paper complained that when 'several tradespeople dined together at the Crown Inn, to celebrate the event', 'few, if any of the surrounding residents gave their countenance to the festivity.' This, the ILN reported, was 'to be regretted, since, had the affair been taken up by some one of consequence in the neighbourhood, a proper "inauguration" might have been achieved; as it was, the meeting was somewhat "flat, stale, and unprofitable." '[153] This was despite the earlier acknowledgment that the impact of the railway might be negative: four trains would 'offer the greatest conveniences to the inhabitants, although it is a question whether it may not affect the business of the town in such affairs as grocery, the fashions, book selling &c. from persons being enabled to get their stock direct from town more readily, and at a less price than by ordering them of the resident dealers.'[154]

Another element to the narrative of success, 'progress' and celebration was a focus on engineering or scientific 'achievement'. In the ILN we hear of engineering feats: the 'two stupendous iron bridges of the Blackwall Railway Extension', for example, which 'in point of extent [were] the largest railway bridges to be found in the vicinity of the metropolis' and were 'erected on a new principle'.[155] Similarly, the Etheron Viaduct on the Sheffield and Manchester Railway was an illustration of the 'attainments of English science', noteworthy because of its 'boldness, grandeur and simplicity', its 'perfect command over the resources at hand, and beautiful economy in their disposal.'[156] According to the

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152   Kaika and Swyngedouw, 'Fetishizing the Modern City,' 121.
153   'Railway Intelligence', *ILN*, 19 February 1848, 106.
154   Ibid.
155   'Railway Intelligence', *ILN*, 11 November 1848, 290.
156   'The Etheron Viaduct on the Sheffield and Manchester Railway', *ILN*, 28 January 1843, 52.

ILN, science, aided by trade, produced a proud record of 'the power and energy of civilized man'; in the form of bridges and viaducts, it embodied 'powerful genius' and the ability to 'curb and restrain' nature.[157]

Through these articles and their illustrations, we can trace the way in which railways were framed as inherently a 'benefit', much like changes to cities were labelled 'metropolitan improvements' without much consideration of whether there were some people whose experience of the city was not improved. The concepts mobilised as evidence for this benefit—increased communication and peace—depict the railways as 'sources of wonder' in the sense that Kaika and Swyngedouw describe.[158] Their effects were apparently miraculous: they dissolved borders, produced common interests, happiness and prosperity.

These narratives of communication, peace and celebration did allow for certain forms of disruption. In reports on the construction of the London Metropolitan Railway, the ILN reported delays in obtaining capital and then the 'immense mass of excavated earth' and gravel which was to be removed by train via the Great Western and Great Northern Stations.[159] Just as Penner's 'sanitary sections' exposed sewer infrastructures and made them visible in an attempt to allay fears about a new system, articles on the Metropolitan Railway were illustrated by maps and sections—methods of visualising construction but also rendering invisible the excavations of earth. Alongside these images, the text emphasised that the need for railway communication had been 'long grievously felt', but the difficulties of carrying a railway into the city appeared to be 'almost insuperable'. While these illustrations made some things visible over others, the text presented order and lack of disruption: unlike an 'unsightly viaduct' or a railway at ground level, the underground Metropolitan Line would pass through the most densely crowded districts 'without the slightest annoyance or obstruction to the existing traffic.'[160]

These forms of representation—the map and the section—were one means of ordering the disruptions and dislocations of construction; another method was the provision of 'views' of the construction sites. A view of one of the

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157   Ibid.
158   Kaika and Swyngedouw, Fetishizing the Modern City: 121.
159   'The Metropolitan Railway', *ILN*, 7 April 1860: 336-7.
160   Ibid.

Metropolitan Line sites shows a partially covered cutting with 'works in progress' and the text tells us what the site will be when it's finished. Difficulties existed but had been overcome: the Fleet River had been 'successfully inclosed [sic] in a huge iron tube', meaning the trains would 'run actually under the Fleet River.'[161] Later articles gave an update on the line, which was 'fast working' its way into the City. We are told of the removal of two houses in Park Crescent by Euston Road, which would 'considerably mar its architectural beauties.' Labourers are not invisible in these views—they feature in illustrations of construction sites—but they are dehumanised: one report on the Metropolitan Line describes the navvies swarming 'like bees in a hive.'[162] Inappropriate nature similes were used for the tunnel too: the railway 'somewhat resembles the track of a mole.'[163]

Part way through the construction process in 1862, the ILN included an engraving of the Metropolitan Railway and the 'Fleet Ditch'.[164] While this illustration did not follow exactly the visual conventions outlined by Fyfe, we can draw some similarities. The image shows a construction site with rubble in the foreground and a trench circling a half-demolished building. The text explains that a tunnel had to be made for the 'rapid removal' of the 'rubbish which comes from the destruction of the houses cityward' and reminds the reader of the reasons why the site was 'formerly celebrated': for its spa and 'for containing the summer residence of Nell Gwynne,' an actress famous in the second half of the seventeenth century. In this accompanying text, there is certainly a nostalgia for the past, when the Fleet was 'a crystal running steam' instead of a 'sewer', and a fear or at least distaste for modernity, which had brought the destruction illustrated in the image.

Compared to the images of railway accidents that Fyfe analyses, this illustration of the 'Fleet Ditch' is less catastrophic and more mundane. While accident illustrations showed 'artistic disorder',[165] with train carriages ripped apart and distorted and damaged elements strewn across the landscape, the Metropolitan Railway construction site provides a more ordered image. The cross beams

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161   'The Metropolitan Railway', *ILN*, 2 February 1861: 99.
162   'The Metropolitan Railway', *ILN*, 21 September 1861: 293.
163   'The Metropolitan Railway', *ILN*, 13 September 1862: 294.
164   'The Metropolitan Railway', *ILN*, 15 February 1862: 182.
165   Fyfe, 'Illustrating the Accident', 73.

'The Metropolitan Railway and the Fleet Ditch', ILN, 15 February 1862: 182.

supporting the excavated trench do not appear scattered or precarious, and the water that jets out from under the ground towards the viewer is far less dramatic than the billowing clouds of smoke often depicted in accident scenes. This stream of water suggests power and velocity, not picturesque disorder.

By the end of 1862, the stations on the Metropolitan Line had been completed, and the ILN was able to publish an illustrated guide, which showed the exterior of each finished station, along with the interior of Kings Cross and two signal men's stations.[166] These engravings marked a reassertion of order: the 'great idea of burrowing beneath what may be called the venous system of London—that is, its reticulation of gas, water, and sewage pipes'—had 'been realised'. The disorder and disruption of construction vanished and in its place was the convenience of the finished project: the tunnelling was 'very complete', the carriages 'commodious', and 'the lighting—a most important matter in an underground railway—very well managed.'[167]

Visual narratives, along with their accompanying texts, allowed for certain kinds of disruption—setbacks in construction, engineering difficulties, and even great excavations and demolitions of the existing city fabric. But these disruptions were often balanced by visual and textual reassertions of order: through maps and sections, illustrations of completed stations, or partial narratives, emphasising how problems were overcome or the ease of communication and movement the new line would afford. In this sense, disruptions did not interfere with the overarching narratives of 'progress' or improvement through infrastructure: the problems of construction could often be resolved in the ILN's narratives.

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166 'The Metropolitan Underground Railway', *ILN*, 27 December 1862: 692.
167 'The Stations of the Metropolitan Railway', *ILN*, 27 December 1862: 687.

4. A 'Horse-Cloth for Uganda'.

In April 1898, the *ILN* ran a short article entitled 'A Horse-Cloth for Uganda'.[1] The text introduced and explained the horse-cloth, which was 'a special pattern of clothing … to be worn by riding ponies night and day while passing through the "fly district" on the road from Mombasa to Uganda.' It was made up of a head piece and a body piece, with the horse's eyes and nose protected by mosquito netting. The clothing was designed to deal with an issue that had been delaying the construction of the railway: horses were quickly sickening and dying thanks to the tsetse fly; according to Guildford Molesworth's report on the railway's progress, the first 250 miles traversed by the railway were 'fatal to transport animals'.[2] Despite the difficult circumstances, the *ILN* was optimistic about the horse-cloth's prospects: it was expected to 'prove of great service in the transport work which plays so prominent a part in the extension of the Uganda railway, and the general

1 'A Horse-Cloth for Uganda'. *ILN*, 23 April 1898, 576.
2 Guildford Molesworth, 'Report on the Uganda Railway' (London: HMSO, 1899): 13.

RAILWAYS, COLONIALISM AND "PROGRESS"

Ever present in these narratives of railways as forms of improvement and communication were the contexts of Britain's growing empire. As a whole, the ILN demonstrates the ways in which news from colonised countries was brought into national narratives and the heavy investment that British engineers had in colonisation, as Casper Andersen has shown in his work on British engineers in Africa.[168] While the ILN was not as 'militantly British' as some of the engineering publications that emerged in the 1890s—for example, *Feilden's Magazine,* which was launched in 1899 as a competitor to *Engineering Magazine* and claimed to give 'voice to the most effective means of retaining and expanding our trade and upholding the supremacy of British institutions and British prestige the world over'[169]—the ILN's coverage of railways in colonised countries often carried the same message. The paper contained stories from railway construction projects across the British Empire, with railway openings in particular covered by illustrated reports: in 1853, for example, the paper included an article on the 'opening of the first railway in India', with an engraving of the coast of 'Bombay' from Malabar Hill.[170]

These articles very clearly set up the idea of the railway as a benefit to be bestowed on other countries by the British Empire. In the report on the opening of the Great Indian Peninsula Railway, for example, the railway was described as a 'noble' example of English power and asserted as proof of the 'power and greatness of … European conquerors', as a technology that 'melts away … the superstitions of ages' through the 'gigantic reality of steam and mechanism.'[171] The visual narratives emphasise these ideas of order and celebration: in the article on the opening of the railway at Durban, the most prominent feature is a triumphal arch declaring 'God Save the Queen'; in the engraving alongside the report celebrating the opening of the Indian Peninsular Railway, the scene

168   Andersen, *British Engineers and Africa, 1875-1914.*
169   'No Apology', *Feilden's Magazine: The World's Record of Industrial Progress*, vol. 1, August to December 1899. London: The Feilden Publishing Company. For context on the establishment of Feilden's Magazine, see Andersen, British Engineers and Africa.
170   'Opening of the First Railway in India', *ILN*, 4 June 1853: 436. For a discussion of representations of railways in a South Asian context, see Ian J. Kerr, 'Representation and Representations of the Railways of Colonial and Post-Colonial South Asia,' *Modern Asian Studies* 37:2 (2003): 287-326.
171   'Opening of the First Railway in India', *ILN*, 4 June 1853: 436.

opening up of the country to British enterprise.'[3]

The brief description is accompanied by an illustration of a horse completely covered in a white cloth, held by a person whose face is mostly obscured by the horse's neck. The image is haunting—the horse looks ghostly, with the head piece emphasising what looks like empty eye sockets, but also ridiculous; despite the article's confidence, this doesn't look like a practical arrangement. How does the horse breathe? Other than this article, I couldn't find any mention of the horse cloth in use—the railway's chief engineer complained frequently about the deaths of his transport animals but didn't mention that a shroud-like solution had been invented, and none of the construction photographs show the horse-cloth on site.

In the context of the delays to the railway's construction, the horse-cloth seems like a desperate attempt to speed up the progress of construction. In the same month, the *ILN* reported on the railway's new appointment of Veterinary-Captain A. J. Haslam, who had been employed to 'organise and direct animal transport'.[4] Similarly high hopes were pinned on this appointment: his task was to 'work animals in the country hitherto fatal in its effects upon them, and put at rest all doubt concerning the nature of the animal diseases so malignant in the district.' But the tsetse fly wasn't the only issue to contend with: at the same time as the line approached the 'worst region', an uprising in Uganda was also delaying progress. This place was clearly inhospitable: both people and insects rejected the British and their horses. So as well as an attempt to speed up construction, the horse-cloth also seems to be desperate

includes a coastline, mountains, and vegetation, but no clearly identifiable evidence of railway construction.[172] Disorder comes from climate and wildlife, but we do also hear briefly about labour disruption in the construction of the Indian Peninsula railway. Labourers were 'difficult to manage' or would strike in groups of 'fifty or a hundred at a time'.[173] These disorderly workers had no place in the visual narrative in the ILN; in the accompanying engraving, people are barely visible.

We can see similar narratives play out in reports on the construction of the Uganda Railway. The first mention of the railway was very brief, simply reporting that the survey party had returned to Mombasa.[174] The first report with more detail came from Reuter's and explained the geography through which the intended line would pass. Although there was mention of 'Mombasa merchants', there was otherwise no reference to people—only that at a certain point, 'the railway enters prairie and grass-land covered with game, but practically uninhabited.'[175] Here, railway representations reinforced the common colonial narrative that emphasised 'picturesque' landscape views as a means of justifying imperial expansion, erasing indigenous communities, and naturalising the 'landscape aesthetic as a rational, distanced way of viewing and organising space', as James R. Ryan puts it in his study of photography and the visualisation of the British Empire.[176]

Like much of the ILN's coverage of railway line openings, its article on the Uganda Railway opening ceremony, where the chief engineer's wife laid the first rail, was particularly celebratory. It referred to 'the great advantages to East Africa which the construction of the railway would confer in opening out the country to British trade'—at this point, the railway's benefits to Britain were emphasised, although later the focus would switch to narratives of peace and supposed benefits to local people.[177] There was mention of over a thousand labourers from India; no number was put on East African workers and the

3 'A Horse-Cloth for Uganda'. *ILN*, 23 April 1898, 576.
4 'Personal'. *ILN*, 2 April 1898, 468.

172   'Cutting the First Turf of the Natal Government Railway at Durban', *ILN*, 11 March 1876: 262.
173   'Opening of the First Railway in India', *ILN*, 4 June 1853: 436.
174   'Home and Foreign News', *ILN*, 1 October 1892: 432.
175   'Uganda Railway', *ILN*, 14 September 1895: 346.
176   James R. Ryan, *Picturing Empire: Photography and the Visualisation of the British Empire* (London: Reaktion Books, 1997): 72.
177   'Uganda Railway', *ILN*, 29 August 1896: 274.

attempt to indicate that east Africa could be hospitable for white settlers. Look! You can bring your horses—just remember to pack their clothes too.

The illustration of the horse-cloth—with the person holding the horse's reigns standing behind the horse, their face partially obscured—also seems to demonstrate where value is placed. There were no articles in the *ILN* on measures taken to protect labourers from the illnesses that they risked contracting because there were none to report on: while the railway had its hospitals and doctors to deal with those who fell ill, its administrators didn't enact suitable plans or provide sufficient resources that might have stopped labourers getting sick in the first place. Preventative measures were reserved for horses: an indication of how colonial construction projects valued the lives of their black and brown labourers.

article claims they were 'freely employed', but provides no evidence to back this up, even though the forced nature of the labour was asserted in parliamentary debates on the railway and the discontent and resistance of various labour forces would mark the line's construction.[178] The image that accompanied the article showed the construction of locomotives on the beach at Mombasa Island. For a project that had barely started, the locomotives provided clear evidence that a railway was underway.

In 1898, the ILN reported on the appointment of A. J. Haslam, 'a well-known officer of the Army Veterinary Department', to 'organise and direct animal transport in connection with the Uganda Railway.[179] In this brief report, disruption entered the narrative: the country was 'infested with the tsetse fly', and the roads were 'very bad', which meant that the 'well-being of the animals employed' became a matter of 'great importance' (although the wellbeing of the labourers was not mentioned). We also hear of other issues: the rate of progress of the railway was 'at present grievously affected by the mutiny in Uganda.'[180] These disruptions and their representation will be discussed in the second chapter, but it is notable that they appear in a notice about the appointment of a vet, rather than in one of the illustrated reports on the railway.

Indeed, an illustrated update later in 1898 clearly emphasised the railway as a means of spreading 'civilization': the paper reported that 'the iron horse leaves no portion of the earth untrod, and his civilising mission nowhere shows more prospect of success than in the fertile territory of Uganda, which promises to be one of the fairest provinces of British East Africa.'[181] Here we can see the railway futures projected by the ILN: railways would allow for European colonisation and would produce 'fair' British colonies around the world. As well as writing about the ways in which landscape photography naturalised the landscape aesthetic as a rational way of ordering space, James R. Ryan describes the ways in which landscape photography 'translated unknown spaces into familiar scenes, opening up distant territory to familiar eyes.'[182] The railway functioned similarly, as we see in a later photograph of a horse race entitled 'a consequence

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178   Mr Labouchere, Uganda Railway Bill, 27 July 1896, *Hansard* vol. 43, col. 709.

179   'Personal', ILN, 2 April 1898: 468.

180   Ibid.

181   'The Uganda Railway', *ILN*, 17 December 1898: 904.

182   Ryan, *Picturing Empire*: 72.

'A Consequence of the Railway Advance: The July Race-Meeting at Nairobi'. ILN, 11 January 1902.

of railway advance: the first July race-meeting at Nairobi.' In this sense, to add to Sinnema's argument, the ILN encouraged both railway and imperial expansion. Arguably, this vision of expansion was common across European infrastructural narratives in the nineteenth century: in 1833, Michel Chevalier's claims of the emancipatory potential of communication extended to 'all members of the human family the possibility of travelling across and exploiting the globe that has been left to it as an inheritance', while technological utopian John Adolphus Etzler encouraged his followers to use his infrastructural schemes to achieve world dominance ('Americans! It is now in your power to become within ten years a nation to rule the world').[183]

Another aspect of the railway future this article highlights is the demise of the caravan, which was described as a 'picturesque' method of travel that would nevertheless 'yield to the conquering rail'[184]. One of the stated aims of the railway was to put an end to the caravan: the General Act of the Brussels Conference (1889-90) recommended 'the construction of roads, and in particular of railways, connecting the advanced stations with the coast … in view of substituting economical and rapid means of transport for the present means of carriage by men.'[185] While the position of porters in caravans is debated—Stephen J. Rockel, for example, argues that Waungwana ('gentlemen') porters, who were either slaves or freed slaves, were 'at the forefront of the emergence of a unique East African modernity,'[186] whereas others emphasise the gruelling and dangerous nature of caravan journeys—their description as 'picturesque' shows how railway narratives often erase both the violence inherent in railway construction and the potential agency of labourers. In the ILN, the act of conquering was displaced to technology ('the conquering rail') and there was

183   For discussions of Etlzer's technological utopianism, see Gregory Claeys, 'John Adolphus Etzler, technological utopianism, and British socialism: the Tropical Emigration Society's Venezuelan mission and its social context, 1833-1848', *English Historical Review* 101:399 (1986); Dolores Greenberg, 'Energy, Power, and Perceptions of Social Change in the Early Nineteenth Century,' *The American Historical Review* 95:3 (1990); John Adolphus Etzler, *The Paradise Within the Reach of All Men, Without Labour, By Powers of Nature and Machinery* (London, 1836).

184   'The Uganda Railway', ILN, 17 December 1898: 904.

185   General Act of the Brussels Conference, 1889-90 (London: Her Majesty's Stationery Office, 1890), 21.

186   Stephen J. Rockel, 'Slavery and Freedom in Nineteenth Century East Africa: The Case of Waungwana Caravan Porters', *African Studies* 68:1 (2009): 87-109.

geographical confusion: the article described Uganda as 'west and north-west of Lake Victoria Nyanza', but the place it named (Voi), is south-east of the lake, in what is now Kenya. This confusion stemmed from the naming of the railway: as previously mentioned, the railway was 'named after where it was going to, not where it was coming from.'[187]

The article ended with the pronouncement that 'such a country cannot fail to benefit greatly by railway enterprise.'[188] The idea that the railway could only bring benefit is unsurprising given that in the ILN railways were often conceived of as inherently beneficial, and any challenges to this idea of inherent improvement were generally restricted to the role of railways in London or the height of railway speculation. Certainly, criticisms of railway development were not voiced in this colonial context. The images that accompanied the article were entitled 'the advance of civilisation in east Africa: scenes on the Uganda Railway'. A caption tells us that these illustrations were 'from photographs by Mr B. Whitehouse, Mombasa', suggesting a level of documentary accuracy, but the images are highly stylised, with outline shapes that remove detail and emphasise the picturesque.[189]

The article on the completion of the plate laying came in January 1902, although the railway certainly wasn't 'complete' at this point. After more than 'five years' arduous labour', the rails had reached the shore of Lake Victoria. From an initial emphasis on the opportunities to British trade and the creation of one of the 'fairest' British colonies, the focus had shifted to costs and engineering issues: apparently, 'the difficulties of the undertaking' could 'only be appreciated by one who considers carefully the sectional diagram of the line'; 'dense forests had to be penetrated, rocks had to be cut or tunnelled, and at the same time the workers had to contend with malarial fever and the attacks of wild beasts.' In the final analysis, the ILN suggested that the railway's purpose was to provide mobility to east Africans: 'the railway,' it claimed, 'will bring facilities of transit within the reach of some four millions of people.'[190] Later in the year, the ILN published a set of photographs entitled 'The Completion of the Uganda

'From photographs by Mr B. Whitehouse', ILN, 17 December 1898: 915.

187   Chao Tayiana and Anna Rose Kerr, 'British Subjects'. http://britishsubjects.annaro. se/2019/05/14/20-52-kenya-tayiana-chao/
188   'The Uganda Railway', *ILN*, 17 December 1898: 904.
189   'The Advance of Civilisation in East Africa: Scenes on the Uganda Railway', *ILN*, 17 December 1898: 915.
190   'The Uganda Railway', *ILN*, 11 January 1902: 42.

Railway: The Last Hundred Miles', which showed bridges and panoramas of rails stretching towards mountains on the horizon.[191] These photographs of the railway will be discussed further in chapter four.

As previously suggested, an analysis of the ILN's coverage of the Uganda Railway shows that disruption was not afforded the same discursive space in depictions of colonial railways as it was in depictions of railway construction or accidents in Britain. There is little acknowledgment of violence, harm or disruption in the ILN's reports on the Uganda Railway. While Fyfe and others argue that the 'catastrophic picturesque' of the ILN's depiction of accidents gave readers a space to question narratives of modernity, this space of interrogation was not provided in the context of the Uganda Railway: there was no ambivalence about the project evident in the pages of the ILN. This was in contrast to discussions in Parliament, where significant criticisms of the railway were aired. The railway's main opponent was Henry Labouchere, a journalist and Liberal MP now primarily remembered for his role in the criminalisation of homosexuality.[192]

Labouchere was a critic of imperial policy, in particular the approach of Gladstone's second administration to Egypt, Cecil Rhodes's British Imperial South Africa Company, and the Chamberlain-Milner policy in South Africa, which aimed to secure British (white) supremacy.[193] Labouchere saw the Uganda Railway as an impractical scheme and a bad investment of public money, which he thought would be better spent on 'facilities of communication in England, so as to be able to compete with the foreigner in this country.'[194] He criticised the decision-making process behind the railway as vague and viewed with scepticism the argument that the railway would somehow reduce slavery: instead, he suggested that whatever arrangements or conditions were made concerning labour, African labourers on the railway would effectively be enslaved.[195] Later criticisms labelled the railway and its cost 'an extraordinary

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191   'The Uganda Railway', *ILN*, 25 October 1902: 604.
192   Herbert Sidebotham, revised by H. C. G. Matthew, 'Labouchere, Henry Du Pré (1831-1912)', *Oxford Dictionary of National Biography*, 23 September 2004, https://doi.org/10.1093/ref:odnb/34367 (accessed 19 March 2021).
193   Ibid (accessed 9 April 2021); Saul Dubow, 'Colonial Nationalism, the Milner Kindergarten and the Rise of "South Africanism", 1902-1910', *History Workshop Journal* 43 (1997): 55.
194   Mr Labouchere, Uganda Railway Bill, 27 July 1896, *Hansard* vol. 43, col. 708.
195   Mr Labouchere, Uganda Railway Bill, 27 July 1896, *Hansard* vol. 43, col. 709.

instance of miscalculation on the part of a Government Department.'[196]

Labouchere's objections to colonial policy and the railway were underpinned by racism, xenophobia, and a belief in British superiority, but they nevertheless present a more complex picture of the railway than was available in any of the ILN reports. Even as politicians in Parliament were questioning the railway as a straightforward agent of peace and prosperity, the ILN's depictions of the railway and, more broadly, colonialism in east Africa provided no corresponding space to question dominant narratives.

In his 1964 article in the *New Left Review* entitled 'Origins of the Present Crisis', Perry Anderson examines why 'capitalist hegemony in England has been the most powerful, the most durable, and the most continuous anywhere in the world.'[197] Anderson presents an analysis of class relations but also sees this situation as a result of 'the cumulative constellation of the fundamental moments of modern English history' – the Civil War, industrial revolution, British imperialism, and British victories in both world wars. Imperialism, Anderson argues, had a particular role in the creation of 'a powerful "national" framework for social contradictions which at normal periods insensibly mitigated them and at moments of crisis transcended them altogether.'[198] The ILN's depiction of the Uganda Railway provides an example of how this 'national framework' was developed, with railways positioned as an unqualified 'good' of colonial expansion.

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196   Mr Bryce, Uganda Railway [Grant] – (Report), House of Commons Debate, 11 December 1902, *Hansard* vol. 116, col, 923.
197   Perry Anderson, 'Origins of the Present Crisis', New Left Review 1:23 (1964): 28.
198   Ibid., 35.

'RAILWAY PROGRESS': RAILWAYS, CAPITAL AND ACCIDENTS

In addition to the prominent narratives of the railway as a source of communication, 'benefit', prosperity and peace, another railway imaginary in the ILN depicted railways as a vehicle for investment, and at certain points, as the source of a bubble—an unsustainable commitment of overwhelming amounts of capital. This narrative was particularly prevalent in two reoccurring ILN columns, 'Railway Progress' and 'Railway Intelligence'. These reports included records of miles built, money invested, traffic receipts, and dividends to shareholders, but also fears that promised railways would not be completed: in May 1849, for example, the ILN quoted from a Report of the Commissioners of the Railways in its 'Railway Intelligence' column that 'there can be little doubt that a very large proportion of the authorized railways will not be completed, although no estimate can at present be formed of the extent likely to be abandoned.'[199] The quoted sections from the report also outlined a 'great change' in public opinion with respect to the 'value of railway investments', and fear that there 'may be much difficulty in obtaining capital for many of the proposed lines.'[200]

These anxieties were particularly evident during the so-called 'railway mania' of the 1840s. Between 1843 and August 1845, railway share prices increased rapidly, as did the number of proposed new schemes. In the ILN, proposed new schemes were listed alongside the capital required for each project.[201] In February of 1844, the paper expressed scepticism in an editorial about the utility of the growing numbers of proposed railways, arguing that although the paper 'would be the very first to protect the rights of individuals who have invested their capital in railways on the faith of acts of Parliament,' they could not view the rivalry between lines as productive 'when we find companies becoming bloated with the immense accumulations of wealth, from which the public derives not the slightest benefit' and promises about reducing fares turned out to be 'specious delusions'.[202] Illustrated articles on 'railway mania' tended to be satirical, such as the series written and illustrated by Alfred Crowquill, a caricaturist who also published in Punch, a weekly satirical magazine founded in

199   'Railway Intelligence', *ILN*, 19 May 1849, 322.
200   Ibid.
201   See, for example, 'The Railway Progress,' *ILN*, 25 October 1845, 259.
202   "The Illustrated London News," *ILN*, 10 February 1844, 86.

SUMMARY OF RAILWAY FACTS.—The Jamaica line, between Spanish Town to Kingston, is completed. The locomotives have been astonishing the natives at the rate of ten miles an hour.——Switzerland is to have railways even amongst her mountains. A line is to run from Geneva to the Great French lines.——The Midland Railway Company are having the electric telegraph laid down upon their lines between Rugby and York, so that it will only require the wires to be extended from London to Rugby, and from York to Newcastle, Berwick, Edinburgh, and Glasgow, to make every event of importance known in the capitals of either kingdom and their chief seats of commerce a few seconds after its occurrence.——The *Constitutionnel* says, that from the present state of the works on the Northern Railway, it is impossible to know at what period the whole line to the frontiers of Belgium will be opened ; but that the portion of the line from Amiens to Valenciennes, with the branch line to Lille, is in such a forward state that in eight months from the present time it will be completely finished and in full operation.——A new line from Windsor to London is contemplated. It is to proceed from Windsor to Staines, with a branch from Datchet to join the Great Western Railway at Slough. The atmospheric principle is to be adopted.——A correspondent of the *Times* makes the following calculation of Railway progress up to the present day : 74 railways completed, or in course of completion, for which bills had been obtained previous to last session, £103,166,220. Branches projected by the foregoing companies requiring a further outlay of £35,000,000. 707 new companies, including those who obtained acts in the last session, and all others in the United Kingdom, projected up to this date, £464,698,656. Capital, £602,864,876. This is independent of the enormous sum which it is proposed to invest in foreign and colonial railways.——The *Journal des Chemins de Fer* announces that the railroads remaining to be adjudicated will probably be disposed of in the following order :—1. The lines from Paris to Strasburg, and Tours, and Nantes, towards the latter end of October. 2. The Creil and St. Quentin, in the first fortnight of November. 3. The Paris and Lyons, and Lyons and Avignon roads, towards the middle of December.——The Great Grimsby, the Sheffield and Lincolnshire, and the East Lincolnshire Railways have amalgamated at par with the Sheffield and Manchester Railway ; the last mentioned railway paying five per cent. on all calls upon the three railways until they are made, which will be within two years.——The French, Bavarian, and Prussian Governments have finally made arrangements respecting the junction of the Lewis (Bavarian) Railway with the French frontiers by Metz and Saarbruck.

5. Railway Facts

While progress, celebration, accidents, and certain kinds of disruption were given visual narratives in the *Illustrated London News*, there were no corresponding illustrations to help readers understand the scale of railway development and investment. Instead, we get the 'railway facts' column: lists of lines completed across the world, in Jamaica, Switzerland, Geneva, from Rugby to York, in Belgium and France. There are summaries: '74 railways completed, or in the course of completion'; 707 new railway companies formed.[1] There

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1 'Summary of Railway Facts', *ILN*, 20 September 1845, 183.

1841.

In the unillustrated 'Railway Progress' and 'Railway Intelligence' columns, a wider range of railway narratives also emerged. In 'Railway Progress', the ILN reported on the 'progress' of various lines across the world. The amount of development and activity each article presented was often overwhelming: in one from 1845, we hear of 79 new schemes in the last fourteen days, new plans for railways in London, the proposition of 'railway streets' (a railway viaduct with building frontages), 2000 workmen fixing masonry on the Sheffield and Manchester line; a demonstration by the Croydon Atmospheric Line, and other railway extensions across the UK.[203] Other columns included details of accidents, unclaimed luggage, the introduction of ticket checks to prevent fare dodging, financial statements on revenue, dividends and surpluses, and news from reports of the Commissioners on Railway Bills.[204] Reports from the half-yearly meetings of railway companies were extracted, with details of 'advantageous arrangements' and between companies, the sale of shares, expenditures and the opening of new portions of line.[205] Reports covered changes to the Acts governing the authorisation and completion of railways[206] and disputes between companies, such as the conflict between the Lancaster Company and the Maryport Company, where 'a strong force of at least a hundred men, armed with crowbars, pickaxes, shovels' tore up the rails, pulled down the sheds of coal, 'gutted the station … and carried away the whole building.'[207]

Often, each column contained a summary of a variety of different railway news stories: in 1848, 'Railway Intelligence' reported the establishment of a mutual assurance fund for the London and North Western Railway Company, developments in railway signalling, and railway laws about the conveyance of the police.[208] In this sense, the impact of the railways was represented as complex and widespread: there were implications for the development of insurance policies, for engineering, for the relationship between infrastructure companies and the growing state systems of surveillance and policing. The column also

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203   'The Railway Progress', *ILN*, 25 October 1845, 259.
204   'Railway Intelligence', *ILN*, 1 January 1848, 430; 'Railway Intelligence', ILN, 8 January 1848, 11.
205   'Railway Intelligence', *ILN*, 4 March 1848, 149.
206   'Railway Intelligence', *ILN*, 11 November 1848, 290.
207   'Railway Intelligence', *ILN*, 24 March 1849, 187.
208   'Railway Intelligence', *ILN*, 30 December 1848, 427.

are also amounts of money: £103,166,220; £35,000,000; £464,698,656. Capital: £602,864,876. And these totals are only partial, 'independent of the enormous sum which it is proposed to invest in foreign and colonial railways.' The paper gives its readers no help in understanding these numbers and it seems as though they are there only to convey a sense of magnitude; it isn't always clear what each total refers to. Tellingly, the article doesn't even try to quantify the amounts invested in railways outside of Britain: those sums are beyond imagination.

It wasn't the case that data visualisation was unheard of in the nineteenth century: there are many examples in Edward Tufte's book *Envisioning Information*, including dance notation, maps of the movements of planets, plans of a road from London to Dover and Calais and from Calais to Paris, and Japanese tour guides, as well as many later, twentieth-century examples of railway timetables.[2] For the 1900 Exposition Universelle in Paris, W. E. B. Du Bois produced his 'data portraits', which used the Black population in Georgia to 'demonstrate the progress made by African Americans since the Civil War' and also visualised national employment and education statistics, amongst other information.[3] Methods of representing information visually existed, but the *ILN*, on the whole, chose to illustrate scenes rather than information. The paper depicted railway openings and accidents, construction and new station buildings. But it rarely visualised information: instead, it sought to depict moments (an explosion or a shipwreck) or

reported what happened when railway companies were not run well or faced financial problems: in 1848, for example 600 labourers were discharged from the Manchester, Sheffield, and Lincolnshire Railway, apparently due to the company's difficulty in obtaining loans; in another case employees, who had managed the traffic of the line for 'many years', were dismissed by the Greenwich Branch of the South-Eastern Railway and in some instances replaced by child labour.[209] There were audits of railway accounts, and investigations into the 'illegal and indefensible' affairs of the North West Railway.[210] This kind of railway news—outside of station openings, engineering feats, constructions sites and accidents—was given no visual narrative in the ILN; the Railway Progress and Railway Intelligence columns were dense blocks of text, unaccompanied by engravings.

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2 Edward R. Tufte, *Envisioning Information* (Cheshire, Connecticut: Graphics Press, 1990). For the map of the road from London to Dover, see p.112.
3 Whitney Battle-Baptiste and Britt Rusert, eds., *W. E. B. Du Bois's Data Portraits: Visualising Black America* (New York: Princeton Architectural Press, 2018): 11.

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209   'Railway Intelligence', *ILN*, 11 November 1848, 290.
210   'Railway Intelligence', *ILN*, 7 April 1849, 218.

static scenes and views, with the occasional addition of maps of new lines.

The COVID-19 pandemic has intensified discussions of wealth inequality across the world. While millions lost their jobs, *The Guardian* reported that 'in the weeks between 18 March and 11 June, the combined wealth of all US billionaires increased by more than $637 billion.' Five men, identified by *The Guardian* as the 'top five billionaires – Jeff Bezos, Bill Gates, Mark Zuckerberg, Warren Buffet and Larry Ellison' increased their wealth by 'a total of $101.7 billion'.[4] These numbers are difficult to comprehend, so in an attempt to visualise the extent of wealth disparity in the United States, software developer Matt Korostoff has designed a website that shows Jeff Bezos's wealth to scale and in context: you scroll right to see a speck that represents $1,000, then a small square that represents $63,179, the median US household income, then a rectangle that's $1 million, then $1 billion, then the final rectangle that represents Jeff Bezos's wealth of $200 billion.[5] You keep scrolling: I haven't yet had the patience to reach the end of his rectangle. After a while, a phrase pops up: 'Jeff is so wealthy, that it is quite literally unimaginable.'[6]

These attempts to visualise wealth make me wonder again how the readers of the *ILN* were supposed to comprehend the numbers cited in the Railway Facts column when they were provided with no context or sense of scale. The politics

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4 Dominic Rushe, 'Coronavirus has widened America's vast racial wealth gap, study finds', 19 June 2020. https://www.theguardian.com/us-news/2020/jun/19/coronavirus-pandemic-billioinaires-racial-wealth-gap (accessed 8 September 2020).
5 https://mkorostoff.github.io/1-pixel-wealth/ (accessed 8 September 2020).
6 Ibid (accessed 9 September 2020).

of the *ILN* and its proprietor, interested in quiet reform and not revolution, did not need people to understand the economic and financial effects and workings of capitalism and infrastructure development: the numbers signified something vast, but no more than that. While the figures give the appearance of precision—they don't seem to be rounded to the nearest ten or hundred—in fact, without explanation, the impression they give is vague—only an indication of an immense amount of money.

In his study of the American technological sublime, historian David Nye argues that experiences of 'immensity and awe' at both natural and technological feats were transformed, through the American sublime, into beliefs in 'national greatness'.[7] The sublime had the capacity to 'weld society together', so that divisions were 'temporarily disregarded'—collective admiration of railways, bridges, skyscrapers and damns 'served as an element of social cohesion.'[8] The *ILN*'s railway facts column could be read as a similar form of the sublime: a site that evokes imprecise feelings of 'immensity and awe' in the service of a narrative of 'greatness'. It is usually the *ILN*'s illustrations that are read as sublime, but its texts could perform a similar, dizzying function in their presentation of information.[9]

7 David E. Nye, *American Technological Sublime* (Cambridge, Mass.: The MIT Press, 1994): 43.
8 Ibid., xiii-xiv.
9 See, for example, Paul Dobraszczyk, 'Sewers, Wood Engraving and the Sublime: Picturing London's Main Drainage System in the "Illustrated London News", 1859-62. *Victorian Periodicals Review* 38:4 (2005): 349-78.

RAILWAYS AND DISRUPTION

Alongside the day-to-day difficulties, accidents and incidents that we see reported in the Railway Progress and Railway Intelligence columns, we also hear about disturbances connected to labour disputes, sabotage, and political action. F. C. Mather's study of the railways and public order during the Chartist period shows that the Home Office and officers in command of districts where Chartist disruptions took place were worried that the railways were vulnerable and would be subject to attack: 'it is evident that Rail Roads will be exposed to injury in disturbed times', as Sir Richard Jackson, officer in command of the Northern District, put it in a letter to the Home Office in March 1839.[211] As the government began to use the increasing railway network to transport troops to supress uprisings, rioters also recognised the importance of controlling or interfering with railways: in the Chartist disturbances of 1842, for example, there were attempts to sabotage railway lines at Rochdale, Bury, Macclesfield, Bolton and Huddersfield.[212]

The ILN reported on Chartist disturbances in August 1842 with three illustrated pages. Unsurprisingly, from the outset the ILN's coverage announced its cooperation with and support of the state's policing and punishment of the riots: the report began with details about a supplement to the London Gazette, 'offering a reward of fifty pounds for the authors, abettors, or perpetrators of the outrages at Manchester'. The railway featured as the facilitator of this policing and repression: the article explained how, after deliberations, orders were sent to troops to depart from London for Manchester via the railway. The report described the spectacle of suppression—the third battalion of the Grenadier Guards marched out of St George's Barracks 'headed by a band playing'—but also its contestation: the guards were followed to the railway station by a crowd groaning and hissing. Outside London, there were reports that 'a large mob had gone to turn out the hands at the engine manufactory of the Leeds Railway' and of attempts to seize the mail train—rioters threw the guard down the embankment and let the water out of the boiler, hoping for an explosion.

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211   F. C. Mather, 'The Railways, the Electric Telegraph, and Public Order during the Chartist Period, 1837-48', *History* 38:132 (1953): 42. I had intended to follow up Mather's references to Home Office Papers at TNA, but the archives were closed due to COVID-19.

212   Ian Herron, *Civil Insurrection from Peterloo to the Present Day* (London: Pluto Press, 2006): 100.
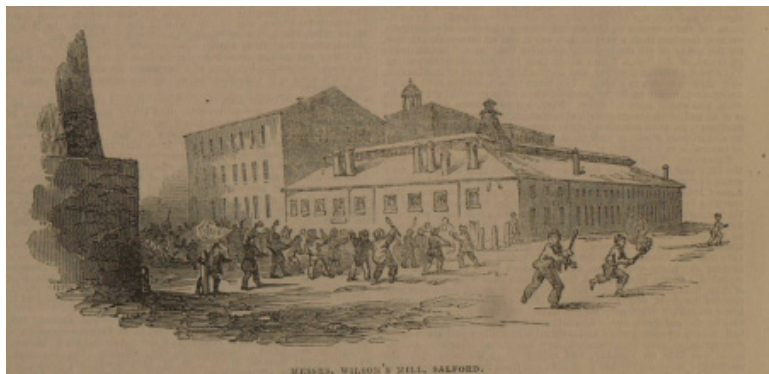
The crowd at the back of Wilson's mill, *ILN*, 20 August 1842: 233.

Although 'prompt aid' was sent by Rifles, police, and special constables, 'on their arrival the crowd had dispersed.'[213]

These riots were given a visual narrative in the ILN, although as Michael Freeman highlights, the focus was often on the repression of violence and disruption. The ILN reported on the 'disturbances in the manufacturing districts' with an illustration of 'the departure of troops by the London and Birmingham Railway', in addition to scenes of disorder at New Cross, the reading of the Riot Act at Manchester Town Hall, a confrontation between police and protestors at Wilson's Mill in Salford, an attack on the workhouse at Stockport, and an attack on the military at Preston, where two rioters were shot.[214] Consequently, most of these illustrations function differently from the depictions of accidents and the 'catastrophic picturesque' analysed by Fyfe. While Fyfe argues that the aesthetic of the picturesque 'resolves the disturbances of industrial modernity' but also demands their scrutiny, in the context of Chartist riots, the very subject of the illustration was the resolution and suppression of disorder so that industrial modernity could proceed.

One illustration does show a crowd who had gathered on the south side of Messrs. Wilson and Co's mill in Salford. A resolution had been passed the previous day at Manchester Town Hall 'not to return to work until the charter had become the law of the land', but Wilson had 'expressed a determination that the works should not be stopped' and as a result, a 'large crowd' assembled at the entrance gates to the mill. When the gates were closed, the crowd 'proceeded to throw stones over the wall'. The illustration of the riot shows the south side of the building, where rioters 'hurled showers of stones at the windows.'[215] Here, the crowd appears unchallenged, although the text does explain that they had been forced into the position by a body of police, who had driven them back from the gates to the mill.

While the rioters are the sole subject of the first illustration, the second below it shows the back entrance to the mill, where the foreground is occupied by two lines of police. To their left and right, more police force the crowd to the other side of the mill. Order is reasserted and disruption recedes into the background.

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213   'The Disturbances in the Manufacturing Districts', *ILN*, 20 August 1842: 232.
214   Freeman, *Railways and the Victorian Imagination*, 18.
215   'The Disturbances in the Manufacturing Districts,' *ILN*, 20 August 1842: 233.

The crowd at the front of Wilson's Mill, *ILN*, 20 August 1842: 233.

The positioning of the illustrations, with the police suppression of the rioters beneath the depiction of the crowd, reverses the order of events narrated in the text, where the police first drive the crowd back from the entrance gates, only for them to gather on the other side of the mill. According to the text, the crowd only dispersed when a private watchmen shot a blunderbuss from the ground window of the mill, injuring five people. The order of the illustrations simplifies the narrative, presenting a more straightforward reassertion of control by the state.

The role of the railways in the suppression of 'rioting' and disturbances was also articulated in newspaper reports. In the Standard in 1838, we hear that as a result of 'the serious disturbances that have occasionally taken place among labourers employed on the different lines of railway, and the doubt that appears to exist as to the powers possessed by magistrates to establish a police for the protection of the peace', an enquiry had been made to the Secretary of State and a reply circulated in return to the clerks of the peace of counties of Essex, Herts, and Surrey, where three railway lines were in the course of construction. The reply drew the magistrates' attention to an 'Act for the Payment of Constables for keeping the Peace near Public Works,' by which magistrates were empowered to swear in special constables to 'preserve public peace'. These forces were established quickly: in a few days, the directors of the Eastern Counties and the London and Brighton Railway, had 'established a permanent police, in accordance with the wishes of the magistrates, for the protection of the peace.'[216] In this account, the railway is a site for labour action but also its repression: the railway companies themselves set up forces to police their own labourers.

Outside of major disturbances such as those in 1842, smaller scale strikes or riots weren't given illustrated coverage in the ILN. But the Railway Progress and Railway Intelligence columns did occasionally give brief summaries of everyday railway labour disturbances. In December 1848, for example, 'some 300 men on the North British Railway' went on strike 'for an increase of wages', resulting in the stand-still of works at the Central Station in Newcastle. In the same column, we also hear that an 'entire stoppage' had been put to works on the railway bridge over the Tweed at Berwick, 'in consequence of the men in a body having refused to work any longer for the contractor without wages. On Saturday

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216   'Riots by Railway Labourers', *Standard*, 10 December 1838.

night the arrears amounted to nineteen weeks.'[217] Often, like other sections of the Railway Intelligence and Railway Progress columns, these reports are brief, with details largely concerning the continuation of railway services, rather than workers' grievances: in December 1849, for example, engine drivers on the East Lancashire Railway had been in a dispute with employers for two months before going on strike; the ILN reports on replacement labour, but not on the drivers' grievances.[218]

At times, these forms of disruption are framed as tensions between different groups of labourers, rather than labourers and employers: in Staffordshire in May 1847, for example, all of the labourers on the South Staffordshire Railway—numbering several hundreds—struck work, and the contractors responded by calling 'in the aid of a number of Irishmen, who, it is alleged, worked under the prices paid to those who had "turned out".[219] The result was a 'ferocious attack' on the Irish community in Walsall.

In 1849, we hear of a more protracted dispute: a series of strikes of 'various classes of workmen' employed by the Midland Railway Company. According to the ILN report, the strikes had been pending for 'some time' and put an 'entire stop to the goods traffic throughout the lines.' Here, we are informed about the cause of the action: directors of the company had reduced the wages of goods guards and goods porters. Another dispute was also ongoing with engine drivers, who refused to submit to new terms that would see then travel three journeys at the same rate of wages they had received for two, and pointsmen, who'd had their salaries reduced by 5 per cent. At this point, the strike had achieved a degree of success: engine drivers and goods guards retained their old terms and were not dismissed for their action, though porters had been forced to accept a reduction because the Company had been able to recruit agricultural labours in their place.[220]

While in the first report on the strike there is a decent level of detail on the issues, this level of reporting is not consistent: as the strike continued into 1850, the ILN's coverage became briefer. In the 'Railway Intelligence' column for 5

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217 'Railway Intelligence', *ILN*, 30 December 1848, 427.
218 'Railway Intelligence', *ILN*, 8 December 1849, 373.
219 'Country News', *ILN*, 15 May 1847, 311.
220 'Country News', *ILN*, 29 December 1849, 442.

January 1850, it was reported that on the Midland Railway, some men who had been on strike returned to work but 'the great bulk of the porters continue to insist on the higher rates of payment,'[221] and this is the last the reader is given on the topic: we do not find out whether the dispute was resolved or won overall by the workers. Unlike the coverage of the construction of the Metropolitan Railway, reports on strikes and labour disputes are often fragmented and partial. Later, in 1872, the ILN reported on the goods porters on the Lancashire and Yorkshire Railway at Bolton, who were on strike for 'an advance of 1s and a reduction of two hours and a half per week.' They were joined by the London and North-Western porters, who also 'struck work for an advance of pay.'[222] But similarly, this initial report was not followed up; readers did not find out if the porters were successful. Fyfe argues that illustrated accident reports were not just 'popular critiques of the railway or sensational attempts to sell copies of newspapers,' but used 'the picturesque to insist on watching accidents very closely.'[223] The lack of illustrations or consistent stories of organised labour on railways suggests the opposite intention—this was not a subject that the editors of the ILN wished their readers to inspect. While it rarely featured in the ILN's illustrated reports, there was nevertheless an underlying narrative in the paper of the railway as a source of disorderly labour and disruption. In Chapter Three, I will explore the ways in which these narratives of disorder and resistance played out on the Uganda Railway.

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The investigation of these railway reports suggests that the ILN only gave visual narratives to certain kinds of railway story. Illustrated stories were largely celebratory or sensational or spoke to some kind of engineering feat or accomplishment. Illustrations of accidents, the opening of new lines, or a new bridge or viaduct were relatively common in the paper, but other railway stories remained unillustrated.

These illustrated celebratory narratives often emphasised the way in which railways supposedly allowed for improvement without conflict. As a result, infrastructures were often mobilised as a form of conflict-free progress:

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221   'Railway Intelligence,' *ILN*, 5 January 1850, 11.
222   'Strikes, Wages and Prices,' *ILN*, 12 October 1872, 339.
223   Fyfe, 'Illustrating the Accident,' 69.

according to the ILN, railways allowed for harmony between the classes; they prevented revolution, both through their ability to allow for the fast mobilisation of the army to supress disturbances and through the facilities of 'progress' and 'communication' they brought. At a time of disruption, the ILN's illustrated railway articles suggested that railway development would be a means of achieving peace and harmony: there was no need to fear working class revolt as prosperity for all would be achieved through infrastructure.

In his analysis of railway accidents in the ILN, Peter Sinnema argues that 'what is uncovered in the ILN's representation of the railway, then, is the type of conflict between word and picture'; while the 'engravings tend to produce reassuring assessments of the railway's impact on the nation, simplifying (and, implicitly, encouraging) rail expansion; in vivid contrast, written texts pay close attention to detail, complexity, and even catastrophe.'[224] From a wider analysis of railway representation, however, it seems that the relationship between illustration and text is more complex and variable than this.

Seemingly, the ILN's visual narratives of railway development allowed for certain kinds of disruption—those of the accident or of the demolition of the capital, for example—and not others. Colonial narratives, for example, were always present in the ILN, but these reinforced the power and superiority of the Metropole. There was less detail on and less space for disruption in reports on colonial railways, although that disruption was still present and will be explored in more detail in Chapter Three.

The disruptions that were illustrated were often resolved, not only through images but also in accompanying texts. In the full telling, these disruptions were not allowed to threaten the overall narrative of the railway (and capitalism) as an agent of progress. Looking beyond the accident, the subject adopted by Sinnema and Fyfe, to the way in which railway construction was depicted allows us to follow how railways featured from proposal to completion and to trace the resolution of a construction project in the form of finished lines and stations. The depiction of construction, particularly in London, is a productive frame through which to follow the ways in which the ILN provided 'an imaginative resolution of real anxieties.'[225] Station buildings and underground rail networks

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224   Sinnema, *Dynamics of the Pictured Page* [ebook].
225   Sinnema, 'Representing the Railway', 143, quoted in Fyfe, 'Illustrating the Accident', 67.

emerged from disorder of construction.

Although the railways appeared in the ILN as a capitalist project, the accumulation of capital in railway companies was described but not directly visualised. The amounts invested in railways were listed, but the reader was given little help in understanding these quantities or the process of accumulation. Similarly, organised labour disruption, while covered piecemeal in the ILN, was not given a visual narrative. This helped to obscure both the socioeconomic conditions under which railways were constructed and the socioeconomic conditions they produced. The overarching narratives of communication, prosperity and the breaking of barriers did not interact with the everyday news from the railway—big proclamations on the communication and benefit enacted by the railway simply did not take into account the day-to-day inconveniences and disturbances reported in other sections of the publication.

How does this help us to better understand narratives of infrastructural progress and technological dreams? It is clear from the ILN that 'progress' narratives were formulaic: the same ideas, even phrases, were repeated in different contexts. These progress narratives incorporated and resolved certain types of disruption and conflict, particularly in the context of infrastructure. Infrastructural narratives provided a perfect means of laundering the disorder of capitalist development into order and regularity.

In Fyfe's article on illustrations of the accident in the ILN, he divides existing authors on the role of illustrations in the ILN into two groups—those that argue that picturesque conventions used in the paper amounted to a 'rearguard action … against any too meaningful acknowledgment of the social and cultural problems brought about by urbanisation'[226] and a means of resolving anxieties, and those who argue, in response, that the picturesque drew attention to change. Fyfe himself suggests that these latter critics 'demonstrate how such aesthetic strategies ironically reveal the material and social disruptions they were originally used to suppress.'[227] But an analysis of railway narratives in the ILN suggests that aesthetic strategies did not seek to suppress social disruptions;

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226   Michael Wolff and Celina Fox, 'Pictures from the Magazines.' In *The Victorian City: Images and Realities*, ed. H. J. Dyos and Michael Wolff, quoted in Fyfe, 'Illustrating the Accident', 66.
227   Fyfe, 'Illustrating the Accident', 67.

instead, the railway narratives examined in this chapter incorporated, resolved and naturalised disruption as a necessary part of capitalist development. In this sense, as the first group of researchers argue, picturesque conventions did amount to a 'rearguard action'—the presence and resolution of disruption did not constitute a meaningful acknowledgment of socioeconomic problems.

This is not to say that the ILN lacked any material that refused to be ordered. In her study of modernity and the technological space of the railway in South Asia, Marian Aguiar suggests that 'counternarratives of modernity emerge from the very heart of narratives of technology.'[228] While the ILN constantly asserted dominant narratives about railways, communication and 'improvement' and 'benefit', elements of a counternarrative did make their way into its reports. These unresolved elements can be pieced together into a railway counternarrative, one that challenges the fetishization of infrastructure networks and the forgetting of the 'human labour and social power relations involved in the process of [infrastructure] production.'[229]

228   Marian Aguiar, 'Making Modernity: Inside the Technological Space of the Railway,' *Cultural Critique* 68 (2008): 66-85.
229   Kaika and Swyngedouw, 'Fetishizing the Modern City': 123.

2

LAND AND DISPLACEMENT

In her book on the colonial construction of property law, Brenna Bhandar begins with a quote from Edward Said in which he emphasises the centrality of 'the actual geographical possession of land' to colonialism. 'In the final analysis', Said argues, this is what empire is all about.[230] This focus on land is similarly important in the context of nineteenth-century infrastructure: it allows for the connection of new ideas and narratives about infrastructure to colonial 'earth hunger' and focuses in on infrastructure's entanglement with the appropriation and commodification of land: infrastructure projects use land not simply as space, but also as a means of generating profit, and have been key in producing 'the unearned increment—the value of land that [is] derived from its naturally and socially endowed qualities, rather than the labour applied to it.'[231]

Bhandar's book goes on to explore how 'property laws and racial subjectivity developed in relation to one another'[232] and examines the ways in which the English common law of property became emblematic of 'civilized life and society'—'a central fixture in philosophical and political narratives of a developmental, teleological vision of modernization that has set the standard for what can be considered civilized.'[233] This characterisation of property law as a key feature of narratives of modernization suggests that regimes of ownership can be placed alongside infrastructure: Bhandar's concerns transfer easily to a study of railway construction, where railways were presented as a key means of bringing about 'civilization'. Similarly, Bhandar's focus on how the appropriation of land was facilitated—for example, through an ideology of 'improvement' or the imposition of a system of land registration, which 'diminish[ed] or abolish[ed] indigenous systems of land tenure that [did] not conform to an economic system based on an ideology of the possessive individual'[234]—resonates clearly with the appropriation of land for infrastructure. Infrastructural projects were intimately entangled with the processes Bhandar describes: appropriation, dispossession, and the formation of racial hierarchies.

So the histories of nineteenth-century infrastructures are necessarily interwoven

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230   Edward Said, Culture and Imperialism, quoted in Brenna Bhandar, *Colonial Lives of Property: Law, Land and Racial Regimes of Ownership* (Duke University Press, 2018).

231   Desmond Fitz-Gibbon, *Marketable Values: Inventing the Property Market in Modern Britain* (Chicago and London: University of Chicago Press, 2018). [Ebook].

232   Bhandar, *Colonial Lives of Property*, 2.

233   Ibid., 4.

234   Bhandar, *Colonial Lives of Property*, 79.

with the histories of land ownership, both in terms of the narratives of 'progress' and modernisation they both carried but also the legal mechanisms of land appropriation and its commodification. The role of the construction of railways in the development of a market for land is clear from Desmond Fitz-Gibbon's work on the property market in Britain, in which he tracks the uncertain and contested establishment of land as a commodity alongside the attempts to protect common land from enclosure.[235] Railway companies bought and sold land, but they were also central to the development of surveying and valuation— processes that were used to articulate rights to land but also made it vulnerable to appropriation.

While Bhandar considers ideologies of improvement as tools of appropriation alongside systems of landholding that were 'premised on the erasure of prior interests in land', she doesn't deal directly with the logic of 'public interest' that often facilitated the acquisition of land by railway companies or for infrastructure projects more broadly. This idea of 'public advantage' provided the justification for acquiring private land: like other authors, Fitz-Gibbon sees the late eighteenth-century and early nineteenth-century development of highways, canals and railways as examples of 'important precedents for interfering in private property' and cites consolidation of compulsory purchase powers under the Land Clauses Consolidation Act of 1845, which 'gave much greater leeway for railway corporations to force sales of land in the name of development.'[236] Powers given to municipal authorities to purchase land for gas and water infrastructure are also mentioned here, alongside 'slum clearance' laws. But while Fitz-Gibbon's work, along with other work on railways and land, traces the development of compulsory purchase as an interference with or even 'invasion' of private property in favour of improvement or the public interest, there is little interrogation of how the idea of the 'public interest' operated, or acknowledgment of the fact that in the UK at least, railways were built and run by private companies, who may have acquired private land in the name of public interest, but used it (or later sold it) for private profit. Public interest,

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235   Fitz-Gibbon, *Marketable Values*.

236   Ibid [ebook]. For the suggestion that the compulsory purchase of land for railways brought about 'the most dramatic infringement of private property rights in England since the Civil War', see R. W. Kostal, Law and English Railway Capitalism (Oxford, 1994), 144. Quoted in James Taylor, 'Private Property, Public Interest, and the Role of the State in Nineteenth-Century Britain: The Case of the Lighthouses', The Historical Journal 44:3 (2001): 751.

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improvement and development were slippery concepts: 'public advantage' was cited in a House of Lords report as 'the only ground upon which a man can justly be deprived of his property and enjoyments', but the report also acknowledged that 'in the case of railways, though the public may be considered ultimately the gainers, the immediate motive to their construction is the interests of the speculators.'[237]

Similarly, the acknowledgment that some common rights to land existed was not necessarily sufficient to allow for their protection, or guarantee that everyone who used or relied upon the land would have their rights recognised. Just as Bhandar outlines the particular form of subjectivity that came with property ownership, the forms of surveying and valuation that came with the construction of railways acted as a process of both subject formation and subject erasure: not everyone's rights or ways of life were made visible. In his article on urbanity and generic blackness, AdboudMaliq Simone investigates the ways in which property makes some people visible and others invisible, and how indifference emerges as a reaction to this context:

> *when property regimes act as the predominant forms of seeing the city, of rendering all that takes place as visible within the optics of transparency, indifference requires opacity, just as opacity is a reflection of the indifference of residents to be fully understood or recognised.*[238]

Like H. J. Dyos's work on railway clearances in London and the demolition statements that were supposed to account for the number of labouring people displaced by new railways, Simone highlights how modes of urban power do not allow for the lives of many—in fact, 'endurance', as he puts it, is predicated on detachment from these modes, along with operations of 'stealth and supplement.'[239] This focus on resistance is present in Bhandar's work too in the concept of racial regimes of ownership, which she constructs in reference to

237   'Report from the Select Committee of the House of Lords appointed to take into consideration the practicality and the expediency of establishing some principle of compensation to be made to the owners of real property whose lands, &c., may be compulsorily taken for the construction of public railways', 27 June 1845. Quoted in Kostal, *Law and English Railway Capitalism*, 180.
238   AboudMaliq Simone, 'Urbanity and Generic Blackness', *Theory, Culture and Society* 33:7-8 (2016): 183-202, 186.
239   Simone, 'Urbanity and Generic Blackness', 183.

Cedric Robinson's idea of the racial regime as an 'unstable truth system'—a frame for looking at the 'fractured and fragmented means by which relations of power and cultural forms coalesce', a means of analysing how relations of power might 'generate resistance.'[240]

These texts all suggest that we must focus on how property regimes allow for racialised processes of differentiation: as Bhandar argues, the logics of property ownership share 'conceptual similarities' with Ruth Wilson Gilmore's definition of racism as 'a death-dealing displacement of different into hierarchies that organise relations within and between the planet's sovereign political territories.'[241] This focus on racialised differentiation is also at the heart of Gargi Bhattacharyya's *Rethinking Racial Capitalism*, where Bhattacharyya builds on Kalyan Sanyal's account of capitalist development, which argues that capitalism works to construct an inside and an "outside", and Achille Mbembe's necropolitics to argue that capitalism is 'highly differentiated', with race enabling the 'differentiation of labour into human and not quite human.'[242] These processes can also be linked to the development and operation of infrastructures: as Huda Tayob has argued, infrastructures and their consequent regimes of differentiation work similarly to construct this inside and outside, the formal and the informal.[243]

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'*I today told the elders at Jimba, who, by native law, have as yet no claim to their land.*'[244]

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Reading these texts together raises questions about the role of infrastructure

240   Bhandar, *Colonial Lives of Property*, 14.
241   Ruth Wilson Gilmore quoted in Bhandar, *Colonial Lives of Property*, 8.
242   Gargi Bhattacharya, *Rethinking Racial Capitalism: Questions of Reproduction and Survival* (London: Rowman & Littlefield International, 2018), 15-19.
243   Huda Tayob, 'Opaque Black Infrastructures: Transnational Trading in southern Africa'. Conference Paper, Colonial and Post-Colonial Landscapes: Architecture, Cities, Infrastructures. Lisbon, January 2019.
244   Rabai, 31 January 1899. PC/1/12/9.

projects in the processes of land appropriation that Bhandar describes and the forms of subjectivity that developed as a result. Did railways produce particular 'racial regimes of ownership'? What were the mechanisms that allowed railway companies to acquire land, and what were the outcomes of this process of land acquisition? In this chapter, alongside charting the process of land appropriation and the consequent displacement of people, I will also consider the ways in which these processes rendered some people visible and others invisible, and the consequences of these different states: what did it mean to be either legible or illegible to the state?

This chapter weaves in and out of two different contexts: the construction of the Uganda Railway and the extension of railway lines into London. In Kenya, the process of railway building took place at the same time as empire building: land acquired by the Imperial British East Africa Company was taken over by the British government, and land was also acquired or allocated for the railway—these processes have to be read together. In fact, as Casper Andersen and Andrew Cohen make clear in their volume on the administration of rural and urban land in British colonial governments in Africa, 'it was the completion of the Uganda Railway in 1903 that accelerated the process' of land alienation in East Africa. After the railway line arrived in Kisumu, the 1902 Crown Lands Ordinance was passed, which 'allowed both freehold grants of Crown Lands and also grants on a ninety-nine-year basis.' Andersen and Cohen argue that 'from the outset it was clear that settlers, rather than Africans or Asians, were intended to be the beneficiaries of this new development.'[245] In this chapter, I will elaborate on the way in which the railway dictated the timeline and nature of land alienation—the process by which land was acquired by the colonial government.

In London, as H. J. Dyos elaborates in his articles on railways and housing, although house demolitions had taken place for 'bridges, docks, private estate development, and some street improvements', these demolitions increased in scale as 'railways penetrated as close to the heart of London as either the Metropolitan Railway Commission recommended or the Corporation of the

245   Casper Andersen and Andrew Cohen, eds., *The Government and Administration of Africa, vol. 4: Rural and Urban Land* (Abingdon: Routledge, 2016). [ebook].

City of London would allow.'[246] These new railways required railway companies to purchase land, but also, from 1853 onwards, companies were required to make a return of the number of occupants and 'any measures they proposed for remedying "the inconvenience likely to arise"' if the scheme would involve the demolition of thirty or more houses in the same parish occupied by the 'labouring classes'.[247] Through this process, some occupants were rendered visible to the state and some invisible: as Patrick Joyce argues, 'in the new liberal state, governmentality depended on reaching a balance which involved not only knowing the governed but not knowing them as well.'[248] This chapter will investigate this dynamic of knowing and not knowing as it emerged in the context of the acquisition and appropriation of land and displacement.

As this chapter discusses ideas of visibility and invisibility and knowing and not knowing, it is important to emphasise that these concepts as I use them are always relational and never absolute: I consider how people were rendered visible or legible to the state, or to power. The idea that people were not visible, legible, or known to the state or to prevailing modes of power, as Simone puts it, bears no relation to whether they were known to each other. It is a colonial logic that insists that some were invisible, unknown, without specifying to whom. Agency can also be read in different ways in these situations: sometimes, people had no choice in being visible when they were captured on camera or recorded in a survey; but also, we can read agency in subterfuge and sabotage, the ways in which occupiers of land tried to gain more compensation or disrupt the efforts of companies or landowners.

LAND ACQUISITION

In his book on railways and Victorian cities, John Kellet explains that railway companies, although operating 'within the normal business rules of price and profit', had an 'unusual privilege': the power to acquire property by compulsory purchase.[249] Although forms of compulsory purchase for transport infrastructure

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246 H. J. Dyos, 'Railways and Housing in Victorian London. I. Attila in London', *The Journal of Transport History* 2:1 (1955): 11.

247 Ibid., 13.

248 Patrick Joyce, *The Rule of Freedom: Liberalism and the Modern City* (London: Verso, 2003), 13.

249 John R. Kellet, *Railways and Victorian Cities* (London: Routledge & Kegan Paul, 1979), 44.

had existed since the mid-1500s, railway mania in the 1840s, along with the development of other infrastructures that used compulsory purchase, required changes to existing procedures, which were seen as defective and inefficient.[250] The Land Clauses Consolidation Act of 1845 set out the new procedure for purchase of land for railways, both compulsory and by agreement. But the journey to this point had been contested, as R. W. Kostal sets out in his history of the law and railway capitalism: 'land purchase and expropriation by early Victorian railway companies was a matter of prolonged and contentious public debate'; it even prompted the rethinking of 'property as an idea'.[251] Kostal writes that 'contemporary observers justly referred to [the development of railways] in the 1840s as the railway "invasion" of the land', and 'respected politicians' became 'deeply concerned' that railways were annihilating 'every estate in the country for the benefit of a few speculators'[252]—an irony, perhaps, if we think that railways were often cited as justification for the military invasion of land in Africa, South Asia, and elsewhere, and the big landowners in the UK were often able to dictate terms to the railway companies.[253] After the passage of the Land Clauses Consolidation Act in 1845, landowners could be awarded both the value of the land and 'compensation for loss of amenity' and often imposed special conditions on a railway's construction or operation, requesting ornamental bridges, for example, or unnecessary tunnels and private stations.[254]

As historians of railway manias have emphasised, guiding a railway bill through parliament was an expensive process of intelligence gathering, careful timing and manipulation: according to Kostal, the 'wealthiest and potentially most troublesome landlords' were paid off first, and smaller landlords left 'until

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250 See Frank A. Sharman, 'The History of the Lands Clauses Consolidation Act 1845—I', *Statute Law Review* 7:1 (1986): 13-22. For the early development of compulsory purchase for infrastructure, see Stephen Gadd, 'The Emergence and Development of Statutory Process for the Compulsory Purchase of Land for Transport Infrastructure in England and Wales, c.1530-1800', *The Journal of Legal History* 40:1 (2019): 1-20.
251 Kostal, *Law and English Railway Capitalism*, 146-147.
252 Ibid., 144; 153.
253 For the suggestion that the Liberals saw the funding of a railway survey as the first step towards the establishment of a British Protectorate in East Africa, see J. Forbes Munro, *Maritime Enterprise and Empire: William MacKinnon and His Business Network, 1823-1893* (Boydell & Brewer, 2003): 457, n15.
254 Ibid., 89; 95-99.

after the power of expropriation was secured'.[255] As outlined by Gordon Biddle in his book on railway surveying, each railway bill required the surveying of land and the preparation of a book of reference, which identified the owners and occupiers of the land and recorded whether they were in favour, against, or neutral to the proposed railway.[256] Reference books went through owners and occupiers parish by parish, recording names and a brief description of the property. Once the bill had been approved, owners and occupiers were served with statutory notices, and attempts were made to persuade occupiers to waive their objections.

As well as developing processes for acquiring the land and compensating owners, from 1853 onwards, all private Bills involving the demolition of more than 30 houses of the 'labouring classes' in any one parish had to include a statement on the number of persons to be displaced, and from 1875 onwards, Bills were required to include provisions for alternative accommodation for displaced people—a rule that the railways' promoters 'either ignored or avoided'.[257] So the system of obtaining land for railways in the UK supposedly involved identifying owners and occupiers, noting their assent or dissent, awarding compensation and the price of the land to landowners—with arbitration if there was a disagreement—accounting for displaced people, and providing alternative housing. We will hear later of the ways in which these processes were subverted, but for now, this was the procedure—one which involved knowing the governed, as much as it also involved not knowing.

Underlying this acquisition of land was supposedly the public interest, a concept that was used both in favour of railway development and by landlords to contest schemes of which they disapproved. Supporters of railways characterised landowners and their attempts to both block schemes and receive higher compensation as selfish, offensive and pathetic: in one article in *Bradshaw's Railway Gazette*, titled ironically 'Railway Invasion of Land', the author castigates landowners for their lack of concern for the appropriation of the public commons for railway purposes and asserts that 'the tenure by which all land is held in Great Britain, according alike to the theory of the constitution

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255   Kostal, *Law and English Railway Capitalism*, 151.
256   Gordon Biddle, *The Railway Surveyors: The Story of Railway Property Management 1800-1990* (London: Ian Allan Ltd, 1990), 44; 48; 53.
257   Ibid., 125.

and the fundamental principles of law, is the public good … the proprietors of land in England are only perpetual stewards of the soil, for the benefit of the people who dwell thereon.'[258] Public advantage was often claimed as the reason for the acquisition of land and the demolition of housing, but it was rarely described in specific terms: in *Bradshaw's Railway Gazette*, one article argues simply that 'the prevailing necessity of the time is, that the public should have certain and rapid communication from on part of the country to the other … Science and legislation have alike decided that the most direct lines of railway are of the greatest advantage to the public.'[259] This situation had come to pass, Kostal argues, because economic development had been equated with the 'public interest': this was 'the central ideological justification for the railway invasion of the land.'[260]

One of the main points of Bhandar's argument in *Colonial Lives of Property* is that 'property laws and racial subjectivity developed in relation to one another.'[261] From the process of land acquisition that was first firmly established with the development of the railways in the UK, this interrelated development of law and racial subjectivity was also filtered through concepts of public interest, public advantage and public utility. Rather than simply constituting the idea of the individual, infrastructure also necessarily built upon and developed the idea of the collective. Like notions of the modern subject, ideas of this modern public were also racialised and classed—and infrastructures had a key role in inscribing these hierarchies both in the UK and in the colonised countries. This is apparent in the way in which land was acquired for the construction of the Uganda Railway, a process which constituted a racialised idea of 'public interest' as benefit to the colonial government and white settlers. This played out through the acquisition of land for the railway and its justification as beneficial to the public interest.

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When construction started on the Uganda Railway, the Railway Committee had not finalised the means by which they would acquire land. The process

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258   'Railway Invasion of Land', *Bradshaw's Railway Gazette*, 12 July 1845, 17.
259   Ibid.
260   Ibid., 179.
261   Bhandar, *Colonial Lives of Property*, 2.

by which this would take place was entangled with the history of the Imperial British East Africa Company and the way in which they had pieced together the territory that was later declared as a British protectorate. In the mid-1880s, Germany, Britain and France had recognised the authority of the Sultan of Zanzibar over a 10-mile-wide strip of land along the coast, between the Tana and Ruvuma rivers.[262] But in 1887, under pressure from Portuguese military force, the Sultan of Zanzibar granted the British East Africa Association 'the right to farm the customs and administer the territory' of the coast area between Wanga and Kipini, at the mouth of the Tana River.[263] This process of acquiring control along the coast from the Sultan was supplemented by trips inland: according to historian E. S. Atieno-Odhiambo, 'in the meantime, the agents of the Association had been busy collecting signatures of chiefs in the coast area and up country.'[264]

The nascent legal system of the Protectorate reflected these differences: subjects of the Sultan in the 10-mile coastal strip were treated differently from those who lived inland. In 1897, there were three different sovereignties as understood by the British—the mainland territories of the Sultan of Zanzibar, the Sultanate of Witu, and 'the remainder of the Protectorate consisting of the old "chartered territory" of the Imperial British East Africa Company and of the region between the Tana and the Juba not included either in Zanzibar or Witu.' This division between territories governed by Sultans and 'the remainder of the Protectorate' shows that while the colonial government was in the process of building racial regimes of ownership, these hierarchies were also based on sovereignty and the colonial government's racist understandings of what forms of authority and land use or ownership should be recognised and which could simply be ignored. In an early report on the Protectorate, Arthur Hardinge remarked that the 'remainder of the Protectorate', which he proposed 'for the sake of convenience to style British East Africa proper', was 'not, of course, technically under Her Majesty's sovereignty, and is divided among a number of tribes and races under our Protectorate, but it differs from Zanzibar and Witu in that the status of the Chiefs exercising authority there is not recognised

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262   https://www.britannica.com/place/Kenya/The-British-East-Africa-Company.
       (accessed 7 June 2019).
263   Forbes Murno, *Maritime Enterprise and Empire*, 413.
264   E. S. Atieno-Odhiambo, 'The colonial government, the settlers and the "Trust"
       principle in Kenya, 1939', *Transafrican Journal of History* 2:2 (1972): 94.

by international law or at least by any international engagement.'[265] This idea that the authority of community leaders outside of the coastal regions was not recognised by international law was used as a justification by the British colonial government to treat these areas differently, ignoring established patterns of land use. The hierarchies in place were complex, a legacy of European deceit, theft, and willingness to ignore their own legal technicalities.

Moves to acquire land for the railway began soon after the newly appointed Chief Engineer arrived in Mombasa. These initially involved attempts to prevent existing owners from selling to anyone else: in December 1895, the Protectorate government declared that 'no subject of His Highness the Sultan is allowed to sell or transfer any land in the neighbourhood of the proposed railway without the sanction of the representative of His Highness the Sultan who reserves to himself the right on behalf of Her Majesty's Government of purchasing any ground which may be required.'[266] In March 1896, the Committee discussed the potential precedents for granting land to the railway: in other British colonial examples, companies had received land grants on an 'alternate block system', under which the colonial government and the railway company 'shared equally in the land and the railway frontage.' In the context of the Uganda Railway, however, it was suggested that a 'continuous zone' should be granted to the railway to allow for the generation of revenue to pay back the loan that had been taken out for construction. Despite enthusiasm for a scheme that would allow the railway to benefit from 'what might hereafter be the most valuable land in these territories', the Committee 'were unanimously of the opinion that the Bill should contain due provision for the acquisition of land from the appropriated zone for the purposes of public utility by the administration of each Protectorate through which the line should pass.' Here, we can see the key principles under which land was granted to the railway: as a means of generating revenue, to grant land to settlers—it was explained that 'settlers would, under either system, be equally secure of being fairly treated as regards the acquisition of land'—and with a nod to 'public utility', as yet not explicitly defined.[267]

265   Report by Sir A. Hardinge on the Condition and Progress of the East Africa Protectorate from its Establishment to the 20th July, 1897 (London: HMSO, 1897), 2.

266   'British East Africa Protectorate. Notice to subjects of his Highness the Sultan of Zanzibar.' NAN PC/Coast/1/1/13.

267   Minutes of the 14th Meeting of the Uganda Railway Committee, 12 March 1896. In *Correspondence Respecting the Construction of the Uganda Railway*, 1895-96, 88A. TNA FO 403/224.

As well as receiving land granted to it by the government, the Railway Administration was also 'anxious' to acquire land on Mombasa Island. Unlike land away from the coast, which the Committee had decided 'as a rule was ownerless and cost nothing'[268], land on the island was acknowledged as owned, and the owners were not keen to cooperate: in February 1896, Arthur Hardinge reported that some were asking 'very high prices', while others declined altogether to sell.[269] In response, Hardinge decided to appoint a Commission to 'examine into the question' and come to a decision as to a 'fair price'. The Commission, it was decided, would be made up of a British Consular officer, a representative of the proprietors, and the Vali of Mombasa; after this process, any outstanding cases would be dealt with 'on their merits, with the assistance, if necessary, of the Sultan [of Zanzibar] and of the Consular representative of subjects of foreign powers.'[270] If the owners ultimately refused to accept the price offered to them, Hardinge suggested it would then be 'for Her Majesty's Government to decide whether … they should be expropriated.'[271]

The Commission was not successful. Landowners were required to submit claims for their lands, but the Commission only received responses from two owners, Shereef Dewji Jamal and J. P. D'Souza, acting on behalf of an owner named Luis. Even for the claims that had been submitted, the Commission ran into difficulties because they did not know how to value the land and contested the measures the owners had used in their claims. Instead, the Commission proposed a new scheme for valuation that placed lands into four categories: uncultivated land; land acquired by purchase prior to or during the Imperial British East Africa Company's Administration, and intended by their owners for building purposes; partially-cultivated land; and cultivated land. This process is akin to what Bhandar describes: the value of land is calculated with reference to English agrarian capitalism's ideas of cultivation.[272] As well as providing a means by which land could be purchased, this process of valuation also aimed to cast the government and the railway administration as legitimate powers against

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268   Final Report of the Uganda Railway Committee (London: HMSO, 1904), 13.
269   Mr A Hardinge to the Marquess of Salisbury, 29 February 1896. In *Correspondence, 1895-96*, 93.
270   Fifteenth Meeting of the Uganda Railway Committee, 26 March 1896. In *Correspondence, 1895-96*, 94.
271   Mr A Hardinge to the Marquess of Salisbury, 29 February 1896. In *Correspondence, 1895-96*, 93.
272   Bhandar, *Colonial Lives of Property*, 35.

the landowners, who were seen as deceptive, providing false valuations and exaggerated claims.

After a few sittings of the Commission, it became clear that difficulties were materialising: Hardinge reported that 'some of the British Indians seemed inclined to raise the question of the right of the Protectorate Government to expropriate them.'[273] Dewji Jamal, a 'British Indian subject of some standing at Zanzibar', suggested that Whitehouse was attempting to buy more of his land than was necessary 'with a view to a subsequent sale at a profit on account of the railway'. He also stated that 'a well on his property was being used without his assent, and that some of his land had been taken possession of previous to any settlement.' The Committee were keen to 'come to some friendly arrangement with this influential British Indian' and avoid litigation, so agreed they would withdraw claim to 'any portion of the land not actually required for the direct purposes of the railway.'[274]

While the Committee claimed that they wanted to reach a 'friendly agreement', it was also the case that Dewaji Jamal's resistance provoked a legislative response: in June, the Railway Committee reported that 'in consequence of the failure to procure the cooperation of the landowners … the creation of legal machinery for disposing of them had become imperative.'[275] As a result, the government decided to introduce the Indian Land Acquisition Act of 1894 to the Sultan's territories, which 'would empower the Protectorate authorities to take the necessary steps for the acquisition of land from British Indian subjects, with regard to whom it had been feared that difficulties might arise.'[276] Hardinge also obtained from the government qadi (judge) in Zanzibar a fatwa sanctioning the expropriation of real property 'if requisite on grounds of public utility, in return for equitable compensation to be determined by the local authority.' This, he concluded, would enable the British Government 'to deal effectually with [the] Sultan's subjects'; meanwhile, the Portuguese Consul-General had promised his

273   Eighteenth Meeting of the Uganda Railway Committee, 7 May 1896. In *Correspondence, 1895-6*, 112.
274   Nineteenth Meeting of the Uganda Railway Committee, 21 May 1896. In *Correspondence, 1895-6*, 116.
275   Twenty-First Meeting of the Uganda Railway Committee, 18 June 1896. In *Correspondence, 1895-6*, 142-143.
276   Twentieth Meeting of the Uganda Railway Committee, 4 June 1896. In *Correspondence, 1895-6*, 125.

'good offices in arranging matters with the two Portuguese subjects concerned.'[277]

In December, negotiations were still ongoing, but Whitehouse believed a settlement was imminent. The process was certainly complete by December the following year, when the Committee queried a statement of account from Mr Byramji, an Indian pleader employed to make valuations of land to be acquired from the Railway.[278] The response was that Mr Byramji's 'work had been of a difficult nature, involving negotiations of considerable delicacy with local proprietors, and had been very well done. He had, in fact, been successful in coming to an agreement with all the persons concerned, with the exception of Messrs. Charlesworth.' The railway had been forced to estimate up the amounts they had planned to spend on land, and the process had taken longer than they had envisaged.[279]

The Declaration of the Railway Zone had also run into difficulties. Although the Committee had resolved to claim to the zone in October 1896, by April 1897 no steps had been taken towards this, apparently 'owing to legal difficulties which attend the dealing with waste lands in Protectorates', which meant 'there was considerable doubt as to whether the Order in Council could contain any direct reference to the "Railway Zone".'[280] By the next month, however, the administration had apparently got around this difficulty: a Proclamation on 10 May 1897 reserved 1 mile of land on either side of the railway 'for public purposes', which was intended to mean the land would be the property of the railway, and theirs to derive future profit from.[281]

From Hardinge's report on the Protectorate for 1897-8, we also find that a special 'Provincial Court' was constituted to operate in this zone either side of

277   Mr A Hardinge to the Marquess of Salisbury, 25 May 1896. In *Correspondence, 1895-6*, 133.

278   Minutes of the Fifty-Sixth Meeting of the Uganda Railway Committee, 2 December 1897. In *Correspondence, 1897*, 185.

279   'Report by the Mombasa-Victoria (Uganda) Railway Committee in the Progress of the Works, 1898-99' (London: HMSO), 6.

280   Minutes of the Thirty-Eights Meeting of the Uganda Railway Committee, 8 April 1897. In *Further Correspondence, 1897*, 41. For a discussion of wastelands, see Vittoria Di Palma, *Wasteland: A History* (Yale University Press, 2014).

281   Minutes of the Eighty-Third Meeting of the Uganda Railway Committee, 15 December 1898. In *Further Correspondence, 1898*, 232.

the railway in the provinces of Seyyidieh and Ukamba, apparently due to 'the large number of cases arising in railway camps and elsewhere in connection with railway coolies and employees.'[282] So the railway facilitated the appropriation of land and then, in turn, established the contours of a particular disciplinary regime, designed to exert stricter control over labour. In January 1896, the Chief Engineer received a letter from the Sub Commissioner in Mombasa, informing him that labourers on the railway had been 'stealing fruit.' In reply, Whitehouse stated that it was 'impossible' for him

> *to provide a force sufficient to protect the whole of the surrounding country. As soon as the land to be taken up by the railway is marked out it will be possible to confine the coolies to certain limits and I will place a guard on the wells. If you will kindly place a few Askaris at such points as you consider most convenient, I will do all in my power in helping them to keep order and have called a meeting of the Jemandars of each gang of 25 coolies for tonight to inform them that any offenders in their gangs will be dealt with by the law and punished severely.*[283]

Staking out the border of railway land provided an opportunity to confine the movement of labourers and exact harsh punishments.

While the declaration of the railway zone was important, and its boundaries would feature in later disputes, the introduction of the Indian Land Acquisition Act, as Atieno-Odhaimbo illustrates, was what had 'allowed the administration to acquire land compulsorily for the railway, for government buildings and for other public purposes.' This mode of acquisition, Atieno-Odhaimbo argues, marked the beginning of the process by which the government 'arbitrarily legislat[ed] itself into sole controller of the land.' By 1901, the Government had passed acts that invested in them all crown lands, which were defined as 'all public lands within the within the East Africa Protectorate which for the time being are subject to the control of Her Majesty by virtue of any treaty, convention, agreement, or of Her Majesty's Protectorate, and all lands which have been or many hereafter be acquired by Her Majesty under the Land

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282   *Report by Sir A Hardinge on the British East Africa Protectorate for the year 1897-98.* (London: HMSO, 1899), 21.
283   Letter from Chief Engineer, Uganda Railway, to the Sub: Commissioner, Mombasa. 31st January 1896. NAN PC/Coast/1/1/20.

Acquisition Act 1894 or otherwise howsoever.'[284] Through the records of the railway, we see how the racial regimes of ownership operated: while the 'rights and requirements of Africans … were seen in terms of actual occupation only,' meaning that 'when land was no longer occupied by Africans it could be sold or leased as if it were waste or unoccupied land,'[285] white Europeans were recognised as owners: when the railway line ran through land 'owned' by the East African Scottish Mission, the administration purchased the land from them and they were given an alternative concession of land in a location of their choosing.[286]

When the railway committee came to reflect on the process by which they had acquired land in their final report, it is not surprising that they misrepresented the situation, claiming that 'a great portion' of the land on Mombasa Island 'was absolutely unoccupied up to the time when the work was undertaken, but, before measures were taken to acquire it, quantities were bought for speculative purposes'[287]—a statement that seems to go against the finding of the first land Commission, which concluded that lands had been in the possession of their present owners for 'at least the last seven years', with the exception of the plot purchased by Messrs. Charlesworth, Piling, and Co.[288] The final report also suggested that the issues over land on Mombasa Island were down to the failure to 'insist upon' the 'Regulation in force for the registration of purchases of land by private individuals in the Sultan of Zanzibar's domains.'[289]

From these first years of railway building, we can see the acquisition of land for the railway unfolding at the same time as the Protectorate was consolidating the legal framework for dispossessing Africans. As Atieno-Odhiambo outlines, and as we can trace in the railway correspondence, where resistance from owners was met with a legislative response, the railway acted as the immediate catalyst for the introduction of Land Acquisition Acts. At the same time as

284   Atieno-Odhiambo, 'The colonial government, the settlers and the "Trust" principle in Kenya, 1939', 97.
285   Ibid.
286   Minutes of the Sixty-First Meeting of the Uganda Railway Committee, 11 February 1898. In *Further Correspondence, 1898*, 16; 66.
287   Final Report of the Uganda Railway Committee (London: HMSO, 1904), 13.
288   Vice-Consul MacLennan and Salim-bin-Khalfan to Mr A Hardinge, 20 May 1896. In Correspondence, 1895-1896, 135.
289   Final Report of the Uganda Railway Committee (London: HMSO, 1904), 13.

it was appropriating land with the aim of generating profit and providing for white settlers, the railway still put forward a narrative of 'public utility' and even friendliness—the Committee repeatedly stated that it wanted to reach a 'friendly' arrangement with landowners in Mombasa. Consequently, it seems that the railway was both a catalyst for legal frames of land acquisition and a means by which these acquisitions were legitimised. As well as facilitating the appropriation of land by the government, the railway also acted as a vector by which white and South Asian settlers were granted land: a small number of those who worked on the railways petitioned for grants of land after their contracts had ended.

VISIBILITY AND DISPOSSESSION

Processes of acquiring land for infrastructure rendered some people visible and others invisible to the state—or in other words, land acquisition was both a process of subject formation and subject erasure. In the UK, as Kostal argues, owners of larger estates fared better than small landowners, who were less able to 'hire the necessary parliamentary lawyers and defend their property from unsolicited encroachments before the select committees.'[290] Railway companies incorporated accommodating 'nobility and substantial squires' into their processes of acquisition: Kostal outlines that ways in which railway company solicitors meticulously planned the 'pacification' of the gentry.[291] But by 1845, with railway mania, Kostal also argues that 'humble landowners' were able to take part in the 'process of hard-headed negotiation', and that 'the fact that every compensation dispute was sure to end in some cash settlement with a monied purchaser meant that landowners even of very humble income could afford to retain a solicitor when one was wanted.'[292] But there is no mention in Kostal's text of tenants and occupiers, who were less privilieged in the process of land acquisition and negotiation. In 1853, decades after railways had first threatened the demolition of housing in cities, the Earl of Shaftesbury orchestrated the introduction of a new Standing Order 'requiring promoters of all Private Bills which involved the demolition of thirty or more houses in the same parish occupied by the "labouring classes", to make a return of their number of occupants, and of any measures they proposed for remedying

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290   Kostal, *Law and English Railway Capitalism*, 148.
291   Ibid., 149.
292   Ibid., 159.

"the inconvenience likely to arise."[293] It isn't clear why thirty was chosen as the threshold, and the demolition of 29 households could still cause the displacement of dozens of people.

These demolition statements were studied in the 1950s by H. J. Dyos, who concluded that they underestimated the total number of people displaced by railway development. In two articles, Dyos considers the social consequences of housing demolitions alongside the various measures taken to mitigate them and the ways in which railway companies evaded regulation: model dwellings constructed by the Metropolitan Railway in St Bartholomew's while their Bill was under consideration were converted into warehouses once opposition to the new scheme had dampened; 'statutory requirements', Dyos explains, 'were most commonly evaded between 1874 and 1885 by acquiring the property and emptying it of its inhabitants before 15 December in any given year, the date on which the number of inhabitants was reckoned; another method was for railway companies to conclude private agreements with landlords to do this for them.'[294] In an enquiry into the housing of the working classes starting in 1884, further evidence of evasion and deception by railway companies was provided: Mr Shirley Foster Murphy explained that companies 'escaped' statutory provisions by 'paying a small sum of money to the people who are turned out', or by paying 'an additional price' to have the houses handed over to them empty. By 'getting rid of people before they obtained possession of the houses', the companies were able to claim that their schemes displaced no one.[295]

So processes of accounting for displacement had been put in place, and statutory provisions had been made for measures to alleviate overcrowding—in 1874, a new Standing Order required the provision of alternative accommodation[296]—but companies simply evaded these forms of regulation. Demolition statements provided a formula to account for a problem, but in doing so they allowed for the appearance of action without any actual change taking place. Dyos records the remarks logged in the 'column for action to be taken' as evidence that the statements changed nothing: companies simply wrote that no action would

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293   H. J. Dyos, 'Railways and Housing in Victorian London', *The Journal of Transport History* 2:1 (1955), 13.
294   Ibid., 18.
295   First Report of Her Majesty's Commissioners for Inquiring into the Housing of the Working Classes, 1884-5, 66.
296   Dyos, 'Railways and Housing', 18.

be taken, or that no inconvenience was anticipated, or that 'persons displaced will easily find accommodation.'[297] In his book on Egypt, Techno-Politics and Modernity, Timothy Mitchell writes about the economy as 'a set of practices that puts in place a new politics of calculation.'[298] In particular, he refers to the completion of the land map of Egypt in 1907, which 'obscured something important': 'the map did not produce a more accurate or detailed knowledge of its object than earlier forms of governmental practice. In fact, the calculations that it was supposed to enable were never quite made possible.'[299] Like the map of Egypt, the demolition statements presented a process of providing information, but they didn't achieve the change they promised: accounting for displacements didn't reduce the number of people who were displaced.

The difference between this process, in which tenants were disappeared, or rendered invisible to processes of accounting, but landowners were often well compensated, shows the classed hierarchies that were at work in the process of land acquisition for the railways: only land ownership made a subject worthy of regard. In the context of the Uganda Railway, we can find both similarities and differences in the ways in which land was acquired for infrastructure building, how people were mapped and accounted for in the process, and who the colonial state sought to 'see' or acknowledge. Through this, we can identify the emergence of a racial property regime as Bhandar defines it, but with particular nuances emerging from the East African context—for example, as I have outlined above, land was purchased from British Indian subjects and from subjects of the Sultan of Zanzibar, but outside the Sultan's territories it was considered 'ownerless', therefore the colonial government simply declared themselves 'owners' of the land—no compensation was required.

In this context, the technique of declaring the land ownerless was supplemented by other tactics of dispossession. As well as claiming that land was unoccupied (or that it was 'waste or uncultivated'),[300] the colonial government used the idea that certain local communities supposedly viewed land as inalienable to establish Africans as occupiers but not owners of land. Unlike the first tactic,

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297   Ibid.

298   Timothy Mitchell, *Rules of Experts: Egypt, Techno-Politics, Modernity* (Berkeley: University of California Press, 2002), 8.

299   Ibid., 10.

300   Report by Sir A. Hardinge on the Condition and Progress of the East Africa Protectorate from its Establishment to the 20th July, 1897, 63.

whereby people's existence or use of land was simply denied, this method allowed for the recognition of existence and use, but not the recognition of ownership or the incorporation into new systems of ownership that were being developed and enforced by the colonial government. Consequently, all these tactics of dispossession were reliant on fictional narratives about existing land use, such as the idea of terra nullius that 'underpinned Crown Grants in South Australia' and claimed that the land belonged to no-one. Fitz-Gibbon labels these ideas as 'acts of fiction' and sees them as 'essential to the task of making both law and economics appear to consist of axiomatic and universal principles.'[301] Processes of accounting, reporting and mapping that went into the acquisition of land for infrastructure were essential in the construction of these acts of fiction. In his report on the East Africa Protectorate for 1897, for example, Arthur Hardinge wrote that:

> *The Administration, both in the time of the Imperial British East Africa Company and at present, were naturally desirous of protecting the rights and interests of the native populations under their rule, and of discouraging land speculators from taking up large tracts for the purpose of floating land companies or claiming land on the line of railway, &c., and accordingly, in April 1891, Sir Francis de Winton, then Administrator for the Imperial British East Africa Company, issued a proclamation reserving to the Company all mines and mineral rights and forbidding outside the Zanzibar dominions all dealing in land between Europeans of whatever nationality and natives.*[302]

Here, the Imperial British East Africa Company seizing mineral and mining rights becomes, according to the fiction, a means of protecting the rights of Africans to their land. In their article 'Decolonization is not a metaphor', Eve Tuck and K. Wayne Yang write about 'settler moves to innocence', which 'attempt to reconcile settler guilt and complicity and rescue settler futurity.'[303] Tuck and Yang write about these moves to innocence in the context of present day discussions about decolonisation, where settlers attempt to relieve 'feelings

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301   Fitz-Gibbon, Marketable Values [ebook].

302   Report by Sir A. Hardinge on the Condition and Progress of the East Africa Protectorate from its Establishment to the 20th July, 1897, 62.

303   Eve Tuck and K. Wayne Yang, 'Decolonization is not a metaphor', *Decolonization: Indigeneity, Education & Society* 1:1 (2012): 1.

of guilt or responsibility without giving up land or power or privilege'.[304] But these moves can be traced back to the beginning of colonial projects, where they worked to acquire land and hold on to it: in the context of the British in east Africa, as we see above, the move to innocence involves shifting the understanding of who the exploiter is: instead of the colonial state, it becomes 'individual Europeans' or 'land speculators'. In contrast, the state then emerges at the protector of rights in a move to innocence par excellence. Later, the blame was also shifted from the individual white settler: in a newspaper article on the 'labour problem' in 1906, the white author suggested that 'every effort should be made to preserve the rightful owners of the soil an interest in their birthright which we fear will only too soon be wrested from them if any considerable number of Indian cultivators settle in the country.' Now the white settler and the colonial state are innocent: responsibility lies instead with 'Indian cultivators'.[305]

But while these fictions were reinforced, we also often see cracks in their structure—moments, letters, or subordinate clauses in which they are unstable, and the scam is acknowledged. In his report on land regulations in 1897, for example, Hardinge argued for the 'expediency of granting somewhat more favourable conditions to bona fide intending settlers' and the granting of certificates for fixed terms, 'if on technical grounds the freehold of unoccupied lands could not be granted in a territory in which Her Majesty does not enjoy sovereign rights.'[306] Here we see the acknowledgment that the colonial government didn't even seek to follow their own rules of dispossession: Hardinge dismisses the fact that the colonial government, under its own system, had no legal right to grant freedhold of unoccupied lands as the 'technical grounds.' This challenges the ideas that colonial officials often had about the existing systems that they sought to replace—that they were 'arbitrary' and 'proceeded by personal decision and the caprice of power', in contrast to 'justice and good government', that deduced 'its arrangements from undisputed points of original right.'[307] White settlers and the colonial government claimed that 'English justice' was, 'on the whole, satisfactory … even where it is applied, in remote parts of the Empire, in a somewhat rough and ready manner, fair play

304   Ibid., 10.
305   'The Labour Problem', *The East African Standard*, 27 October 1906, 14.
306   Report by Sir A. Hardinge on the Condition and Progress of the East Africa Protectorate from its Establishment to the 20th July, 1897, 62.
307   English administrator in India, quoted by Timothy Mitchell in *Rules of Experts: Egypt, Techno-Politics, Modernity* (Berkeley: University of California Press, 2002), 54.

is believed to be its spirit.'[308] But the tension between these fictions of fairness and the reality was active: even colonial officials could not always keep up the pretence.

Infrastructure played a key role in the colonial government's 'moves to innocence'. We can see this in the narratives of progress ascribed to the railway, or the ways in which the project was justified, but we can also see it in the ways in which land was acquired for the railway. In the Declarations that announced that land would be acquired, the justification given is that it is for a 'public purpose' under the provisions of the Indian Land Acquisition Act of 1894.[309] Here, we have the assumption that the railway was a 'public purpose' or a 'public advantage'—there is no attempt to justify its credentials. But we see cracks in this narrative of public advantage too, especially in relation to the 'mile zone' either side of the railway and disputes over its ownership and usage. In November 1899, the Uganda Railway Committee produced a memorandum on the land zone, attempting to set out the nature of the railway's tenure. They claimed that the railway held its lands 'by virtue of a proclamation issued by direction of the Secretary of state' and that:

> *this Proclamation was issued absolutely, so far as it did not previously belong to private proprietors, on legal advice, in lieu of a statutory declaration of title which had at first been contemplated. It is indisputable that the Railway holds by tenure which is superior to that of a private landowner, because [it is] dependent directly on the Crown, and of a less restricted character.*[310]

Here, there are no qualms as to granting land over which 'Her Majesty does not enjoy sovereign rights'—perhaps it was the idea of 'public purpose' that meant there was no hesitation in acquiring the land. We also see, though, that 'public purpose' in this case was defined more clearly: the memorandum goes on to state that:

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308   'The Curse of the Indian Penal Code applied to Europeans.' The East African Standard, 10 March 1906, 7.
309   See NAN PC/Coast/1/1/13. Proclamations and Public Notices. Nos 39, 49, and 50.
310   Memorandum on the Land Zone by the Uganda Railway Committee, 16 November 1899. NAN ACW/30/64.

An ordinary landowner holds the surface only, but the Railway owns all minerals besides. In short, it owns the zone in as absolute a completeness as it is possible for the Secretary of State (i.e. the Crown) to give. And the equity of this lies in the fact that the Railway holds its lands, not for any private end, but for the benefit of the British taxpayer, who has advanced the capital for making the line, and looks to the zone as practically the whole source from which that capital can be recovered.[311]

Later, we get another clue as to what 'public purpose' really means:

This is another point of difference between the railway and a private landowner, who holds his land on the specific condition that any part of it may be resumed for public purposes. The whole of the Railway land is held, as such, for a public purpose of Imperial importance; therefore, any such condition of resumption would be inapposite.[312]

So, while in Declarations the idea of 'public purpose' is left vague, here we clearly see the limits of the 'public', who are conceived as the 'British taxpayer', and 'public purposes', which is defined in terms of 'Imperial importance.'

A fiction of public purpose, good or advantage also operated in the acquisition of land for railways in the UK. As I've already mentioned, this idea was also vague and also contested: an allegation in one article in *Bradshaw's Railway Gazette* was that 'public advantage' was simply a synonym for the desires of the railway companies, which were given 'free scope', with little care for true public goods like common land: 'In the report to the Lords there is not a word as to the hardships of removal by the poor, not a syllable as to the cutting up or appropriation of common lands for railway purposes. In such cases the "public advantage" is allowed free scope, as also is it wherever the parties interfered with are too insignificant for legislatorial notice.'[313] There were also limitations on who could contest this idea of 'public advantage' in an official setting or use it in their favour: in one railway committee hearing in 1845, Lord Kensington's lawyer was able to argue that 'no public benefit would accrue if the railway

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311   Ibid.
312   Ibid.
313   'Railway Invasion of Land,' *Bradshaw's Railway Gazette*. Vol. I. 12 July 1845, 16.

were constructed',[314] but this avenue was not open to everyone—only aristocrats protecting their land.

But at the same time as railway companies were given powers of compulsory purchase, supposedly on the grounds of public advantage, these ideas were exposed, resisted and alternative narratives presented: that new schemes for railways, electric light, tramways, and water works were for the benefit of capitalists only. 'No one supposes for a moment,' read an editorial in the journal of the Amalgamated Society of Engineers, 'that these capitalists go to the expense and trouble of piloting private Bills through Parliament for the public good; their object is obviously to make profit to themselves, without any consideration of others, except in so far as it brings grist to their mill.'[315]

RESISTANCE

If outright seizure of land was one form of theft the railway enacted, there were also others: colonial government records from the early years of railway construction contain various complaints about encroachment on land. In April 1898, the government received a complaint from Andara Saree, a resident of the Nuba hills, that the Uganda Railway 'built a telegraph office and a kitchen within the limits of [their] shamba without either [their] authority or knowledge.'[316] When Saree reported the matter, they were promised compensation for 'cutting a coconut tree from the site upon which the office was built and a verbal promise that Mr Crauford would settle with me about the value of the land used.' But the promise wasn't followed up on, and the railway continued building on the site, leaving Saree to pursue them for compensation for the land.

In June 1899, a year later, the elders of Mombasa similarly complained that they had not yet been paid the sum promised for 'exchanging part of a cemetery required for railway purposes for another plot of land' on the island.[317] In 1898, there had also been a similar complaint about the theft of stone—in April, Mohamed bin Hamis claimed that the railway had been 'taking stone from his

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314   'Railway Committees', *Bradshaw's Railway Gazette*. Vol. I. 12 July 1845, 11.

315   'Editorial', *The Amalgamated Engineers' Monthly Journal*, vol. 1 no. 1, January 1897, 6.

316   To the Chief Engineer. 7 April 1898. NAN PC/Coast/1/1/21(B).

317   To the Chief Engineer. 8 June 1899. NAN PC/Coast/1/1/21(B).

Chief Police Station. Album of Views of Mombasa by William D Young, c.1900. Rogers Zanzibar and East Africa Collection, Y30468G, Cambridge University Library.

shamba at Makupa for about 9 months now without making any payment.'[318] It is important to note the way in which the provincial commissioner conveys this issue to the railway administration, who he suggests have been 'taking without payment'—theft isn't mentioned. Unlike instances of theft by labourers or local people, the commissioner isn't keen for this episode to cause any trouble: he simply asks the railway to 'make a rough estimate' of what stone they've taken and 'if he agrees to accept the amount you name there need be no further difficulty in this matter.'[319] From their attitude to land and resources, but also labour and discipline, it seems as though the railway was deliberately operating at the edges of what was considered appropriate by the settler colonial state, itself built on a foundation of theft and violence.

As well as stealing land and resources, the railway was also keen to defend and hold on to these 'assets' once 'acquired'—we can see this determination in the memo of 1899, where the railway committee insist upon the superiority of their tenure. But despite these attempts to make their control over land in the 'railway zone' clear in their 1899 memorandum, the zone remained contested and its boundary resisted in examples of everyday rejection of colonial boundaries and practices. In 1902, 12 people were asked by the Chief Engineer to 'discontinue cultivating land within the railway boundaries between Mombasa and Kilindini.'[320] In 1905, similar complaints were made again: F. J. Jackson wrote to the Commissioner in Mombasa to say that despite warnings 'not to encroach on railway land', 'such encroachment [was] continuing to take place, and plots of land situated in the Railway zone, which were formerly unoccupied, are now being cultivated.'[321] Jackson requested 'prompt measures to eject any occupiers of shambas' who were 'now settled without the permission of the railway authorities in the area along the line reserved for the railway.' In 1908, another complaint from the Uganda Railway to the Provincial Commissioner in Nairobi that people were 'commencing to make new shambas on railway

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318   To the Uganda Railway. 28 April 1898. NAN PC/Cost/1/1/21(B).

319   Ibid.

320   Provincial Commissioner Coast Province to John Mabruke, Ibrahim mali Bwana, Katyari, Bilali, Farida, Fasuma, Hamisa, Abusiri, Barawa, Twakari, Nakya bin Kasim, and Ma? Byela. 25 July 1902. PC/Coast/1/1/82.

321   F. J. Jackson to Commissioner's Office, Mombasa. 23 November 1905. NAN DC/MKS/10A/1/5.

6. Railway Police

In the early summer of 2020, following the murder of George Floyd by police officer Derek Chauvin in Minneapolis in the United States, protests against police brutality and the lack of police accountability spread across the world. In many instances, protestors were calling for the defunding of the police or the outright abolition of policing and prison systems, which soak up billions of dollars in the United States and perpetrate systematic white supremacist violence on black, indigenous, and otherwise marginalised people.

In calling for the abolition of the police, commentators and protestors often drew our attention to the origins of the police and prisons. Articles published in the summer linked the development of policing in the United States to slavery and slave patrols, which were charged with enforcing the codes governing enslaved people, breaking up unauthorised meetings of enslaved people at night, catching those who had attempted to escape to freedom and stopping insurrections.[1] In the UK in particular, activists also emphasised that prisons and policing were colonial exports, and cast abolition as a key practice of anti-imperialism.[2]

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1 Jill Lepore, 'The Invention of the Police', *The New Yorker*, 13 July 2020 https://www.newyorker.com/magazine/2020/07/20/the-invention-of-the-police (accessed 4 January 2021); Sally E. Hadden, *Slave Patrols: Law and Violence in Virginia and the Carolinas* (Harvard University Press, 2003); Sally E. Hadden, 'Slave Patrols', in *The New Encyclopaedia of Southern Culture: Volume 10 Law and Politics* (University of North Carolina Press, 2008), 129.
2 See 'The Transmission Line: Empire & Abolition'. 16 September 2020. https://decriminalisedfutures.org/the-transmission-line-empire-abolition/ (accessed 4 January 2021).

land near mile 335/10', and a request to 'have this stopped at once.'[322] From this series of complaints, it is clear that the boundary was periodically disregarded, and despite repeated efforts to maintain it as a profitable asset for the 'British taxpayer', people who lived along the railway continued to claim it as their space for cultivation. The railway had established its claim to land in part by asserting that it was unoccupied or 'waste', and these forms of encroachment claimed back the productive potential of the railway zone while also disrupting colonial land classifications.

A longer-running dispute over the railway zone re-emerged in the 1920s, when the Maasai claimed that part of the railway mile zone should be included in their 'reserve'—or rather, that it had always been included. Following the report of the 1904 Land Committee, the Maasai had agreed 'to move away from the railway line and away from any land that may be thrown open to European settlement.'[323] In return, as Andersen and Cohen elaborate, they were 'settled in two reserves to the north and the south of their existing land.' But these boundaries were hardly stable: 'this agreement only held until 1911, when the northern reserve at Laikipia was reclaimed for white occupation in exchange for an extension of the southern reserve.'[324] Later, in 1929, steps were taken to demarcate the boundary of the railway zone, a process contested by the Maasai. An enquiry was held in 1930, and the Governor in Council recorded that the Maasai had 'no claim on legal or historical grounds for the extension of their Reserve by the addition of the Mile Zone,' and that 'delimitation of the boundary by inter-visible beacons should proceed.'[325] The possibility was left open that the Native Lands Trust Board could recommend 'leasing … part or all of the Mile Zone.'[326] Nevertheless, one member dissented from this advice, arguing that the Maasai had a 'moral claim' to the land, and in August, the Provincial Commissioner reported back that the mile zone was 'extensively grazed' in parts

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322   Uganda Railway Superintendent Way & Works to the Provincial Commissioner, Nairobi. 8/10/1908. NAN DC/MKS/10A/1/5.
323   Andersen and Cohen, eds., *The Government and Administration of Africa*, vol 4. [ebook].
324   Ibid.
325   Precis for Central Board. Claim by the Masai for the Inclusion of the Railway Mile Zone from Athi River Township to Sultan Hamud Station and the Triangle Between Chyulu, Kiboko River and Sultan Hamud Within the Masai Reserve, 2. 14 May 1930. NAN PC/CEN/2/2/11.
326   Ibid.

The development of policing in Britain can be seen through the concept of the 'imperial boomerang effect': 'the process by which techniques, institutions and ideologies of social control [were] honed in colonial laboratories before being deployed against oppressed populations within the imperial motherland.'[3] Policing strategies and structures were trialled in colonial Ireland in the 1810s, for example, before they were implemented in London, with the formation of the London Metropolitan Police in 1829.[4] In turn, policing and the development of systems of incarceration and surveillance were essential to colonialism and the establishment of colonial government control across the British Empire.

Unsurprisingly, these processes did not end with the fall of formal empire—money and resources are still funnelled from the UK to repressive police regimes in former colonised countries, as highlighted by the recent 'End SARS' protests in Nigeria, which targeted the Special Anti-Robbery Squad (SARS), a police unit responsible for 'beatings, killings, extortion, unlawful detention and other crimes'.[5] The UK government has funded SARS for the last four years, providing training and the supply of equipment.[6] Similarly, recent

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3 Connor Woodman, 'How British police and intelligence are a product of the Imperial Boomerang Effect', 20 June 2020, https://www.versobooks. com/blogs/4390-how-british-police-and-intelligence-are-a-product-of-the-imperial-boomerang-effect (accessed 16 January 2021).
4 Randall Williams, 'A state of permanent exception: The Birth of Modern Policing in Colonial Capitalism', *Interventions: International Journal of Postcolonial Studies* 5:3 (2003): 322-344.
5 Theresa Villiers in the House of Commons. 'Nigeria: Sanctions Regime', *Hansard*, 23 November 2020, vol. 648, col. 285WH.
6 Kate Osamor in the House of Commons. 'Nigeria: Sanctions Regime', *Hansard*, 23 November 2020, vol. 648, col. 288WH.

by Maasai cattle, and that within the mile zone, there was 'a permanent village' of Maasai traders which had been there for 'many years'.[327]

Again, this indicates the colonial government's intermittent desire to assert control over the zone and render it profitable to them. As well as its illegitimacy in an absolute sense, the other issue with this desire was its irregularity, as Ole Nakoido pointed out in a meeting with the Acting Governor, the Colonial Secretary and other Commissioners: why should the Government 'deprive the Maasai of this land after having left them in apparent possession of it all these years?'[328] Even the government were able to admit that the mile zone was:

> *obviously an unsatisfactory boundary. Following all the windings of the railway its position cannot be known unless it is clearly demarcated … Unless fenced it will probably always be useless as a boundary and fencing would be costly to maintain. (Moreover a fence that would keep out cattle would also have the unfortunate effect of keeping away the game from the railway and the Colony would lose an admitted attraction.*[329]

Despite knowing the unsatisfactory nature of the boundary, the colonial government still sought to enforce it. This approach was reiterated by white settlers: after the Governor in Council recorded that the Maasai had no claim, settlers in Ulu followed up on the ruling, and requested that the Government enforce their 'law'.[330] Consequently, the railway's mile zone provided a legal means for both the government and settlers to continue to dispute Maasai claims to land, ignoring evidence of occupation and use in favour of technicalities that even the colonial government considered 'useless'.

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In both London and along the route of the Uganda Railway, infrastructure construction allowed for the appropriation of land. This process of acquiring land involved judgments by the colonial government of the British East Africa

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327   Ibid., 4.
328   Memorandum of Baraza Held at Kajiado on Friday 21st June 1929, 3. NAN PC/CEN/2/2/11.
329   'Memorandum – Masai Boundary', 2-3, 27 June 1929. NAN PC/CEN/2/2/11.
330   George Sherston, Honorary Secretary Ulu Settlers Association, to the Provincial Commissioner, Machakos. 29 August 1931. NAN PC/CEN/2/2/11.

research has shown that Police Scotland provide training to Sri Lankan police forces, well known for their human rights abuses and harassment of Tamil and Muslim minorities in Sri Lanka.[7] Policing remains an important thread of neo-colonialism.

Joe Oloka-Onyango traces these histories in Kenya and Uganda, outlining the development of colonial police forces in the context of anti-colonial resistance, the desire to obtain cheap labour, and the violent struggle for "security" for white settlers.[8] He explains how state and police violence manifested in law and practices surrounding forced labour and prohibitions against loitering and vagrancy, which criminalised people's simple presence in certain spaces. Punishments were often collective and included 'internal exile, deportation and detention without trial'. As Oloka-Onyango points out, in this context the police function emerged 'in diametrical opposition to any notion of respect for individual and societal rights and freedoms.'[9]

In this outline of the histories of the police force in Kenya, we can begin to see how the Uganda Railway furthered the development of police powers. The railway formed its own police force during its construction: the report on the progress of the railway works from 1899-1900 stated that the 'formation of a railway police force, under the direction of two officers lent

Protectorate and authorities in the metropole over whose rights to land to recognise and resulted in hierarchies of both land use and subjectivity. Often, the appropriation of land was justified by an appeal to public use, public interest, or public advantage, but these concepts were either strategically defined in terms of the generation of revenue for the colonial government or left undefined, depending on the context. 'Public interest' proved an expansive concept, one that failed to appropriately regulate the acquisition of land and the payment of compensation.

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7 Phil Miller, *Keenie Meenie: The British Mercenaries who got away with War Crimes*. London: Pluto Press, 2020: 281-3.
8 J. Oloka-Onyango, 'Police Powers, Human Rights, and the State in Kenya and Uganda: A Comparative Analysis', *Third world Legal Studies* 9:1 (1990): 1-36.
9 Ibid, 8.

by the Government of India,' had been 'most valuable.'[10] The railway facilitated the movement of the police, who travelled 'inland with the railroad', policing both railway workers and anti-colonial resistance.[11] As Samuel G. Ruchman argues, the railway's police force operated in a military way and the railway's own labourers were intensely policed, particularly following riots and desertions. Guards stood watch over labourers at night to prevent escape and Whitehouse was granted permission 'to search steamers and dhows departing from Mombasa for deserters fleeing to India.'[12] From the early days of construction, railway police were sent to collect labourers who had run away from their contractors and were tasked with returning them to work.[13] In October 1898, one contractor in particular, Mr Anzoulatos, requested from the Superintendent of Railway Police 'a police constable or two' to be 'place[d] in his camp to arrest deserters and help keep general order.'[14]

The railway police, unsurprisingly, were vigilant in their surveillance of indentured labourers, but less so in their attention to contactors. In October 1898, Nadat Ali and 29 other indentured labours wrote to the Commissioner of

10 Uganda Railway Committee, Report on the Progress of the Works, 1899-1900 (London: HMSO, 1900), 2.
11 James B. Wolf, 'Asian and African Recruitment in the Kenya Police, 1920-1950', *The International Journal of African Historical* Studies 6:3 (1973): 404.
12 Samuel G. Ruchman, 'Labor Practices and Precedents Along the Uganda Railway, 1893-1903', *The International Journal of African Historical Studies* 50:2 (2017): 261.
13 Letter to George Whitehouse, Chief Engineer, 9 March 1898. Kenyan National Archives, PC/Coast/1/1/21(B), 113.
14 Letter to the Superintendent of Railway Police, 27 October 1898, Kenyan National Archives, PC/Coast/1/1/21(B), 499.

Mombasa to inform him that their contractor had extorted money from them in Lahore and was still taking 'bribery rupees' from their pay on threat of violence. The railway police had not picked up on this issue: their role was to enforce rather than prevent the exploitation of labour.

As well as in everyday acts of resistance against and undermining of police authority, we can see dissatisfaction and disaffection with the police and justice system in a series of complaints against the railway magistrate and the trial of railway cases in 1902. Mr Farquar, Superintendent of the Railway Police, was also the Railway Magistrate. If any employee had a complaint against the railway, they had to bring that complaint before the railway magistrate in the railway court. Although Farquar was technically an officer of the Protectorate, he was 'actually looked upon as a railway official and more or less so under the orders of the Chief Engineer.'[15] Indeed, in his position as head of the railway police force, he was a railway official.

As well as taking issue with his independence, complaints questioned his judgments, in particular in a case where he found two policemen guilty of committing only 'rash and negligent acts' for shooting and killing two Maasai men. Farquar reasoned that the previous week (although not at the time of the murders), the policemen were under orders to 'chase and shoot robbers', and 'had they in the present instance shot robbers' instead of the two Maasai men, 'they would have

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15 'Complaints Re: Railway Magistrate's Position and Re Trial of Railway Cases by him.' Kenyan National Archives, AP/1/113.

received if not praise then certainly very mild blame.'[16] The judge at Mombasa and the Commissioner were not impressed with these explanations and suggested that Farquar was 'ignorant of the law on this subject' and had overstepped his jurisdiction.[17]

As these incidents show, the railway police and magistrate's court clearly functioned as a means of enforcing systems of indentured labour and operated in the interests of the colonial government, the railway, and railway contractors, rather than the general interests of the population. There is little doubt who and what the police intended to keep safe—as one Foreign Office official put it in reference to Zanzibar, the police were there to maintain order and to protect 'all British and foreign residents' and 'the capital accumulated in the islands.'[18] It is no wonder, then, that Tibamanya Mushanga found 'a very deep dislike of the police' in a mid-1970s survey of undergraduate students at Makerere University in Uganda and the University of Nairobi in Kenya. As Oloka-Onyango puts it, 'virtually nobody likes the police, and this is an almost universal sociological phenomenon, particular among the oppressed classes in society.'[19]

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16 C. Farquar, Railway Magistrate, to H. M. Judge, EAP, Mombasa, 30 June 1902. Kenyan National Archives, AP/1/113.

17 R. B. P. Cator, H. M. Judge, to C. Farquar, Inspector General of Police, 27 June 1902. Kenyan National Archives, AP/1/113.

18 T. V. Lister to the Foreign Office, 10 September 1891. Kenyan National Archives, PC/Coast/1/1/3.

19 Oloka-Onyango, 'Police Powers,' 2-3.

Letter from Indentured Labourers concerning 'bribery rupees'.

The colonial context in Kenya makes clear dynamics that were also at work in the 'imperial motherland'. As railway historian Anna Despotopoulou argues, from their beginnings in Britain railways were 'strongly linked to discipline', as they were often staffed by police officers and ex-military men.[20] Railway police were some of the earliest police forces in England, with the 'Police Establishment' of the Liverpool and Manchester Railway set up in 1830, only the year after the formation of the

20 Anna Despotopoulou, *Women and the Railway, 1850-1915* (Edinburgh University Press, 2015), 73.

Metropolitan Police in London.[21] The Special Constables Act, passed in 1831, gave these police officers jurisdiction not only over sites of railway construction and the railway itself, but also over the wider area in which the railway was located.

Although their powers stretched beyond the railway, these police officers were employees of the railway companies—a private force who were 'not subordinated to any chief constable of the borough or county.'[22] As a newspaper article in the *York Herald* pointed out in 1894, these police forces existed 'not to protect her Majesty's subjects generally, nor to preserve the peace of the Crown, but simply to look after the interests of their employers, enforce the statutes under which the company trades, and not trouble their heads about other violations of the law.'[23]

This position led to issues with legitimacy. In one incident in 1897, Sidney Thornton, a wool manufacturer and his wife, Elland, were charged with interfering with the railway police in exercising their duty. The railway policeman had been taking a prisoner to the town hall when Thornton intervened. The defence argued that railway policemen only had the power to arrest people in certain circumstances, and the defendants were justified in interrupting the policeman while he was 'performing an illegal act'. The case was dismissed.[24]

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21 British Transport Police, 'The First Railway Police'. https://www.btp.police.uk/about_us/our_history/detailed_history.aspx#:~:text=These%20early%20railway%20policemen%20were,the%20movement%20of%20railway%20traffic. (accessed 16 January 2021).
22 'Railway Police Responsibilities', *York Herald*, 12 June 1984, 3.
23 Ibid.
24 'Railway Police and the Public', *The Daily Telegraph*, 6 January 1897, 8.

Abolitionists remind us of the histories of police forces because despite the insistence to the contrary, these dynamics still feature in the work of policing today. On the whole, policing operates against the interests of the poor, the marginalised and the racialised and in favour of the white ruling classes. Abolition reimagines the world anew, focusing on systems of life rather than systems of death. It is key to a politics of radical infrastructure, where infrastructure can act as a means of true liberation and not a disciplining power.

Rest in Power George Floyd, Breonna Taylor, and all other victims of racist police violence across the world.

3

DELAYS

In his article on the temporality of infrastructure, Akhil Gupta discusses the particular place of infrastructure in relation to futurity and ruination.[331] Gupta sees the temporality of infrastructure as necessarily future-oriented for a number of reasons: projects require significant upfront investments that 'pay off over a long period of time', and schemes always anticipate future demands. But infrastructure projects are often also in suspension, a state of 'in-between-ness' – paused or delayed indefinitely. Indeed, because of infrastructure's constant need for maintenance, Gupta poses the idea of completion as ideological; rather, infrastructures are always a process, in motion, 'shifting' and 'elusive'.

To puncture the idea of infrastructures 'always already on the path to completion', Gupta suggests that 'we look at infrastructure projects neither from the perspective of the neat charts and timelines of planning documents nor from the retrospective view afforded by the cutting of the tape at their inauguration, but from the time when construction is under way and perhaps making uncertain "progress".[332] In this chapter, I will take up Gupta's suggestion in the context of the construction of the Uganda Railway. While the site of railway construction ran from Mombasa on the coast up to Kisumu on Lake Victoria, delays to the "progress" of construction originated both along the construction site and in the UK, where strikes and retaliatory lock-outs in the engineering trade disrupted the shipping of engines to Mombasa. Consequently, this chapter aims to bring together the sometimes disparate causes of disruption to the railway and the disjointed networks of labour and resistance that coalesced around it.

As Gupta argues, infrastructures are always 'sold', either to a sceptical public, or in terms of raising funds for a project.[333] In the context of the Uganda Railway, the narratives generated by this practice of selling, a process of legitimising the railway and also ensuring consistent funding from government, suggest one temporality—that of improvement, progress, and completion. But the reports and correspondence from the ground suggested another, where the project was subject to constant delays, resistance and difficulties, construction that

331   Akhil Gupta, 'The Future in Ruins: Thoughts on the Temporality of Infrastructure', in Nikil Anand, Akhil Gupta, and Hannah Appel, eds., *The Promise of Infrastructure* (Duke University Press, 2018): 62-79.

332   Ibid., 72.

333   Ibid., 75.

continued beyond the point of announced completion, and cycles of demolition and reconstruction, when work was dislodged by the weather, or sabotaged by local resistance. By focusing in on these delays, I hope to work with a different sense of infrastructural time, one that is disrupted and contingent, but I also hope to consider how these competing temporalities functioned and what they enabled—what resulted from the interaction of rapid 'progress' and incomplete construction?

Another key question of the chapter is how this focus on delay allows a different view on the everyday—what comes into view when we take up this framing of infrastructure's disruption? This issue builds on a body of existing work that considers, as Stephen Graham puts it, what happens when malfunctions, interruptions, strikes, theft, and weather disrupt infrastructural flows.[334] Graham argues that this focus on disruption provides a 'means of rereading the politics of normal circulations' and reveals the 'hidden politics of flow and connection, of mobility and immobility.'[335] In this chapter, I will extend this approach to the process of construction—what happens when construction is disrupted, and to what extent do we need to problematise the 'normalities of flow' here, as Graham urges?[336]

There is a considerable literature on the ways in which the British empire imposed new temporal regimes on the countries it colonised. Drawing on Sumit Sarkar's work, Tania Sengupta shows how the 'paperworlds' of government clerical offices required the 'submission to alien temporal rhythms of secular modern capitalist time and production.'[337] On Barak's *On Time* traces the development of the 'contrast between "mechanical, swift, Western time" and "cultural, slow, Egyptian time' through a study of the introduction of the steamer, railway, telegraph, tramway and telephone into Egypt between 1830 and 1940.[338] In a recent issue of the magazine *The Funambulist*, Meryem-Bahia Arfaoui analyses time and the colonial state in Algeria, arguing that railway

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334 Stephen Graham, 'When Infrastructures Fail', in Stephen Graham, ed., *When Infrastructure Fails* (New York and London: Routledge, 2010), 2.
335 Ibid., 3.
336 Ibid.
337 Sengupta, 'Papered Spaces', 125.
338 On Barak, *On Time: Technology and Temporality in Modern Egypt* (University of California Press, 2013).

construction not only colonises space but also time.[339] This chapter builds on these studies of colonialism and time and examines what happens when disruptions to colonial time occurred and colonial officials came up against differing temporalities.

In addition to thinking of disruption, delay, or malfunction, I also set out to question what 'failure' might mean in the context of the Uganda Railway, which despite apparently constant delay and difficulty, was built in a relatively short period of time (five years from the beginning of construction to when the rail reached Lake Victoria, although the project stretched back and forwards in time from these points—discussion of the railway began in 1890, and construction continued after 1901).[340] In this sense, the railway presents a paradox in the context of the existing body of work on infrastructural delays and disruption. During its construction, the railway was often described as a failing project, and when it was necessary to grant more money to the project in 1900, the House of Commons was presented with a litany of difficulties: there had been insufficient surveying, so engineers had little knowledge of the ground the railway had to cover; there was a lack of local labour, and the original plan for construction had failed; there were 'attacks by wild beasts, diseases and accidents.'[341] Although the *Illustrated London News* preferred to print accounts of the project's 'civilising mission' and the 'conquering rail' and published images of construction that claimed to show the 'advance of civilisation,'[342] other publications did cover the construction difficulties. In a sense, disruption and failure have always been present in the railway's public and private narratives—so how does this alter what a focus on disruption can tell us, or inform Gupta's argument that 'the actual practice of building infrastructure may end up subverting the imagined future that is embedded in an infrastructural project'?[343]

339   Meryem-Bahai Arfaou, trans. Chanelle Adams, 'Time and the Colonial State', *The Funambulist* 36 (July-August 2021): 26-28.

340   Neera Kapila, *Race, Rail and Society: Roots of Modern Kenya* (Nairobi: East Africa Educational Publishers, 2009), 2.

341   Under Secretary of State for Foreign Affairs in the House of Commons. Hansard, HC Deb 30 April 1900, vol. 82, cc288-335.

342   'The Uganda Railway', *ILN*, 17 December 1898, Issue 3113, 904; 'The Advance of Civilisation in East Africa: Scenes on the Uganda Railway', *ILN*, 7 January 1899, Issue 3116, 15.

343   Gupta, 'The Future in Ruins', 67.

In this context, where delays were sometimes emphasised and sometimes minimised, it seems important to consider how different kinds of delay were conceived and reported—were delays due to weather and sickness dealt with differently from delays that came out of labour resistance? Comprehensive accounts of the construction of the railway have already been provided by Neera Kapila and Henry Gunston;[344] building on their work, in this chapter I will examine the contours of delays and disruptions, when they were articulated and when they were hidden, but also the particular ways in which they were expressed: in the House of Commons, for example, delays were not discussed in terms of time but in terms of money. Unlike Bruno Latour, who asks his reader to travel 'without blame', I am acutely interested in blame: tracing the contours of delay involves tracking where blame is assumed and where it is shifted.[345]

Yet despite the well-debated difficulties, this railway did get built. Unlike Latour's Aramis, the project was able to move from fiction to reality. In this context, I am interested in how we conceive of infrastructural failure, and what has to be in place for a project to continue in the face of delays: in a similar period, for example, a German project for railway construction in Tanganyika failed due to local resistance—the delays forced the construction company into bankruptcy.[346] Here, I seek to reframe or redefine the idea of infrastructural failure to allow for the violence that facilitates the continuation of a project, rather than limiting it to termination or disruption.

After considering delays in a generalised sense and establishing the ways and sites in which they were articulated and managed, I will focus on one particular type of delay—that caused by labour resistance. Over the course of the construction of the railway, 34,000 labourers were employed, 32,000 of which were indentured labourers from India.[347] In October 1895, the Uganda Railway Committee decided to recruit labourers in India for the construction of the line,[348] but they had not intended for Indian labourers to make up such a

344   Kapila, Race, Rail and Society; Henry Gunston, 'The Planning and Construction of the Uganda Railway', Transactions of the Newcomen Society 74:1 (2004): 45-71.
345   Bruno Latour, Aramis; or the Love of Technology (Cambridge, Mass. and London: Harvard University Press, 1996): 79.
346   Kapila, Race, Rail and Society, 4.
347   'Final Report of the Uganda Railway Committee', 13.
348   Percy Anderson to the India Office, 11 October 1985. In Correspondence Respecting the Construction of the Uganda Railway, 1895-96, 17. TNA FO 403/224.

high proportion of the workforce. At first, the aim, partly at least, was to employ African workers to assist in construction. But in 1896 Whitehouse wrote to Mr O'Callaghan, the managing member of the Uganda Railway Committee, that African labourers rarely stayed working on the railway for more than a week at a time. A project to bring large numbers of Kamba and Kikuyu people to work with the railway survey was 'devastating', with the railway failing to provide adequate food and medical care.[349] The result was that the vast majority of those who worked on the construction of the railway were Indian indentured labourers. According to historian Robert G. Gregory, some British colonial administrators had been in favour of this arrangement before construction on the railway started: Frederick Lugard in particular, a colonialist who had worked for the Imperial British East Africa Company, saw the railway as an opportunity to manage colonial populations, arguing that it 'would promote Indian immigration to East Africa and thus provide release for the congested districts of India.'[350]

Gregory's study of Indian indentured labourers in East Africa provides more detail on recruitment: at first, the railway used private contractors, but in March 1897 the Uganda Railway set up its own agency in Karachi and two years later established another agency in Bombay. Recruitment was supervised by the Indian Public Works Department. According to Gregory, the labourers who travelled to East Africa to work on the railway were largely from Punjab and Sindh, with Punjabis being the dominant group.[351] Selma Carvalho also documents the involvement of Goans in the railway as station masters, guards, clerks and drivers.[352]

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349   Robert L. Tignor, *The Colonial Transformation of Kenya: The Kamba, Kikuyu, and Maasai from 1900 to 1939* (Princeton, New Jersey: Princeton University Press, 1976): 96.

350   Robert G. Gregory, *India and East Africa: A History of Race Relations within the British Empire, 1890-1939* (Oxford: Clarendon Press, 1971): 51.

351   Ibid, 54.

352   Selma Carvalho, *A Railway Runs Through* (Leicestershire: Matador, 2014). See Anna Greenwood and Harshad Topiwala, *Indian Doctors in Kenya, 1895-1940* (Palgrave Macmillan, 2015) for the history of Indian doctors in Kenya. According to Gregory, the medical staff who were provided to care for railway labourers included twelve Indian assistant surgeons and eight Indian hospital assistants. Gregory, *India and East Africa*, 55.

Although the administrators and engineers involved in the construction of the Uganda Railway often cited labour issues as a key reason for delays, they rarely discussed the subject in terms of resistance. Focusing on labour allows the reframing of this issue as one of different modes of resistance that varied according to the position and circumstances of the workers. It is also a fruitful topic because labour was a key site of fluctuating colonial confidence and anxiety: colonial officials and engineers veered between confidence in their ability to attract labour and anxiety over their failure to ensure both sufficient numbers of labours and their "effective" employment. This focus also facilitates a wider understanding of the actors on whom the railway's "progress" and disruption was contingent: as I've mentioned, I will be addressing sites of resistance along the line in Mombasa and Nairobi, but also in the UK: disruption in both locations caused delays to the construction of the railway. Finally, this view of the railway conjures infrastructure as an assemblage of the human and non-human but importantly casts it as bodily, made up of the people who labour on it. While I consider delays caused by weather, animals, materials and terrain, unlike Latour, Jane Bennett, and others, who use the idea of the infrastructural assemblage to attribute agency to the material elements of a network, I see the failure to take the agency of nature and the environment seriously as a key component of an extractive colonial worldview.[353] The construction of the Uganda Railway provides an opportunity to consider the infrastructural assemblage in a historical and colonial context, one that can be used to work both with and beyond this conception of infrastructure.

In considering the restrictive nature of the engineers' visions of progress, I also attempt to articulate infrastructure's relation to Alain Badiou's idea of modernisation as 'the name for a strict and servile definition of the possible'.[354] In contrast to the common representation of the railway as a means of opening up horizons of possibility, I suggest that visions of the potential progress of the line were restrictive visions of the future, articulations of what was possible but more importantly what was impossible from the perspective of the colonial engineer. These horizons of possibility shifted according to the stage of the project—while it was important to project confidence at the outset, this vision of easy construction shifted as the plans moved from their paper form to a material

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353   Latour, *Aramis*; Jane Bennett, *Vibrant Matter* (Duke University Press, 2010), 20-38.
354   Quoted in Mark Fisher, *Capitalist Realism: Is There No Alternative* (Winchester, Zero Books, 2009), 17.

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Managing and accounting for delays emerges as a repeated issue in the railway correspondence, and we can begin to track a cycle: delays are acknowledged, improvement in the speed of progress is promised, but this improvement often fails to materialise. In March 1897, as construction was nearing its first year, Whitehouse wrote: 'I respectfully point out to you that the future progress of the railway should not be judged by the progress made during the first year … preparations are now completed, and a good road has been constructed over the most difficult portion of the route, and I confidently expect that from the beginning of April rapid progress will be made.'[355] This confidence in the two senses of progress—both in terms of the 'completion' of the railway and 'improvement' more generally—is also my subject in this chapter. I see it as an example of a particular colonial mindset, one that cannot envisage or understand that its own ways of working and thinking may not be universal, but one that also generates an inflated belief in its own capabilities—suggesting a link here to Kehinde Andrews' conception of whiteness as a distortion of reality, or an irrationality.[356] In this context, the framework of racial capitalism is also an important aide in reading the inability of white colonial capitalism to value Indian and African life and the relationship of this to a condition of constant crisis. While I work with ideas of infrastructure as an assemblage as articulated by Latour and Bennett, this frame of racial capitalism is integral too: without it, it is difficult to consider or begin to explain why the project progressed in the way that it did.

This chapter is based on two main bodies of source material. The first is volumes of correspondence about the Uganda Railway printed for Foreign Office use, which contain engineer's reports, minutes of committee meetings, and other correspondence, alongside the diaries of George Whitehouse, the engineer in chief of the railway. These sources provide an insight into the working difficulties of the construction project and the challenges that impeded its 'progress'. They are colonial records, and as such they contain the voices of white colonial officers and engineers and most often erase the voices of others. At

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355   Mr Whitehouse to Mr O'Callaghan, 22 March 1897. In *Further Correspondence Respecting the Construction of the Uganda Railway, Part II, 1897*, 60. TNA CO 614/1.
356   Kehinde Andrews, 'The Psychosis of Whiteness: The Celluloid Hallucinations of Amazing Grace and Belle', *Journal of Black Studies* 47:5 (2016): 435-453.

some points, other voices do slip through—the account of the strike contains letters and demands from the strike committees, though these have still been the subject of censorship: an initial letter of demands, for example, was rejected by Mr Rawson, the railway's Chief Accountant, on the grounds that it was 'very offensive', and so only appears in the printed records of correspondence in an edited form.[357] But we do get differing accounts of the events: the strikers present their grievances; the officers reply with a different version of events, and in many cases the strikers retort by sticking to their understanding of the situation. White subordinates dominate the correspondence, but the grievances and demands of Indian subordinates are aired too, and signatories to a comprehensive list of demands include representatives of the Indian Covenanted Drivers, the Indian Accounts Office, the Goanese employees, and Indian subordinates in the Traffic Department.[358] Sometimes, the lies of the employers are laid bare: Whitehouse claims one thing in a speech to the subordinates, but in another letter a colleague reveals this claim to be untruthful. Drawing out these inconsistencies is key to a reading of the colonial sources that opens a 'critical space', as Dominic Davies puts it in his study of infrastructure in imperial literature.[359]

In addition to these volumes of correspondence, there is also a series of reports, which were presented to Parliament: an initial survey report, yearly updates on progress, an external report from 1899 by the engineer Guilford Molesworth, and the final report of the Railway Committee, which marked the 'completion' of the project. Molesworth's report was commissioned in 1898 when work had been 'in progress … for nearly three years, and … only one-third of the estimated length of the line' had been completed. He was asked specifically to report on whether the 'progress of the work' had been 'satisfactory', and 'if not, to what causes are delays to be attributed?,' along with the question of whether the Chief Engineer had the 'confidence and respect' of his staff, and whether he was 'loyally and thoroughly supported by the District Engineers and Heads of Departments.'[360] Through these different reports, we see the way in which

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357   Arthur Hardinge to the Marquess of Salisbury, 28 March 1900. In Further Correspondence Respecting the Construction of the Uganda Railway, Part V, 1900. TNA CO 614/7.

358   Mr W Billings and others to Mr Whitehouse, 24 March 1900. In Further Correspondence, Part V, 1900, 185. TNA CO 614/7.

359   Dominic Davies, *Imperial Infrastructure and Spatial Resistance in Colonial Literature, 1880-1930* (Oxford: Peter Lang, 2017), 4.

360   Foreign Office to Sir G. Molesworth. In *Further Correspondence, 1898*, 191A.

infrastructure projects are dependent on the management and control of information: we can trace what makes it out of the correspondence and what doesn't, and how information might be framed differently depending on its audience.

The second, smaller body of material is from the Amalgamated Society of Engineers (ASE), the main union involved in the 1897 strike and lock-out in the UK. These sources are official records of a different type—monthly, quarterly and annual reports of the union, which represented "skilled" workers in the engineering trades. The monthly report recorded numbers of members and provided updates on the running of the union, but from January 1897, it was also intended as forum for discussion and correspondence and a record of 'facts, figures and fancy'—as well as a section for correspondence, which contained letters from members around the world, there were also articles and editorials on points of interest for the engineering trades and trade unionism more widely.

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According to Neera Kapila's meticulous account of the construction of the Uganda Railway, the Imperial British East Africa Company first initiated plans to construct a railway in 1890.[361] An initial party was sent to examine possible routes but their report was 'discouraging'; nevertheless, a year later the British Government funded a second survey, led by Captains Macdonald and Pringle and supported by Indian and Swahili workers, which provided a confident statements of the railway's feasibility.[362] Their report, published in 1893, concluded that the project presented 'no great, or even serious difficulties to be overcome'. The authors predicted that there would be no local opposition to the construction of the railway or any of the accompanying works, for example the telegraph line, where they concluded that 'the construction of the railway will have such a revolutionary effect that there will be no danger of interference.'[363] The first section of construction would be 'exceedingly easy', and although the risk of the 'constant recurrence' of fever was acknowledged, the fever that might be contracted was said to be 'of a very mild character', despite the fact that by

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361   Kapila, *Race, Rail and Society*, 2.
362   Ibid., 2.
363   'Report on Mombasa Victoria Lake Railway Survey' (London: Her Majesty's Stationary Office, 1893), 3; 5; 25.

the survey's own account, they were obliged to leave one member of their party behind midway through, 'serious illness rendering him quite unfit for further travel.'[364]

This report doesn't foreground estimates of time or address them explicitly, but its calculations of overall cost were of course dependent on an estimate of the time the project would take to complete. Costs for the surveys were estimated at a rate of progression of 180 miles per year, which equalled a total time of just over three and a half years to cover the 657 miles of the projected route of the railway; similarly, costs were budgeted for the Chief Engineer and his office on the basis of four years of labour.[365] In this context, at the preparatory stage of the project, we can see that the possibility of delays is minimised and time is not explicitly addressed—instead, it is cast in terms of money, and the engineers write of the importance of building an 'inexpensive' railway.[366]

If time isn't explicitly addressed in this report, it is still clear that the authors have a flexible idea of completion and envisaged different speeds of construction. The aim was to get the line from the coast to the lake as quickly as possible but reaching the lake didn't mark the end point of labour: the plan was to build a temporary line and then return to earlier points for 'improvements and alterations'. After the line was open, 'such operations as ballasting, &c.', would be 'steadily gone on with very cheaply, though slowly.'[367] In 'The Future in Ruins', Gupta suggests that we see the end of infrastructure projects as 'potentially open': here, in a sense, the end is clear and fixed—the line reaching the lake—but the report also suggests it is almost open or at least multiple, as 'improvements and alterations' bleed into routine maintenance.[368] The completion date announced in the ILN—19 December 1901, when the rail reached the lake—certainly bore no relation to the date at which construction labour on the railway ceased: the final report of the Uganda Railway Committee recorded works continuing into 1903, and their own report on the completion

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364   Ibid., 10; 25; 110.
365   Ibid., 64; 70.
366   Ibid., 14.
367   Ibid., 10.
368   Gupta, 'The Future in Ruins', 71.

of the railway wasn't published until 1904.[369] Even the start date was unclear, as Henry Gunston argues in his article on the planning and construction of the Uganda Railway. There are three possible points at which the commencement of the railway could be placed: 'Whitehouse's arrival at Mombasa on 11 December 1895; the official 'First Rail' ceremony on 30 May 1896; or the start of tracklaying on the mainland on 4 August 1896.'[370]

In this context, identifying the different temporalities and ambiguities in the timeline of construction isn't necessarily always a matter of interpretation—multiple beginning and end points were consciously built into the project from the start. This method of construction was in part a result of the desire for speed, a requirement of a colonial temporality where railway construction was seen as a race among European powers and there was no time to lose: in October 1897, Lord Salisbury told Whitehouse that he was 'particularly anxious that the line should be pushed as fast as possible' and that 'it was a political necessity that [the railway] should get to the Lake as soon as possible as the French were doing something on the Nile and he could not find out what it was.'[371] But it also exploited the idea of ambiguity and an open-ended period of construction and subsequent maintenance: completion, for example, could be announced before construction was anywhere near finished.

So in the early stages of plans for the railway, a report claimed that construction would pose no great difficulties and implied that the project would be finished in four years: at this point, delays are hidden, hinted at but dismissed by confident statements, a confidence that could be connected to the distorted reality of colonial whiteness, but also to the manipulations required to secure backing for infrastructure projects.[372] When the time came to scrutinise these plans,

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369   'The Completion of the Uganda Railway to the Victoria Nyanza, December 19', *Illustrated London News*, 11 January 1902, Issue 3273, 50; Final Report of the Uganda Railway Committee (London: His Majesty's Stationery Office, 1904).
370   Henry Gunston, 'The Planning and Construction of the Uganda Railway', *Transactions of the Newcomen Society* 74: 1 (2004): 55.
371   G. Whitehouse to Hardinge, 17 December 1897, Whitehouse Correspondence 1896-1902, MSS.Afr.S.1046/11, Weston Library, Oxford.
372   This form of manipulation can often be read in twentieth-century infrastructure projects. Robert Moses in particular was expert at hiding the likely cost of projects from financiers. See Robert Caro, *The Power Broker: Robert Moses and the Fall of New York* (Bodley Head, 2015).

however, this projection of easy construction was contested: in the second reading of the Uganda Railway Bill, the MP Henry Labouchere characterised the scheme as symptomatic of a kind of 'earth hunger', a 'sort of disease'; others pointed out that the estimates were uncertain, and no detailed surveys had been completed.[373] The government doubled down: the survey had in fact been done with 'unusual care'; the railway would save the government money; the Railway Committee comprised men whose experience spanned the world, and whose whole lives had been spent in railway work; the method was 'smoother and more economical' than any other.[374] In the third reading of the Bill, the desire for speed was also emphasised: the Prime Minister concluded the discussion by stating that 'we feel on every ground, political as well as commercial, that every month lost is to a certain extent an injury, and no effort will be spared in order to bring it to a speedy conclusion.'[375]

In the pre-construction phase, then, when the project was being 'sold', potential delays were minimised by government and engineers, and in turn the need for rapid construction was emphasised. How did this situation change once construction began, and how were different types of delay perceived and handled? I will consider four causes of disruption—anti-colonial resistance in Uganda, sickness, interference from animals and the weather, and labour resistance and its management by the administration.

In the second reading of the Uganda Railway Bill, the government suggested that if they didn't build the railway, Germany would, and this competition was cited as one of the 'main grounds' for construction.[376] But the temporality of European military interventions in Africa and the violent 'scramble' for control both dictated the expected speed of the 'completion' of the railway and interfered with it. In 1897, resistance to the British occupation of neighbouring Uganda intensified: according to Amii Omara-Otunnu's account, British forces were challenged by Kabaka Mwanga in Buganda, Omukama Kaberaga in Bunyoro, and by a rebellion of Sudanese troops in September, which 'was quelled only after seven months with the help of troops enlisted from India,

373   Uganda Railway Bill, Second Reading, 27 July 1896, *Hansard*, vol. 43, col. 705; 720.
374   Ibid., col.713; 715.
375   Uganda Railway Bill, Third Reading, 13 August 1896, *Hansard*, vol. 44, col. 682.
376   Uganda Railway Bill, Second Reading, 27 July 1896, *Hansard*, vol. 43, col. 716-717.

Kenya, Somaliland and elsewhere'.[377] Amassing these troops from different locations required transport, and the incomplete railway was thus enlisted to help. While in a sense this marked the premature fulfilment of its purpose as a means to secure British military control, it also caused difficulties with the timetable for construction and initially, Whitehouse had refused to give facilities for the transport of troops 'on account of the delay in plate-laying which would result'[378]—he complained in a letter to the Commissioner that he was 'continuously getting requests for special trains and material to be sent up the line,' which was causing 'unforeseen strain' on the railway and the construction timetable.[379] The problems continued into the next year, and at the end of June 1898, 'the movements of troops and their porters and impedimenta' on account of the resistance in Uganda was still stated as one of the three principal causes of delays to plate-laying.[380] But while Whitehouse was concerned by these delays, his colleagues on the Railway Committee were more anxious to ensure that 'a careful record of expenses' was kept to allow the Treasury to refund the railway for the work it was carrying out for the military.[381] To the Committee, this type of delay didn't pose a threat: it had to be accounted for, but ultimately it reinforced the utility of the railway to the colonial state.

In addition to being subject to the contradictory demands of British colonial military intervention, other forces intervened to throw the progress of the line off-course. Sickness was the most notable recurring issue, with Whitehouse's reports frequently highlighting high levels of fever and other conditions. Health was particularly bad at the end of 1896 and the beginning of 1897: in December, Whitehouse reported that all the staff and 50 per cent of the Indian

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377   Amii Omara-Otunnu, *Politics and the Military in Uganda, 1890-1985* (Palgrave Macmillan, 1987), 20-22. See also R. W. Beachey, 'Macdonald's Expedition and the Uganda Mutiny, 1897-98', *The Historical Journal* 10:2 (1967): 237-254.
378   Railway Committee Meeting, 30 December 1897. In *Further Correspondence, Part II, 1897*, 197. TNA CO 614/1.
379   Diary entry for Wednesday 27 October 1897, George Whitehouse's Diaries, MSS. Afr.S.1046/3, Weston Library, Oxford.
380   Report by Mr A E Cruickshank on Working of Traffic Department for the half-year ending June 30, 1898. In *Further Correspondence, Part III*, 227.
381   Railway Committee Meeting, 30 December 1897. In *Further Correspondence, Part II*, 196.

labourers had been affected by 'malarial fever',[382] an epidemic which continued into January 1897, when Whitehouse concluded that it was 'so general, officers and men suffering to such an extent,' that he considered it as 'one of the most severe' that he had experienced 'on any railway works in any country.'[383] Work was 'almost at a standstill' from the middle of January,[384] and issues with health continued intermittently throughout the year. In March, for example, sickness among the drivers and firemen delayed work in the locomotive department, and in April, Whitehouse was unable to report the measurements of work done 'owing to sickness' among the District Engineer's staff.[385] Health issues affected both humans and animals: over half of the bullocks initially assigned to the construction project had perished by December 1896.[386]

Sickness and injury weren't just problems at the outset: they were persistent issues that continued as the project 'progressed'. Health was often presented as in a state of crisis, and this can certainly be read from the figures: levels of sickness could climb to 50 per cent of the workforce at certain times, and over the course of the project, of about 34,000 labourers employed, 2,493 died; a further 6,454 were invalided home. The starkest statistic is the number of injuries, which was recorded in 1903 as 25,259.[387] But as Samuel Ruchman points out in his work on labour exploitation on the railway, these statistics included the deaths of Indian labourers but not of Africans—therefore we can only assume that the true figures must have been higher, especially if you take into account those killed in the suppression of resistance.[388]

Although there was a clear crisis in health and safety and a clear link between

382   Mr Whitehouse to Mr O'Callaghan, 4 December 1896. In *Further Correspondence, Part II*, 5.
383   Mr Whitehouse to Mr O'Callaghan, 1 January 1897. In *Further Correspondence, Part II*, 22.
384   Mr Whitehouse to Mr O'Callaghan, 26 February 1897. In Ibid., 47.
385   Mr Whitehouse to Mr O'Callaghan, 23 April 1897. In Ibid., 80.
386   Mr Whitehouse to Mr O'Callaghan, 4 December 1896. In Ibid., 7.
387   See 'Final Report of the Uganda Railway Committee' (London: His Majesty's Stationery Office, 1904), 13. The report uses the term 'casualties', but this must refer to injuries rather than deaths.
388   Samuel G. Ruchman, 'Colonial Construction: Labour Practices and Precedents Along the Uganda Railway, 1893-1903,' *International Journal of African Historical Studies* 50:2 (2017): 251-274.

sickness and delays, potential preventative measures were rarely raised in Whitehouse's reports, and the lack of medical provision wasn't held to blame for the situation. Whitehouse sent for medical assistance in May 1897 when the head doctor himself was ill, but on the whole there was a reluctance to invest in adequate medical care: as Kapila argues, the initial hospital, planned for 700 patients, was 'grossly inadequate', and emergency extensions in 1899 only allowed for 200 further in-patients.[389] Instead, responsibility for the situation was deflected: illness was explained as the fault of the rains, or of the men themselves, who surely were not healthy or strong when they arrived.[390] At times, high hospital numbers were even put down to malingering. In Molesworth's report in 1899, sickness is listed under 'extraneous difficulties' and attributed to jiggers, without noting that the risks posed by these mites would have been reduced if labourers' housing had proper flooring. Hospitals also fall under this category as a cause of delay and difficulty, in that they were required to be 'very complete … to cope with the number of sick, which is abnormally large at times.'[391] Ruchman attributes this inaction to a desire to reduce costs—'administrative denial of basic material goods,' he argues, 'particularly those necessary to create safer living and medical environments, was essential to minimizing immediate labour costs during railway construction.'[392]

Another key issue that caused disruption and delay was the weather and terrain, with rain and difficult conditions hindering construction and bringing works to a halt. In December 1896, 'work was nearly at a standstill for half the month owing to the recent heavy rains,' which left the 'borrow-pits ... full of water' and turned the cuttings into 'quagmires,'[393] and in June 1897, heavy rains again stopped work and turned the newly constructed banks to 'slush'.[394] Rain was a particular problem because it both stopped construction and undid it: banks that had been washed away required reworking once the weather improved. The terrain through which the railway passed was also presented as an unforeseen

389   Kapila, *Race, Rail and Society*, 11.
390   See Mr Whitehouse to Mr O'Callaghan, 21 May 1897. In *Further Correspondence, Part II*, 90. ('During the month there has been a great deal of sickness, probably owing to the rains, that have been exceptionally heavy.')
391   Sir Guildford Molesworth, 'Report on the Uganda Railway', 28 March 1899, 14.
392   Ruchman, 'Colonial Construction', 270.
393   Mr Whitehouse to Mr O'Callaghan, 4 December 1896. In *Further Correspondence, Part II*, 5.
394   Mr Whitehouse to Mr O'Callaghan, 21 May 1897. In Ibid., 89.

7. Mrs Whitehouse's Diaries

Women are rarely pictured in construction images or featured in records of construction, even though we know that Kamba women worked as labourers on the Uganda Railway[1] and that white women were stalwarts of the celebratory infrastructural photograph. It was Chief Engineer George Whitehouse's wife, after all, who laid the first rail of the Uganda Railway, and Florence Preston, the wife of engineer Ronald Preston, who laid the last. Florence Whitehouse also appears in her husband George's correspondence: in January 1900, he was told off by Harry Johnston, the Special Commissioner for Uganda, for trying to name Kisumu, a city on the shore of Lake Victoria, Port Florence; when challenged, George claimed

difficulty: in January 1897, Whitehouse reported that the 'unusual heavy jungle greatly retards progress and makes the work of clearing very heavy,'[395] and later in construction, steep gradients caused particular difficulties: as Molesworth wrote in his 1899 report, this was 'essentially a mountain railway.'[396] Big cats caused problems too: Molesworth reported that 'progress has been seriously impeded by the depredations of man eating lions.'[397]

So weather, terrain, and unruly nature all resisted the smooth 'progress' of construction, a point I raise not to shift blame from the human, but to draw attention to the manufactured overconfidence of the British government and engineers, who either failed to seriously consider such possibilities in their forecasts or purposefully minimised them to secure funding for the project. White colonial attitudes to animals—that they existed to be killed for sport—are clear in the diaries of Whitehouse's wife, who reports every animal that her husband and his colleagues shoot, but it is also clear that officers on the railway were particularly destructive: Whitehouse is reprimanded for the unnecessary destruction of forests, and Kapila notes that illegal hunting intensified over the period of construction.[398]

The framing of delays and disruption due to weather and wildlife issues was often similar to the framing of sickness: the conditions were emphasised as extreme, or abnormal: in May 1897, Whitehouse wrote that they were experiencing the 'heaviest rains that have been known in the country for the last twenty years.'[399] In this context, the 'phenomenal' weather conditions and problems with sickness became the only reasons for delay in Whitehouse's accounts: 'but for the very bad weather and the great amount of sickness that has prevailed, the culverts would nearly all have been completed', he wrote in

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1 See letter from The District Engineer, Construction Division 4, to Her Majesty's Subcommissioner, 15 November 1897, in which the engineer states he has 'a large number of Wakamba women working on contract.' National Archives, Nairobi. PC/Coast/1/1/20.

395   Mr Whitehouse to Mr O'Callaghan, 1 January 1897. In Ibid., 22.
396   Molesworth, 'Report on Uganda Railway', 15.
397   Molesworth, 'Report on the Uganda Railway', 13.
398   Florence Whitehouse, 'Diary of a trip with her husband through Kenya to the shores of Lake Victoria,' Weston Library, Oxford, MSS.Afr.s.1055. H. H. Johnston to Mr Whitehouse, 26 January 1900. Weston Library, Oxford, MSS.Afr.s.1046 (11). Kapila, Race, Rail and Society, 87.
399   Mr Whitehouse to Mr O'Callaghan, 19 June 1897. In Further Correspondence, Part II, 105.

the name Kisumu wasn't in use, even though his own brother had previously recorded it on his map of the area.[2] As well as tracing her through her husband's records, we can also read Florence Whitehouse's own words: her diaries from a two-month trip with her husband in 1898 'through Kenya to the shores of Lake Victoria' are held in the Weston Library in Oxford, and through these records, we get a brief sense of what her life in Kenya was like.[3]

Acknowledging the role of white women in colonialism is important. In her book *Imperial Leather*, Anne McClintock examines race, gender and sexuality in histories of imperialism and argues that colonial women were 'ambiguously placed'—unlikely to be involved in making the 'direct economic or military decisions of empire' but not 'hapless onlookers' either; they were often in positions of 'decided power' over both racialised men and women. But McClintock also encourages us to think about the differing class positions of white colonial women—some, for example, where 'shipped out as convicts or conscripted into sexual and domestic servitude'; others 'served discreetly at the elbow of power as colonial officers' wives, upholding the boundaries of empire'.[4]

2 H. H. Johnston to George Whitehouse, 26 January 1900. Weston Library, Whitehouse Correspondence 1896-1902, MSS.Afr.s.1046 (11).
3 Florence Whitehouse, 'Diary of a Trip with her Husband', Weston Library, MSS.Afr.s.1055.
4 Anne McClintock. *Imperial Leather: Race, Gender and Sexuality in the Colonial Contest*. London and New York: Routledge, 1995. 6. Against McClintock's argument that 'very few women reaped [the] vast profits' of empire (a point I find difficult, as white women will have benefitted indirectly from their husbands' wealth even if they weren't in charge of fortunes), see Stephanie E. Jones-Rodgers. *They Were Her Property: White Women as Slave Owners in the American South*. Yale University Press, 2019.

March 1900.[400] But unlike sickness, delays from weather elicited a clear response: damage was assessed and systematic repairs carried out at a result, a solution facilitated through the exploitation of labour: after heavy rains in May 1897, labourers worked 'for eleven hours a-day without a break, Sundays included', for fourteen days in a row.[401]

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While sickness, the weather, and the terrain all contributed to Whitehouse's continual reports of delays, controlling and disciplining labour was another considerable issue in ensuring the construction of the railway. Addressing the processes of labour resistance and control is in part a strategy to emphasise the agency and importance of the labourers, whose work and resistance was constitutive of the railway, but it is also to examine the particular ways in which the railway state controlled and disciplined labour, and the ways in which they framed delays that resulted from labour resistance. Issues of labour help to illustrate colonial-railway government anxieties over their control of a workforce upon whose labour the 'completion' of the project was entirely dependent, and focussing on labour resistance takes us along the line from Mombasa to Nairobi, but also to the UK, where a dispute in the engineering trades in 1897 caused delays to the shipment of engines for the railway.

Here, I will be building on existing work on labour and the construction of the Uganda Railway by a number of scholars: Samuel G. Ruchman, whose text on labour practices on the railway (1893-1903) examines the 'coercion and exploitation' of labour, arguing that 'negotiations with resistant labourers along the railway construction line fostered the foundations of the colonial state's most coercive social and economic practices;' Neera Kapila, whose work provides extensive details on the labour conditions of Indian workers, and Tiyambe Zeleza, who poses strikes, desertions and communal revolts on the railway as the beginning of a long history of labour struggles in Kenya.[402] I will also be working with theorisations of different forms of labour resistance. In his work

400   Mr Whitehouse to Mr O'Callaghan, 20 March 1900. In *Further Correspondence, Part V*, 159.
401   Ibid., 106.
402   Ruchman, 'Colonial Construction,' 256. Kapila, *Race, Rail and Society*; Tiyambe Zeleza, 'The Strike Movement in Colonial Kenya: The Era of General Strikes', *Transafrican Journal of History* 22 (1993): 1-23.

Florence Whitehouse was at the elbow of power, and I'm not sure if she was discreet. In her diaries of her trip in 1898, we can read about the different activities and experiences that structured her trip. She was involved in railway work, copying her husband's reports to the railway committee, speculating about the route of the railway, and imagining railway bridges.[5] But we hear more about hunting, to which she was often an onlooker or observer: she describes the eagerness of the men around her to 'get a lion' and a rhino, lists the animals that have been shot, and admires Lord Delemere's 'wonderful collection of trophies'. [6] She includes herself in more active roles too, reporting that: 'we saw two splendid herds of Wildebeast and Zebra, but could not get near enough to shoot',[7] or that the rhino she spotted was later shot by Dr Walters. Another evening, she walked with her husband to a swamp and 'tried to get a shot at some big wild geese swimming there, but they were too far away.'[8]

In his book on the photography and visualisation of the British Empire, James R. Ryan describes the hunter as one of the 'most striking figures of the Victorian and Edwardian imperial landscape' and explains the role of hunting in empire, citing other historians who have argued that 'the techniques and ethos of European hunting were embedded in the imperial enterprise.'[9] Similarly, in 'Big Cats and Imperialism', William K. Storey examines the symbolic role of hunting as an assertion of power: 'for the hunters, the basic underlying structures of the

on the labour struggles of Ghanaian miners, Jeff Crisp articulates three types of labour resistance: informal, collective, and institutional.[403] As summarised by Piet Konings, informal resistance is usually pursued 'on a small-scale basis, intermittently and in a covert manner,' and ranges from 'desertion, absenteeism, malingering, sabotage, theft, the smoking of hemp, and the excessive use of alcohol, to more positive examples such as the creation of individual, anti-employer work cultures and the adoption of religious beliefs as forms of resistance to the demands of the capitalist mode.'[404] Collective resistance includes 'strikes, riots, demonstrations' and go-slows and 'normally involves a deliberate attempt to change the situation which gives rise to the conflict';[405] institutional modes involve trade unions. The example of the Uganda Railway also gives the possibility of reflecting back on and reassessing these categories of resistance.

I am also interested in where labour resistance falls in relation to other causes of delay and disruption, how it's understood, reported, and managed, and where blame is assumed and where it is shifted. Unlike sickness and weather, labour was an issue that was considered in at least some detail before construction began. The 1893 survey report suggested that labour would need to be imported from India, but the idea of attracting as much local labour as possible, particularly for clearing, was voiced too.[406] Ideas about which labourers would be suited to different tasks were highly racialised, and as Ngugi wa Thiong'o points out in his foreword to Kapila's book, the railway constructed a racial hierarchy where Indian labour was valued over local African labour—'the beginnings of the construction of a racist society', as he puts it.[407] Although it was suggested relatively early on that labourers would mostly like come from India, the need to import and house labour was still cited as a cause of delay and difficulty and, like sickness, the situation of labour appeared in crisis throughout much of the project.

5 Florence Whitehouse's Diaries, 27th September.
6 Florence Whitehouse's Diaries, 20th September; 23rd September; 24th September.
7 Florence Whitehouse's Diaries, 20th September.
8 Florence Whitehouse's Diaries, 30th September.
9 Ryan, *Picturing Empire*, 99.

403   Jeff Crisp, *The Story of an African Working Class: Ghanaian Miners' Struggles, 1870-1890* (London: Zed Books, 1984).
404   Piet Konings, *Labour Resistance in Cameroon: Managerial Strategies and Labour Resistance in the Ago-Industrial Plantations of the Cameroon Development Corporation* (Leiden: African Studies Centre, 1993), 12-13.
405   Crisp, The Story of an African Working Class, quoted in Konings, *Labour Resistance in Cameroon,* 13.
406   'Report on Mombasa Victoria Lake Railway Survey', 24; 77.
407   Kapila, *Race, Rail and Society*, v.

hunt symbolised the triumph of culture over nature and of the colonist over the colonized.'[10] We can read these dynamics in Florence Whitehouse's accounts of animals killed and trophies collected: there is a delight in the exercise of lethal power over living creatures.

Another theme in Whitehouse's diaries is landscape and nature. Often, Whitehouse compares the scenes in front of her to those in England. The country after passing Nairobi, for example, 'gets much greener and more English looking and mountainous.'[11] On one evening, she describes the surrounding landscape as 'so pretty and green with clover, bracken, wild clematis, wild laburnum and forget-me-not … like a brilliant English summer's day.'[12] Ryan's work on landscape photography in colonial contexts suggests that 'by imposing the aesthetic contours of "English scenery" on to foreign environments", photographers were 'familiarising and domesticating a potentially hostile landscape'.[13] Whitehouse's descriptions of nature play a similar function here, rendering the landscape familiar and hospitable to white settlers. Her comments also set up England as the benchmark—the gold standard to which everything must be compared.

Whitehouse's enjoyment of nature and landscape leads us to an overarching sense we get from her diaries—that of enjoyment of experiences, places, and people; of how she is treated: carried in a hammock when she feels ill or carried across a

As previously mentioned, over the course of the construction of the railway, 34,000 labourers were employed, 32,000 of which were indentured labourers from India.[408] Ruchman has clearly illustrated the ways in which the railway 'facilitated the wilful erosion of legal protections for indentured labour': after demands from the Uganda Railway administration, for example, the government of India changed legislation which had restricted the emigration of indentured labourers to allow for labour to be transported to East Africa for the construction of the railway.[409] While indentured labour is often associated with earthwork, labourers were employed across departments on terms of indenture, on the printing press, and in the medical, and locomotive departments, for example. In addition to indentured labourers, the railway also employed approximately 2,300 subordinate officials, although these numbers fluctuated over the course of construction.[410] Subordinates (both white and Indian) were recruited from India and from the UK, and also worked in various roles across the railway, in the accounts and traffic departments, as engine drivers and foremen, in the printing press, and so on.

Episodes of informal resistance were frequently reported in Whitehouse's letters, although they were often interpreted as disorder or disobedience. In the first instance, Whitehouse struggled to attract local labourers, who simply had no interest in working for the railway, or worked in a way that was convenient for them—for example, leaving when it was time to cultivate crops.[411] In December 1896, Whitehouse asked two contractors to produce 100 labourers each, but after six weeks they had managed to find 36 in total, and by June 1897 Whitehouse declared the 'experiment' to recruit local labour 'a failure' that would result in significant delays to the 'progress of the line'.[412] There were various attempts to induce labourers to work, including opening stores to sell 'fancy goods' as an incentive for wage labour and providing a 'greater variety of rations'.[413] These efforts, nevertheless, were of little success: Whitehouse was

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10 William K. Storey, 'Big Cats and Imperialism: Lion and Tiger Hunting in Kenya and Northern India, 1898-1930', *Journal of World History* 2:2 (1991): 149.
11 Florence Whitehouse's Diaries, 29th September.
12 Florence Whitehouse's Diaries, 30th September.
13 Ryan, *Picturing Empire*, 51.

408   'Final Report of the Uganda Railway Committee', 13.
409   Ruchman, 'Colonial Construction', 261-265.
410   Kapila, *Race, Rail and Society*, 6.
411   Mr Whitehouse to Mr O'Callaghan, 4 December 1896. In *Further Correspondence, Part II*, 5.
412   Ibid., 7; Mr Whitehouse to Mr O'Callaghan, 19 June 1897. In *Further Correspondence, Part II*, 5.
413   Mr Ainsworth to Mr Whitehouse, 20 February 1897. In *Further Correspondence, Part II,* 66.

river by five men ('it was very droll to see me standing on the bank and all these black fellows standing in the water holding out their hands to me; each thought he could get me across dry and safely').[14] There are moments she finds difficult—walking past the rotting corpses of mules that died on the road—but it is also clear that the trip is often exciting for her: seeing huge crocodiles and hippos, 'dense high green jungle … alive with birds', and the 'strange and wonderful head dresses' of the people she meets. In these interactions, Whitehouse enjoys her feelings of superiority and power: she enjoys showing one man how to use matches; after describing the head dress of another, she reports: 'We threw beads among them and they all scrambled like a lot of school children for sweets.'[15]

Within this enjoyment, there are the kinds of anti-Blackness that are foundational for colonialism. Whitehouse objectifies the Black men she encounters ('They are very fine looking people … They look very like bronze statuary').[16] The threat of violent resistance to her party's presence doesn't seem to daunt her: she reports that the Nandi, an ethnic group involved in lengthy anti-colonial struggles, had been 'rather troublesome lately, spearing stray porters', but she presses on ahead of the main guard who had been arranged for her safety because she found 'it too slow and the smell of Swahili porters is not of the sweetest.'[17] She demonstrates her disregard for Black life— the lives of the porters who were killed, and those who are carrying her belongings—in her overconfidence. White women in her position enacted, developed and enforced these modes of anti-Blackness.

14 Florence Whitehouse's Diaries, 24th October.
15 Florence Whitehouse's Diaries, 30th October.
16 Florence Whitehouse's Diaries, 27th September.
17 Florence Whitehouse's Diaries, 13th October.

forced to concede that 'the strangeness of the work [offers] no inducement to a people who have ample food.'[414]

This explanation—that the work simply wasn't attractive, or that people's needs were already met, which rendered wage labour unnecessary—was given alongside a number of different reasons: in Molesworth's report of 1899, for example, difficulties in obtaining local labour were attributed to the fact that people were unwilling to work at any distance from their homes, and also the fact that local leaders only had authority over a limited number of people—the railway had hoped to negotiate with leaders who would in turn supply labourers, something the government later denied in Parliament when being questioned on the nature of railway labour.[415] The final report of the Railway Committee probably came unintentionally closer to the truth when it suggested East Africans were 'unable to discriminate between contract labour and slavery'; in Parliament, one MP also suggested that that the work seemed to be 'pretty nearly the same thing as slave labour'.[416]

For those who did agree to work, or those who had been indentured, one option for resistance was desertion. In June 1897, Whitehouse reported that desertions (in particular on dhows) were 'becoming more frequent', and there had been consistent reports of desertion the previous year: in February 1896, September, and then three separate reports in October, often including groups of labourers leaving together—for example, the seven porters who left the Uganda Railway Survey Camp.[417] Desertions from survey parties continued into 1897: in January, one surveyor Mr Church started his journey with 129 men and arrived with 81, and a month later, a further 17 labourers left the party and were later prosecuted, fined and imprisoned.[418] In October 1898, Mr Anzoulatos, a contractor on the

414   Mr Whitehouse to Mr O'Callaghan, 24 March 1897. In *Further Correspondence, Part II*, 65.
415   Molesworth, 'Report on the Uganda Railway', 20. Mr Labouchere, 'Uganda Railway Consolidated Bill', *Hansard*, 30 April 1900, vol. 82 col.304.
416   'Final Report of the Uganda Railway Committee', 11; Mr Labouchere, 'Uganda Railway Consolidated Bill', *Hansard*, 30 April 1900, vol. 82 col.304.
417   Chief Engineer to H. M.'s Subcommissioner, 8 June 1897; Letter on 7 October 1896; Chief Engineer to Crauford, 15 October 1896; Letter from Chief Engineer, 16 October 1896. PC/Coast/1/1/20.
418   Mr Whitehouse to Mr O'Callaghan, 26 February 1897. In *Further Correspondence, Part II*, 47.

railway, reported to the Superintendent of Railway Police that he had 'been put to too much trouble through desertion and refusal to work,' and asked that 'a police constable or two may be placed in his camp to arrest deserters and help keep general order.'[419] Desertion wasn't mentioned in either Molesworth's 1899 report of the final report of the committee, and it seems to have been dealt with by harsh punishment and surveillance, as both Kapila and Ruchman argue: police were sent to watch over labourers at night, and ships leaving Mombasa harbour were searched for stowaways before departure.[420] On suspicion of being deserters from the railway, Africans were arrested and sent to the Chief Engineer, who was asked to verify whether they 'belonged' to the railway.[421]

But in some cases, even the colonial government had to acknowledge that the railway was being unreasonable. In March 1898, seven labourers were charged with desertion by the railway but the case was dismissed, 'it being admitted that with one exception the prisoners had not received their regular pay at the time of their alleged desertion, that they had been worked overtime and on Sundays without extra pay, and also that they [had] reason to believe that they would get sixteen rupees a month while working in the transport department.'[422] The railway tried to argue that the agreement was for twelve rupees a month and the amount of sixteen rupees was mentioned 'as what [Captain Haslam] would try and attain for them recognising their harder work', but the judge concluded that 'the facts remain that the men were worked longer hours … and on Sundays without being paid overtime and this for a long while so that they had a legitimate grievance unredressed.' The railway was required to pay the overtime, and also 'make final' the 'understanding which ha[d] been allowed to remain in the minds of the men.'[423]

Unlike sickness, difficulties with the terrain, and the issues with recruiting labour, problems of desertion and the subsequent treatment of deserters who were captured seems to have gone unreported, and the matter was dealt with by

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419   Letter from Superintendant of Railway Police. Mombasa, 27 October 1898. PC/
        Coast/1/1/21(B). No. 499.
420   Kapila, *Race, Rail and Society*, 22-23.
421   Letter to Chief Engineer, 18 July 1898. NAN PC/Coast/1/1/21(B). No. 311.
422   Crauford, 'Farquar as a prosecutor for the Uganda Railway in the criminal case against
        seven railway coolies charged with desertion.' Mombasa, 2 March 1898. NAN PC/
        Coast/1/1/21 (B).
423   Ibid.

both repressive measures and expressions of anxiety over control: Whitehouse, for example, sought changes to the terms by which labourers were engaged in India, which were supposed to prevent engagements being entered into 'with the sole object of … gaining a free passage to Africa'.[424] As we can see from the case above, the railway were sometimes forced to confront the fact that their working conditions caused desertions. But unsurprisingly, the narrative put forward by the railway, when they did discuss desertions, was that labourers were at fault: Swahili porters were said to 'take advances and run away on the earliest opportunity', despite the fact that labourers also deserted when they were owed money by the railway, not the other way round.[425]

While desertion was clearly often a response to desperately exploitative labour conditions, in other cases we might view it as a means of 'stealth and supplement', of playing the colonial government at their own game of theft and deception. In March, an Indian khallasi, Gundra Singh, was sent from Mazeras with 'Rs50 for a money order, a watch and chain and some clothes.' He was seen once in camp, but then nothing was heard from him, and the Chief Engineer presumed he had deserted with the money and goods.[426] In August 1896, a jamandar Ali Golem Shah apparently deserted with an advance of pay plus '12 pick axes, 8 spades, and 1 bag salt', and later in the year, in October, 18 labourers from Malindi deserted with their new clothes, blankets and water bottles.[427]

The many labourers who didn't desert still found ways of enacting resistance and undermining or subverting the system. Accounts of these episodes in the colonial records are often difficult to read—when Whitehouse reports difficulties in inducing labourers to perform the amounts of work he expected, was this because his expectations were too high, or were indentured labourers exerting

424   George Whitehouse to Alexander Rendel, 5 December 1896, MSS.Afr.s.1046/10, Weston Library, Oxford. Foreign Office to India Office, 30 January 1897. In *Further Correspondence, Part II*, 11.
425   Mr Whitehouse to Mr O'Callaghan, 26 February 1897. In *Further Correspondence, Part II*, 47. When labourers were ordered to pay fines for desertion, these fines were sometimes paid directly by the railway from wages owed to the labourers. 'Cheque for fines of railway coolies.' NAN PC/Coast/1/1/21(B). No. 397.
426   Chief Engineer to Sub-Commissioner, 26 March 1896. NAN PC/Coast/1/1/20.
427   Chief Engineer to Acting Commissioner and Consul General British East Africa Protectorate, 27 August 1896. PC/Coast/1/1/20. Chief Engineer, 16 October 1896. NAN PC/Coast/1/1/20.

their agency and working less, or working intentionally slowly? There were certainly instances of more formalised resistance to labour: Whitehouse's 1896 diary records that Indian labourers were out on strike in November, although he gives no information on any demands or how the situation was resolved.[428] And if we read delays to work or slow work as intentional, this seems to suggest that contrary to Crisp's characterisation of informal resistance as individual, in the context of the Uganda Railway it was often conducted collectively and consistently over time. We can also read a similar pattern of informal resistance in the behaviour of the subordinate officers. In 1898, a report from the traffic department indicated that a 'considerable' number of subordinate staff were dismissed for 'bad conduct'—problems with alcohol are mentioned in particular—and allegations of theft or the misuse of privileges were not uncommon.[429]

The colonial archive also contains records of labourers and guards withdrawing their labour as a protest against unsafe or unsatisfactory working conditions. This happened on an individual level—for example, in April 1899, Johnstone reported on a theft at the transport clerk's house included the fact that 'a sentry was on duty in the market place close to the house from 8pm,' but as 'the askaris do not obtain a sufficient number of nights in bed, he went off duty at 10pm.'[430] But it also happened in a collective and organised way: in May 1899, a jamandar and staff 'struck work owing to a lion scare', the response to which was to send '11 police constables' (presumably for the suppression of the workers, rather than the lion).[431] Similarly, when anti-colonial resistance threatened labourers on the railway in 1899, they 'threatened to strike work if ample protection was not afforded.'[432]

As Ruchman argues, the railway authorities responded to informal labour resistance with coercion and exploitation and sought new methods to control

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428   Foreign Office to India Office, 30 January 1897. In *Further Correspondence, Part II*, 10. Diary entries for 2 and 3 November 1896, George Whitehouse's Diaries, MSS. Afr.S.1046/1, Weston Library, Oxford.

429   'Report by Mr A E Cruickshank on Working of Traffic Department'. In *Further Correspondence, Part III*, 229.

430   H. B. Johnstone to the Acting Sub-Commissioner, 28 April 1899. NAN PC/Coast/1/12/9.

431   To J Boyle, 1 May 1899. NAN PC/Coast/1/1/41.

432   Ainsworth to C. H. Crauford, 22 August 1899. NAN PC/Coast/1/1/45.pl

the labour process, such as the shift to task work, which was intended to 'reduce labour costs and augment output.'[433] Initially, agreements stipulated that wages of 15 rupees a month must not be fixed on task work, but Whitehouse became concerned that this did not give him any 'power to make the [labourers] do a fair day's work, excepting the punishment of returning a man to India which is no advantage to me.'[434] In the committee's final report, this initial state of affairs was presented as 'unworkable'; in response, a 'strongly worded letter' was addressed to the India Office, in which 'a new form of agreement [was] suggested, by which the labourer was obliged to work by task or piece work when required to do so, this form to be applied to existing labourers on pain of dismissal.' The new agreement was adopted, 'with two slight modifications'.[435]

One final option for labourers, although it doesn't seem to have happened often, was violent resistance. In September 1898, Patterson reported that the masons 'dressing stone for the Tsavo Bridge' had 'laid a plot to kill him when he next visited the quarry.'[436] Patterson had planned to fine each labourer per cubic foot that he was short of thirty cubic feet per month, but the labourers resisted, arguing that 'they had come here on an agreement to receive forty-five rupees per month, and that they were going to receive that amount.'[437] When Patterson next visited the quarry, the masons rose up in protest against the measurement of their work and fines being imposed, apparently threatening to kill Patterson. The railway police were called, but only arrived four days later. In December 1898, Whitehouse reported to the Railway Committee that labourers had rioted, attacking and 'severely beating' an overseer who had 'insisted on 30 cubic feet of earth shifted, 50 feet as a minimum day's work' per labourer. According to Whitehouse, the labourers 'objected to' this requirement and attacked the overseer as a result. There are common themes in the reporting of violent resistance: labourers are depicted as unreasonable, or underqualified— the original letter reporting the incident to the Sub-Commissioner claimed that the men were recruited as masons, when in fact they were skilled labourers. Whitehouse lists the punishment as two months' imprisonment for six of the

433   Ruchman, 'Colonial Construction', 267.

434   Whitehouse to Alexander Rendel, 5 December 1896, Weston Library, Oxford, MSS. Afr.s.1046 (10).

435   'Final Report of the Uganda Railway Committee', 12.

436   R. Whitehead to Sub-Commissioner, Ukamba Province. 10 September 1898. NAN PC/Coast/1/1/32.

437   Ibid.

8. STRIKE!

In the last two weeks of February and the first two weeks of March 2018, staff at UK universities were on strike. The strike was over cuts to pensions, but much more came up in our discussions: the neoliberalisation of UK universities, casualisation and precarity in the workforce, problems with the curriculum and the corresponding need to support and enact decolonisation, difficulties with hiring practices, or reporting sexual assault, or pervasive ableism, or the ongoing legacies of racist histories (in January 2018, UCL was in the news for hosting a conference on eugenics with white supremacist speakers on campus).

Once we started raising our issues with the institutions in which we work and study, it was difficult to understand why we hadn't been always been on strike. We were back out again in November and December 2019 and February and March 2020, when the tail end of the strike coincided with the closure of universities due to the COVID-19 pandemic. This second round of strikes included the fights that had always been an informal aspect of the 2018 action: casualisation, unsafe workloads, the race and gender pay gaps, and pay devaluation.

At the Bartlett, we had a strong picket line throughout the strikes and some senior colleagues—in particular Barbara Penner and Jane Rendell—worked to build a programme of teach-outs, events and a strike chronicle. Not everyone who wanted to could strike—people with precarious immigration status or those who could not lose 14 days' pay gave their support in other ways—but it was also the case that not everyone wanted to strike: some in the university are scared

labourers, and fines of 15 rupees for 'several others'.[438] Despite the seriousness of this incident—the initial letter claimed that the situation was 'most serious' and Patterson's life was in 'great danger', the report from Whitehouse to Callaghan was brief, and incidents like this, if there were others, didn't make it out of correspondence between Whitehouse and the railway committee—the reports do not mention it. This response seems typical of the attitude to informal resistance and the methods that were deployed to manage and supress it—incidents were noted in correspondence but are rarely reported more widely, and labourers' demands were not taken seriously or as an indication of structurally poor working practices, but met with suppression.

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In addition to informal resistance, railway construction was also disrupted by different forms of collective and institutional resistance. Although it didn't receive systematic or detailed attention in the Uganda Railway correspondence, the early years of construction were impeded by a well-organised and comprehensive strike of engine builders across the UK and a retaliatory lock-out by employers in the summer of 1897. According to the ILN, this dispute involved concerted action throughout the country and was in their estimation, 'one of the most far-reaching of modern labour struggles'.[439] The strike was called by members of the Amalgamated Society of Engineers (ASE) and was centred on the struggle for the eight-hour working day, although other issues fed into the dispute too.[440] The ASE was a large union, with 91,500 members in 1897 and branches across the UK, the US, Australia, New Zealand, India, Canada, South Africa, France and Malta—membership reflected the mobility of white British workers across the empire, as well as attempts to build solidarity with European neighbours. As Nigel Todd elaborates in his account of the strike, it began in London in July 1897, with the demand for the 48-hour working week, but soon spread across the country when the employers retaliated with a 'nationwide lock-out of 25 per cent of their engineering workers'.[441] In reply, the unions

438   Kapila, *Race, Rail and Society*, 170. Mr Whitehouse to Mr O'Callaghan,13 January 1899. In *Further Correspondence, Part IV*, 1899, 47.
439   'Home and Foreign News', Illustrated London News, Saturday 10 July 1897, p.41.
440   For a detailed account of the strike in Barrow, see Nigel Todd, 'Trade Unions and the Engineering Industry Dispute at Barrow-in-Furness, 1897-98', *International Review of Social History* 20:1 (1975): 33-47.
441   Ibid., 36.

of disruption, even when its aim is to safeguard their pensions and jobs. My decision to participate was made easier by guidance from Barbara and Jane, and at the Bartlett we started to formulate the strike as a form of care: for each other, for future university staff, and for students, even though we were told that to withdraw our labour was uncaring and created harm for those who hadn't caused it. The picket line at the Bartlett and a room on Gower Street rented by the UCL union branch became strike spaces, and we posted strike writing—an adaptation of Jane's site writing—on a new website, made by David Roberts: www.s-t-r-i-k-e.org.

The formal negotiations between our Union and our employer were complex and hard to follow. But outside of this process, the strike gave us the impetus for new formations. At the Bartlett, we brought together a collective to develop critical engagement with UCL's existing equality, diversity, and inclusion measures. Exploitative contracts and practices now seemed more egregious, and the strike made some discussions easier: the sense that things are wrong in the institution was closer to the surface, although for those institutions tend to oppress, this has always been obvious. Striking is often framed as negative, but it can be productive and creative.

It was strange to research labour disruption in the nineteenth century while our own industrial action was ongoing. Despite the differences in circumstance, the similarities often felt clear: I was reading in the archive about railway labourers going on strike over poor treatment by their bosses, for overtime pay, over the rules relating to leave and restrictions on the

withdrew 'the remaining 75 per cent of their members from the affected firms'; overall, 35,000 workers were 'directly affected by the stoppage.'[442]

This struggle between workers and their employers across the UK meant a delay to the export of engines to Kenya, which in turn led to a delay in plate-laying. This shortage of engines on the line came at a time when construction was already under strain from the demands related to the repression of resistance in Uganda—according to Whitehouse, the limited number of engines made it 'very difficult to get the material over the line'[443] and caused 'innumerable delays in the delivery of other appliances urgently required for progress.'[444] The limited number of engines also meant that even 'the slightest accident' caused 'a breakdown of arrangements.'[445] Initial responses to this delay were to 'bring every possible pressure to bear upon the contractors' and to offer an increased price for expedited delivery, though neither of these solutions was effective.[446] In the end, despite their reluctance 'to place an order for engines abroad', the Railway Committee decided to pursue the possibility of obtaining engines from India, Brussels and the US, an action deemed unavoidable because 'the progress of the line was being seriously delayed.'[447] In the final report, this decision was presented as a positive one: apparently, US engines were 'easier on the road, and … generally better suited for rough work during construction.'[448]

Although there were detailed discussions in parliament concerning the apportioning of blame for the strike—Mr E. Robertson, MP for Dundee, argued that the employers were responsible for the delays because of their retaliatory lock-out, and therefore should be liable for penalties for failing to complete

442   Ibid.
443   G. Whitehouse to Hardinge, 17 December 1897, Whitehouse Correspondence 1896-1902, MSS.Afr.S.1046/11, Weston Library, Oxford.
444   Sir Guildford Molesworth, 'Report on the Uganda Railway', 28 March 1899, 13.
445   Mr Whitehouse to Mr O'Callaghan, 12 August 1897. In *Further Correspondence, Part II*, 138.
446   Minutes of the 48th Meeting of the Uganda Railway Committee, 12 August 1897. In *Further Correspondence, Part II*, 119; Mr Whitehouse to Mr O'Callaghan, 12 August 1897. In *Further Correspondence, Part II*, 138.
447   Minutes of the Fifty-First Meeting of the Uganda Railway Committee, 7 October 1897. In *Further Correspondence, Part II*, 153.
448   Final Report of the Uganda Railway Committee, 22.

number of hours drivers were required to work.[1] Meanwhile, at the Bartlett, we were following up issues of unpaid holiday and unpaid incremental increases while, in the background, everyone was working more than their contracted hours—I wish we had demanded overtime pay. Railway workers were striking over racial discrimination and we were too: black and brown staff at UCL are paid less than white staff, with black women earning the least and white men the most; similarly, the cleaners, security guards and porters who UCL refuse to bring inhouse are mostly migrants and BAME (Black, Asian, and Minority Ethnic).[2]

As the final strike weeks of 2020 began to bleed into COVID lockdown, we also saw how exposure to deadly risk through work is racialised, as it was in the construction of the Uganda Railway. While statistics emerged showing that Black men and women in the UK are more than four times more likely to die from COVID-19 than white men and women,[3] trade unions ran campaigns around the deaths of their members: United Voices of the World (UVW) highlighted how cleaner Emanuel

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1 'Notes of Demands of Strikers, as related at their Interview'. In Further Correspondence Respecting the Construction of the Uganda Railway, Part V, 1900, 150. TNA CO 614/7.
2 See 'UCL Gender and Ethnicity Pay Report 2020', https://www.ucl.ac.uk/human-resources/policies-advice/workforce-reporting-and-analytics/gender-and-ethnicity-pay-gap (accessed 7 September 2020). This report does not break down the ethnicity pay gap by gender; the figures on the difference between pay for black women and white men were cited by the Bartlett's Vice-Dean for equality, diversity and inclusion during a teach out on the picket line. For the campaign for inhousing security guards and cleaners, see: J L Botey, 'UCL: End Discrimination, End Outsourcing!', 1 July 2020. https://iwgb-universityoflondon.org/ (accessed 7 September 2020).
3 Office for National Statistics, 'Coronavirus (COVID-19) related deaths by ethnic group, England and Wales: 2 March to 10 April 2020.'

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their contracts on time[449]—the intricacies of the dispute were not discussed in the Uganda Railway correspondence. Nevertheless, the strike did come up in reports of the railway's progress—although it is worth noting that there is no direct mention of the lock-out, an omission which automatically placed responsibility on the workers rather than their employers. In these reports, the strike often assumes great importance as the cause of disruption: in the annual report for 1987-8, it is suggested that the strike almost brought works to a standstill and is later provided as the only reason for revised estimates to costs for construction.[450] As well as being important, the strike is often framed as unforeseeable or out of the ordinary: in his 1899 report on the railway, Molesworth labelled the strike an 'insane internecine war between employer and employed' and admitted that it was 'difficult to foresee [the] outcome' of the strike, the fallout from which was still ongoing in 1899.[451] Again, like incidents of sickness and weather, this issue was depicted as abnormal, even 'insane'—as though delays from this cause could not possibly have been predicted. This tallies with Whitehouse's characterisation in his reports, where he writes: 'such a list of misfortunes as I have had to contend with—in phenomenal rains, a serious malarial epidemic, the plague in India, and lastly the strike in the engineering trades in England—make up a series of delays which need hardly be calculated upon in any single year in the future.' To him, these were 'unforeseen difficulties' that were so abnormal or extreme, they were unlikely to occur again.[452]

While engineers and the Railway Committee lamented the impact of the strike on their project's 'progress', the strikers themselves seemed unaware of this specific impact of their action. Although the membership of the union reflected the spread of the British Empire and there was interest in the international movement of capital, the monthly, quarterly and annual reports for 1897 and 1898 didn't engage in much discussion of the international disruption caused by their labour resistance—attentions were generally focused close to home, or on expressions of solidarity from various different locations. Nevertheless, when

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449   See report in *The Amalgamated Engineers' Journal and Monthly Record*, April 1898, 7-13. Modern Records Centre, Warwick, MSS.259/ASE/4/1/30.
450   'Report of the Progress of the Mombasa-Victoria (Uganda) Railway, 1897-98' (London: Her Majesty's Stationery Office, 1898), 3-4.
451   Ibid., 14.
452   Mr Whitehouse to Mr O'Callaghan, 12 August 1897. In *Further Correspondence, Part II*, 136.

Gomes had died from COVID-19 as a result of the actions of the Ministry of Justice and outsourcing agency OCS, who refused to offer sick pay and required cleaners to continue to come into work to clean an empty building.[4] The Transport Salaried Staffs' Association, a trade union for the transport and travel trade, is fighting for justice for Belly Mujinga, a railway worker who also died from COVID-19 after a man claiming to be ill spat at her while she was on duty at Victoria Station.[5]

What these similarities showed me was some of the consistencies in how capitalism eats away at workers: how we are constantly being scammed by our employers, who chip away at our holiday entitlements, deny us our incremental increases, and always encroach on our time, demanding more hours for no more pay; and how systems of racial capitalism mean that the lives of black, brown and poor people are rendered the most disposable.

But reading about these strikes also showed the power of withdrawing labour, on a more formalised and planned basis and as an immediate response to unsafe working conditions. Building on and amplifying these histories helps us to understand how capitalism works, but also helps us to understand and to feel that resistance is possible and has always been present. As Lola Olufemi writes in her book Feminism, Interrupted, stories of past resistance 'give us the

4 'Justice for Emanuel – End Statutory Sick Pay at the Ministry of Justice'. https://www.uvwunion.org.uk/justice-for-emanuel (accessed 7 September 2020).
5 'Belly Mujinga, two months on', 5 June 2020. https://www.tssa.org.uk/en/whats-new/news/index.cfm/belly-mujinga-two-months-on (accessed 8 September 2020).

the impact of the strike was raised, it was formulated in terms of disruption to the flow of capital: an editorial quoted the *Shipping World*'s account of the dispute, which reported that: "During the seven months the flow of capital has been checked to the tune of £12,000,000. It would be a low estimate to put the amount locked up on account of locomotives, cranes, implements, tools, guns, firearms, the machinery of electrical engineering, etc. at £12,000,000, making a total present loss of over £25,000,000. We say locked up, because it will now flow again in a large stream."[453]

While the impact of the strike on the construction of the Uganda Railway was presented as immediate and significant, it was also framed as 'unforeseen', abnormal, almost too ridiculous to engage with in detail. But at the same time as dismissing the strike as a 'misfortune', the engineers and the Railway Committee allowed it to take the blame for revisions to the costs of the railway and its timetable for 'completion'. In the final report, the strike is mentioned as the first of 'a series of unexpected and disheartening impediments'; the plague in India, malaria, jiggers and the tsetse fly are cited as other causes of disruption.[454]

Three years later, however, collective resistance occurred in a more immediate location, on the site of construction itself. In 1900, 'subordinate' staff along the line went out on strike over working conditions. As summarised by the Uganda Railway Committee, the strike began over a telegram issued by Whitehouse on 8 March, removing the privilege of free carriage of provisions (i.e., the right to transport provisions from Mombasa to their workplaces for free) for 'members of the inferior staff', which Kapila links to criticisms by the British government of the 'escalating cost of the railway'.[455] A strike was threatened if no concessions were made; Whitehouse replied that he would not move, and the response was a 'general strike … amongst the subordinates.'[456] Unlike the informal resistance of Indian indentured labourers, the labour resistance of the 'subordinate staff' was acknowledged as a strike, and the grievances of the strikers were

453   'Editorial', *Monthly Record of the Amalgamated Society of Engineers*, February 1898, Modern Records Centre, Warwick, MSS.259/ASE/4/1/30.
454   Final Report of the Uganda Railway Committee, 28.
455   Kapila, *Race, Rail and Society*, 158.
456   Précis of Telegrams on Strike of Members of the Inferior Staff. In *Further Correspondence Respecting the Construction of the Uganda Railway, Part V*, 1900, 125. TNA CO614/7.

courage to act' and provide an antidote to the narratives that 'at all times tell us that revolution is impossible.'[6]

documented and addressed—in fact, the strike takes up a considerable amount of correspondence in 1900, despite the fact that the strikers were off work for a few days only, in mid-March. Beyond the initial issue of free carriage of provisions, grievances were raised about 'harsh and unjust' treatment, the failure to pay incremental increases, unfair fines, and 'overbearing and insulting' behaviour, and demands included an eight-hour day, overtime pay, better medical assistance, an institute for all staff, sick pay, an improvement in living conditions, particularly for Indian subordinates, and no punishment for any of the strikers.[457]

While the main strike started in Nairobi, it soon spread to different locations along the line. The fragmentation of workers at different sites and the difficulties of communication meant that the strike was episodic, and while the workers in Nairobi agreed to go back to work on 19 March, others along the line in Kilindini did not return until their grievances had been aired directly to officials in Nairobi, and on their journey persuaded workers at Voi and Makindu to resume their strike.[458] Nevertheless, the entire staff had returned to work by the end of March, with the guarantee that their grievances would be heard by the Railway Committee in London. In June, the Committee considered a compiled list of demands; concessions were granted on carriage, for which a monthly allowance was granted, leave—three or four months' leave on full pay after 33 months' service was offered, depending on whether the employee was returning to continue service—and the right for employees to give three months' notice of termination, provided that they refund the cost of 'the passage and expenses from the place of enlistment.' A scheme was also worked out for a provident fund, which O'Callaghan thought would have prevented many from joining the strike, had it been in force earlier.[459] The Committee didn't move on the eight-

6 Lola Olumfemi, Feminism, Interrupted (London: Pluto Press, 2020): 10-11.

457   Grievances and demands were articulated across a number of different telegrams/statements. See The Makindu Strike Committee to Mr Whitehouse, 25 March 1900. In *Further Correspondence, Part V*, 176; Mr W Billings and others to Mr Whitehouse, 24 March 1900. In *Further Correspondence, Part V*, 179. Minutes of the 127th Meeting of the Uganda Railway Committee, 28 June 1900, Annex A. *In Further Correspondence, Part V*, 244-246.

458   Sir A Hardinge to the Marquess of Salisbury, 28 March 1900. In *Further Correspondence, Part V*, 176.

459   F.L. O'Callaghan, Appendix of Annex (A): Strike Demands. In *Further Correspondence, Part V*, 246; F. L. O'Callaghan, Introduction of a Provident Fund. *In In Further Correspondence, Part V*, 266.

hour day, declaring that they were 'not prepared to interfere with the hours of labour.'[460]

Although this conclusion left many demands and grievances unanswered, the strikers hadn't simply been dismissed: their grievances were considered in a meeting on 3 July, and again on 9 July—Whitehouse feared the concessions initially granted were insufficient and risked igniting another strike.[461] There are a number of reasons we might suggest as to why some of the demands at least were considered and later conceded. First, the action occurred across racial lines, including white and Indian workers, with the result that it was comprehensive: it involved the 'entire subordinate staff'—clerks, station-masters, guards, and engine drivers—and this meant that 'all the offices were closed and traffic suspended along the whole line from the coast to the railhead.'[462] While this made the strike stronger, at the same time the railway found this aspect seemingly difficult to understand or believe: in a report to Lord Salisbury, one official wrote that 'consisting as they do of men of various races and classes, some of them divided by conflicting interests and caste jealousies, I feel little doubt that their present cooperation and united action has only been brought about with a good deal of difficulty, and give and take.'[463] Similarly, the demand for there to be 'no distinction in quarters' between European and Indian staff was met with incredulity: 'the European employés can hardly realize the effect of this demand—the habits of the two classes of employés are essentially different.'[464] Part of the reason for this incredulity, in addition to the officials' own deeply violent racism, was the fact that attempts to generate a racially segregated system for the Uganda Railway staff had thus far been successful: as Kapila notes, in May 1898, Indians and Africans were excluded from the Railway Institute on the request of the white officers, and in September, two separate institutes for white and Indian subordinates were constructed.[465]

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460   Annex (A), Minutes of the 128th Meeting of the Uganda Railway Committee, 3 July 1900. In *Further Correspondence, Part V*, 263.
461   Minutes of the 129th Meeting of the Uganda Railway Committee, 9 July 1900. In *Further Correspondence, Part V*, 272.
462   Sir A. Hardinge to the Marquess of Salisbury, 18 March 1900. In *Further Correspondence, Part V*, 148.
463   Ibid, 149.
464   'Grievances put forward during interview with Mr Ainsworth, representing Sir A Hardinge, on the 15th March.' In *Further Correspondence, Part V*, 245.
465   Kapila, *Race, Rail and Society*, 11.

In addition to the strike's comprehensiveness, it was seemingly well-organised and had wide-reaching aims: the strikers formed a committee and elected representatives to stand 'to represent the men in a Society or Union for railway servants.'[466] In fact, it's possible that the lack of organised labour prior to the strike is what allowed it to coalesce in the way it did: while unions like the ASE gestured at a politics of internationalism, in South Africa at least they organised for an eight-hour day for whites only—if the white subordinates on the Uganda Railway had already been unionised, it is difficult to believe that they would have worked outside of this model.[467] Third, the railway administration feared disorder, the spread of the strike, and potentially violence: men in Kilindini had blocked a train carrying the mail by 'placing sleepers and other obstructions on the line' and the police had responded with bayonets,[468] while demands were drafted with the aim of drawing other colonial staff into the strike.

Ultimately, as I've said, the Railway Committee conceded ground on four of the strikers' demands and left many unanswered. But this final result wasn't the only way in which the railway managed the disruption. On the whole, unlike in cases of informal resistance, and save the incident with the police at Kilindini, Whitehouse and his colleagues did not pursue the harsh repression of the strike, a decision made because it was calculated to be the most likely way to induce the men back to work.[469] Agreeing to put the grievances before the Railway Committee was a successful way of dissipating the energy of the strike while granting only moderate concessions—although many of their demands were ignored, the subordinate staff did not go back out on strike, despite Whitehouse's fears. And while there were no severe punishments for the strike, this did not mean they had not been threatened: Rawson, who was the acting Chief Engineer while Whitehouse was away on a survey, warned strikers that 'they were all liable to prosecution for breach of agreement; they would not be allowed to leave Africa till they had completed their agreements, and they might be turned out

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466   Strike Committee to Mr Whitehouse, Nairobi, 31 March 1900. In *Further Correspondence, Part V*, 125.

467   Correspondence, *The Amalgamated Engineers' Journal and Monthly Record*, April 1900, 30. Modern Records Centre, Warwick, MSS.259/ASE/4/1/32.

468   Sir A. Hardinge to the Marquess of Salisbury, 18 March 1900. In *Further Correspondence, Part V*, 149.

469   Precis of Telegrams on the Strike of the Inferior Staff. In *Further Correspondence, Part V*, 125.

of their houses.' This, he claimed, was not a threat, though the workers rejected this idea—they understood clearly that it was intended to intimidate.[470] Once concessions had been granted, the Railway Committee made it clear than any further disruption would be treated differently: their letter claimed that their concessions removed 'all grounds for legitimate grievance', and Whitehouse requested from the Railway Committee a 'free-hand' to deal with the leaders of any further strike action.[471]

In addition to hinting at the possibility of further repression and punishment, the railway administration gave justifications for their actions and the prevailing conditions of work. In an address to the strikers on 17 March, Whitehouse claimed that contrary to perception that he was 'simply … a hard master' who wanted to 'grind them into the dust', he was interested in the welfare of his staff and had put proposals to the Railway Committee for their 'benefit', but these were 'vetoed by the Committee, as they do not propose to consider any such schemes until the completion of the railway. At present,' he continued, 'they look upon the whole staff as temporary.'[472] A similar justification was given by Mr Sandiford in reply to the demand for a reduction in long hours on duty or compensation for locomotive staff: 'the conditions of this line,' he claimed, 'rendered certain hardships unavoidable.'[473] In this context, construction was seen as a particular condition or zone of exception,[474] one that allowed for the exploitation of labour and imposition of hardship on the grounds that it was a temporary arrangement in difficult circumstances. To the administration, a change in conditions seemed literally 'impossible'—an eight-hour day for staff in the locomotive and traffic departments was rejected on the grounds that 'a driver had to get to his journey's end, and in any case nine hours was the standard on this railway.'[475] Here we see an appeal to an arbitrary number of hours in a working day as though it were natural: the 'standard' was unquestionable and, of course, a minimum: there was no issue in exceeding it.

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470   Memorandum by Mr Rawson. In *Further Correspondence, Part V*, 166; Mr W Billings and others to Mr Whitehouse, 24 March 1900. In *Further Correspondence, Part V*, 179.
471   Draft of Letter to the Acting Chief Engineer. In *Further Correspondence, Part V*, 277; Minutes of the 129th Meeting of the Uganda Railway Committee. In *Further Correspondence, Part V*, 273.
472   Memorandum by Mr Whitehouse. In *Further Correspondence, Part V*, 167.
473   Memorandum by Mr Rawson. *In Further Correspondence, Part V*, 165.
474   Thank you to my supervisor Professor Barbara Penner for suggesting this phrase.
475   Memorandum by Mr Rawson. In *Further Correspondence, Part V*, 165.

Although a number of the strikers' demands concerned racial inequality and the poorer conditions that prevailed for Indian members of the subordinate staff, the Railway Committee failed to mention any of these demands in their formal response to the strikers, and informal responses, as I've said, simply articulated incredulity that European subordinates could support such claims. Of course, it is not surprising that the Committee failed to respond to these issues: as Kapila argues, there was a 'strong administrative underlying policy to create a gap between whites and others,' and the Committee obviously had no interest in addressing these issues of inequality—the creation of racial hierarchies was part of their managing strategy.[476] But it is interesting to note that they do not attempt to defend this position: instead, they simply ignore the relevant grievances and demands. This process of denial—the refusal to engage in discussion or consideration of an issue—seems to have been a technique of management: Kapila argues that it was common for the complaints of Indian labourers and subordinates to be ignored.[477]

The strike took up a good deal of correspondence in the spring and summer of 1900, and Whitehouse was called back to London to present his account to the Railway Committee in person. But outside of correspondence with the Committee, this incident of labour resistance was rarely mentioned or discussed. When the issue was raised in Parliament, the reply was simply that 'the question is being dealt with,'[478] and no reference was made of the strike in the annual report for 1900 or the Committee's final report, which mentioned the strike in the UK three times. The disruption was reported in *The Morning Post*, but the report claimed that 'the dispute was not of large proportions, and has not affected the progress of the railway'—a contradictory account from the internal correspondence, which clearly indicated that the entire subordinate staff were on strike. The report also reproduced the employers' argument—that the privilege of free carriage had been subject to considerable abuse—and claimed that an 'amicable settlement' was expected imminently, although events turned out to be more complicated. To finish, the Reuters reporter quoted the latest information on construction: 'the railway had been carried past the three hundred and

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476   Kapila, *Race, Rail and Society*, 157.
477   Ibid.
478   Mr Brodrick, 'Uganda Railway Consolidated Fund', *Hansard*, 30 April 1900, vol. 82, col. 304.

sixtieth mile, while the telegraph had been completed right through to Kampala in Uganda.'[479] A further report ten days later confirmed that the strike had ended, and the men employed in all departments had resumed work.[480]

From a discussion of the different forms of labour resistance that occurred during construction, we can see that they were managed, handled and reported in different ways. While the engineers and the Railway Committee saw the strike in the engineering trades in the UK as a legitimate reason for delays to construction, they were more unwilling to report labour resistance among their own staff, whether collective or informal, and did not discuss the harsh and coercive ways in which they managed labour in response. While labour was acknowledged as a key factor in the 'progress' of the project, its disciplining was not seen, on the whole, as a matter for engineering reports presented before Parliament.

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In examining the construction of the Uganda Railway and the ways in which delays and disruption were managed and reported, we can see that different delays were figured in different ways. Timing was key in this process of representation: in the initial planning stages, while the railway was being 'sold', its prospects were presented in 'rosy colours'[481]—the likelihood of delays was minimised and the gaps in estimates and projections were glossed over with confident statements and wild rejections of what would turn out to be legitimate concerns. But this narrative of ease evaporated almost as soon as construction began, when the project was beset by issues of sickness, troublesome weather and disorderly nature, and forms of both anti-colonial and labour resistance. The flimsy basis of the original projections was exposed, and the narrative switched from confidence to delay: instead of being an easy project, this was one with considerable challenges, extraneous difficulties, harsh conditions. When the time came to vote more money for the railway, it was clear that there was no option but to invest more: with £3 million and four years already spent on the project, it could not be abandoned.

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479   'Uganda Railway Strike', *The Morning Post*, Saturday 17 March 1900, 3.
480   *Edinburgh Evening News*, Tuesday 27 March 1900, 3.
481   Sir Edward Grey, 'Uganda Railway Bill', *Hansard*, 7 May 1900, vol.82, col. 917.

As delay and disruption became an accepted means of representing railway construction, it was also true that all delays were not treated in the same way and did not elicit the same type of response. The railway administration was happy to report on delays that seemed fantastical or distant—the 'phenomenal rains', man-eating lions, and 'insane' labour disputes that took place back in the UK, at a remove from the site of construction. But disruption and resistance closer to construction—anti-colonial action by Nandi and Maasai raiders, who took material from the railway and killed labourers, or resistance by railway workers—was less reported and often harshly repressed. Often, the idea that the railway was delayed facilitated this repression, along with the exploitation and coercion of labour.

So, what does the example of the construction of the Uganda Railway tell us about the normal operation of infrastructures? Following Stephen Graham, what does this instance of infrastructural delay and disruption show about the 'hidden politics of flow and connection'? Unlike many of the examples in Graham's Disrupted Cities, where disruption marks a point of difference in the functioning of a network, once construction had started on the Uganda Railway, delay and crisis were normal modes of operation, modes that facilitated some developments but not others—the input of greater amounts of money and labour, for example, but not the development of adequate medical facilities or sufficient investment in labourers' housing. Delays indicate what was valued—when they were figured in terms of increased estimates, we see how the lives of labourers and subordinates were viewed only in terms of the monetary cost of their labour—but they also show the extent to which colonial officers and engineers relied on and framed the period of construction as a time apart, a diversion from the 'normal', where the supposedly temporary nature of arrangements allowed for exploitative practices that nevertheless stretched beyond the years of construction. Expediency became normalised, and agencies continued to import indentured Indians to Mombasa until 1922, when a new Indian emigration bill was enacted. These labourers worked on the construction of new branches, on maintaining the old line, and in the Public Works Department.[482]

From a focus on delays, we also learn more about the ways in which infrastructure projects managed information: we see that the construction of

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482   Gregory, *India and East Africa*, 52-53.

the railway involved a dual process of rendering lives and labour as calculations on the one hand, as Ruchman argues, and the construction of a narrative on the other: in the Railway Committee's final report, they present what they call a 'narrative of the advance of the rails'.[483] Calculations are reformed from tables of numbers into a story of 'progress' and 'advancement'.

Dwelling on labour resistance in the context of construction reemphasises the centrality of labourers and labour politics to infrastructure, but also helps draw attention to the small and larger ways in which empire and its infrastructural projects were subverted, sabotaged and impeded. Introducing infrastructural temporality as a frame to this resistance allows us to see that engineers' projections of the future didn't allow for unruliness of labour or for the existence of non-capitalist structures—a nineteenth-century version of Mark Fisher's capitalist realism, where alternatives to neoliberalism are impossible to imagine.[484] In fact, we might suggest that delays and disruption were manufactured by limitations to white colonial ideas of the future: anything outside of their narrow vision of the possible was framed as a surprise, an unforeseeable event, separate from the narrative as they saw it unfolding.

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483   Ruchman, 'Colonial Construction', 267.
484   Fisher, *Capitalist Realism*.

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PHOTOGRAPHY

APPROACHES

As the previous chapters have argued, infrastructure projects have a particular temporality, imbued as they are with a promise of change and modernity.[485] Historian of technology Eike-Christian Heine has argued that construction always involves 'assumptions about the past, the present or the future.'[486] This is particularly apparent in photographs of infrastructure building, which suggest a past and present beyond the moment of the image but also a wider narrative of progress and change in their subject and their medium: as Joel Synder argues in the context of Carleton Watkins' photographs for the Pacific railroads, both railways and photography were 'insignia of industrial and technological progress.'[487] Heine invokes the work of Reinhart Kosselleck to begin to unpick these relationships between change and its representation: progress becomes 'a narrative to rationalise and deal with … continuous and enormous transformation.'[488]

In the chapter that follows, I analyse photographs of railway construction in London in the 1860s and of the construction of the Uganda Railway in the 1890s. These two sets of photographs do not provide a direct comparison: while the London images mainly depict the construction of underground metropolitan railways, the Uganda railway spanned over 560 miles from Mombasa to Kisumu—the city was only a point of departure.[489] Nevertheless, I am interested in what both sets of photographs suggest about the visual narratives and temporalities of construction and the forms of modernity, 'progress' or 'improvement' they were meant to imply. Thinking about the visual narratives that these images were supposed to perform also necessitates the

485   Akhil Gupta, 'The Future in Ruins: Thoughts on the Temporality of Infrastructure', in Nikhil Anand, Akhil Gupta and Hannah Appel, eds., *The Promise of Infrastructure* (Durham and London: Duke University Press, 2018): 62-79.

486   Eike-Christian Heine, 'The Cranes Were Everywhere: Building the Material and the Imagined World', in Eike-Christian Heine, ed., *Under Construction. Building the Material and the Imagined World* (Berlin: Lit Verlag, 2015), 12.

487   Joel Snyder, 'Territorial Photography', in W. T. J. Mitchell, ed., *Landscape and Power* (Chicago and London: The University of Chicago Press, 1994), 187.

488   Heine, 'The Cranes Were Everywhere', 13.

489   Samuel G. Ruchman, 'Colonial Construction: Labour Practices and Precedents along the Uganda Railway, 1893-1903', *International Journal of African Historical Studies* 50:2 (2017): 256.

William D Young, 'Uganda Railway Construction I.' c.1899-1901. Rogers Zanzibar and E Africa Collection, Y30468H. Cambridge University Library.

consideration of audience and meaning, and how the meaning of a photograph might change depending on its context. Can these images be dislocated from the narratives of 'progress' and 'completion' they were supposed to support, and be made to tell different stories?

These photographs of railway construction have long lives: they have resurfaced at different points since their creation in the nineteenth century. As the anthropologist Richard Vokes has argued in his work on postcards in early colonial Uganda, approaches to photography increasingly consider the 'social biography' of images and the way in which meanings 'alter as the social relations and the processes within which they are located similarly change.'[490] This is particularly important in the study of infrastructure where past, present and future are often intertwined and cross-referenced: photographs from the nineteenth-century may have different meanings in the present, when infrastructure evokes imperial nostalgia and is bound up in processes of neo-colonialism. Rather than signalling modernity, these images may shift and become embroiled in longings for the past on the part of white settlers and whites in the metropole. All this is to say that the implications or meanings of these photographs are 'not yet past'[491] or quiet: they are still active in regimes of visuality with colonial dynamics of power.

Presence and absence are other important themes in this chapter: I try to get to what the photographs show and what they occlude and how the dynamics of showing and concealing in function in each context. As Sharpe writes, 'so much of Black intramural life and social and political work is redacted, made invisible to the present and the future, subtended by plantation logics, detached optics, and brutal architectures.'[492] This focus on what is made visible and what is hidden also refers back to discussions of visibility and invisibility in chapter two, where I considered the ways in which processes of land acquisition made some people visible to the state in order to dispossess them, and made others invisible as a means of dispossession. Ideas of visibility were linked to the construction of 'modernity': 'The pedagogical goal served by the "visibility" of infrastructure

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490   Richard Vokes, 'Reflections on a Complex (and Cosmopolitan) Archive: Postcards and Photography in Early Colonial Uganda, c.1904-1928', *History and Anthropology* 21:4 (2010): 377.

491   Christina Sharpe, *In the Wake*, 13.

492   Ibid, 114.

… is … about the biopolitical project of creating citizens who share the goal of inhabiting a modern future.'[493] Finally, I consider what comes from placing images of railway construction in London and Kenya in conversation with each other and the ethics of thinking and working with these images, especially those that come from the colonial archive and speak implicitly to the violence of colonisation.[494]

As I attempt to read these images as highly edited narratives with a role in ordering the disruptive power of construction and promoting violent extraction and theft (colonialism) as a 'civilizing mission', I don't want to foreclose their possibilities or prevent readings of the images as evidence of resistance. In her analysis of colonial photographs of black women in South Africa, the historian Tina M. Campt draws on Darieck Scott's theorization of 'muscular tension', which comes to represent 'the paradoxical power of the black body in subjection … "even within the lived experience of subjugation perceived to be at its worst, there are potential powers in blackness, uses that undermine or act against racist domination."'[495] While I can draw attention to the violent histories of which these photographs were a part, I don't seek to fix their meaning: instead, I consider the methodologies that might facilitate the different readings of the images and their incorporation into histories of resistance.

The images that I study in this chapter don't come from one location—they are from museums, institutions and archives across London (and Cambridge)—but they are all images of railway construction, or at least are described as such. Some of the London photographs are bound in albums, with photographs of construction sites opposite photographs of architectural drawings; others are unbound sets of images; all were taken by photographers commissioned to record the progress of works. The photographs of the Uganda railway have a similar genesis: many were taken as part of a survey of the area and to record the construction of the railway, and these are also bound in seven volumes with fold out panoramas and occasional captions. In addition, there are three 'professional albums' of views of Mombasa and railway construction. Other photographs

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493   Gupta, 'The Future in Ruins', 69.

494   I define colonial archives as the records of colonial governments, but also any other archival material produced through colonialism, for example the records of colonial officials or companies involved in or benefitting from colonialism.

495   Tina M. Campt, *Listening to Images: An Exercise in Counterintuition* (Duke University Press, 2018), 50.

9. The Rogers Collection

This panorama of the Kedong Valley is from an album owned by Alexander Stuart Rogers. The album is part of the wider 'Rogers Collection on East Africa', which is currently held at Cambridge University Library and consists of 592 images in 8 albums and 1 file; apparently, some of the images might have been taken by Rogers himself. In the collection catalogue, Rogers is described as 'an autocratic but able administrator.'[1] There is a brief biography: initially he served with the Punjab Police and arrived in Mombasa in July 1890 to work for the Imperial British East Africa Company. The next year, he became administrator of the Protectorate of Witu, and later became a sub-Commissioner when the British Government took over the East Africa Protectorate in 1895. There are a few more details about his life and career, but there's no mention in the catalogue of what I find from googling his name: he was 'harsh, not to say brutal', so harsh that his conduct was investigated by the colonial government—a murderer, maybe, but still in office for fifteen years until his 'personal habits' got too much for his colleagues and he was sent back to England.[2]

In his speech in front of Oriel College, Oxford, during the Rhodes Must Fall protests in November 2015, Ntokozo Qwabe spoke of the ways in which descriptions of colonisers are often sanitised. Oriel College, for example, continued to refer to Cecil Rhodes as 'a diplomat, as a businessman, as a

made their way into printed publications—a different context and audience.

In one sense, these photographs can be understood alongside other images that documented engineering and construction projects in the nineteenth century.[496] As Mark Chrimes explains in his photographic history of civil engineering, the profession had close ties to photography: early on, engineers realised the potential of photography for recording work accurately, and by the mid 1850s, this was accepted practice.[497] Consequently we see, for example, the work of Evelyn John Carey as the official photographer of the construction of the Forth Bridge, a project he worked on for a period of eight years;[498] or in the context of construction more generally, the photographic record of the building of the Victoria and Albert Museum.[499] These images were records of structures and their parts and materials, but the physical labour of construction was only intermittently depicted: the appearance of labourers is something I will come back to.

In Paris, the photography of engineering projects and urban 'improvement' projects was often more systematic—students at the École des Ponts et Chaussées were trained in photography and photographers such as Charles Marville were commissioned to document elements of the urban fabric identified for demolition.[500] These photographic projects have been studied: Sarah Kennel's book on Marville reproduces many of his photographs alongside essays on his work and Sean R. Weiss's PhD thesis at the City University of New York gives an analysis of August-Hippolyte Collard's photographs of bridges in

1 'Rogers Collection on East Africa'. https://janus.lib.cam.ac.uk/db/node.xsp?id=EAD%2FGBR%2F0115%2FY30468A-I (accessed 9 September 2019).
2 The first result I came across was a blog post on a website called 'Old Africa'. Christine Nicholls, 'A. S. Rogers, Controversial British Official, 22 June 2014. http://oldafricamagazine.com/a-s-rogers-controversial-british-official/ (accessed 14 September 2020).

496   For a brief summary of photography of railway construction in Britain, see 'Railways' in Robin Lenman, ed., *The Oxford Companion to the Photograph* (Oxford: Oxford University Press, 2005), 532.

497   Mark Chrimes, *Civil Engineering, 1839-1889: A Photographic History* (Stroud: Alan Sutton, 1991), 1-5.

498   See Michael Gray and Angelo Maggi, *Evelyn George Carey: Forth Bridge* (Milan: Federico Motta Editore, 2009).

499   Michael Collins, *Record Pictures: Photographs from the archives of the Institution of Civil Engineers* (Göttingen: Steidlmack, 2004).

500   Sean R. Weiss, Engineering, Photography and the Construction of Modern Paris, 1857-1911, PhD Thesis, The City University of New York, 2013, 4; Sarah Kennel, *Charles Marville: Photographer of Paris* (Chicago and London: The Univeristy of Chicago Press, 2013).

benefactor', even after it claimed that it was acting to deal with the 'question of Rhodes'. For Qwabe, this language is 'deeply offensive': it says 'that diplomacy entails the raiding of an entire people's land, that diplomacy is holding guns to people's heads … [that] benefactors are people that go dispossessing and stealing from others to benefit other people unjustly'. Using these terms mean the college's disavowals of Rhodes's 'values' don't make sense, he argues, because 'we see the remnants of Rhodes in the language that Oriel uses': Rhodes is described as he would wish to be described.[3] In his speech, Qwabe simply calls Rhodes a racist colonialist.

There are definitely remnants of Rogers in his biography in the Cambridge Library catalogue. There is the omission and misrepresentation of key details: the investigations and complaints against him aren't included; he 'returns' to England in 1905 and retires on a pension, whereas the blog post I find says that he was sent back because of his corrupt and negligent actions. But there is also the reference to his supposed reputation as 'an autocratic but able administrator', and you wonder who wrote this description. What does 'able' mean in this context? What's the source for the claim that this was his reputation? The catalogue also notes that the collection was 'presented by Gordon A. H. Rogers in June 1971': we only have access to the images because the Rogers family allowed it.

These remnants of colonialists in the language institutions still use to describe them is another example of the ways in which archives, universities and academic disciplines have failed to

Paris.[501] Shao-Chien Tseng has also written about Félix Nadar's photography of underground Paris and its importance both in terms of photography as a medium and the exploration of the 'cityscape from below'; Marie Collier has written on photographs of construction in two Soviet periodicals from the 1930s.[502] Similarly, 'territorial photography' in the US context has been addressed in studies that consider both its aesthetic conventions and its relation to ideas of technological progress.[503] But there has been less exploration of this type of photography in the British context, perhaps because photographic recording of engineering projects was less systematic. Photography of large engineering projects is often mentioned in accounts of London photography, but there is little exploration of the genre in its own right.[504]

One of the only studies of engineering photography, Michael Collins' Record Pictures, provides important background to and examples of the genre, but interprets the images as presenting 'no hidden meaning, no direction to follow'.[505] Collins distinguishes between promotional photographs intended to advertise a project or an engineer and record photographs, 'whose fundamental purpose was to provide an accurate, unbiased and unequivocal description.'[506] Rather than focusing on ideas of realism or philosophies of objectivity, I take the opposite approach: I follow the biases, inaccuracies and ambiguities in

3 Ntokozo Qwabe, 'Protesting the Rhodes Statue at Oriel College', in Roseanne Chantiluke, Brian Kwoba and Athinangamso Nkopo, eds., *Rhodes Must Fall: The Struggle to Decolonise the Racist Heart of Empire* (London: Zed Books, 2018).

501   Sarah Kennel, *Charles Marville: Photographer of Paris* (National Gallery of Art, Washington, and Chicago and London: University of Chicago Press, 2013); Weiss, Engineering, Photography, and the Construction of Modern Paris.

502   Shao-Chien Tseng, 'Nadar's Photography of Subterranean Paris: Mapping the Urban Body', *History of Photography* 38:3: 233; Marie Collier, 'Socialist Construction and the Soviet Periodical Press During the First Five Year Pan (1928-1932), in Eike-Christian Heine, ed., *Under Construction. Building the Material and the Imagined World* (Berlin: Lit Verlag, 2015). See also Sam Grinsell, 'Mastering the Nile? Confidence and Anxiety in D. S. George's photographs of the first Aswan Dam, 1899-1912', forthcoming; and Matthew Gandy, 'The Paris Sewers and the Rationalisation of Urban Space', *Transactions of the Institute of British Geographers* 24:1 (1999): 23-44.

503   See Synder, 'Territorial Photography' and Robin E. Kelsey, 'Viewing the Archive: Timothy O'Sullivan's Photographs for the Wheeler Survey, 1871-74', *The Art Bulletin* 85:4 (2003): 702-723.

504   See, for example, Mike Seaborne, *Photographers' London 1839-1994* (London: Museum of London, 1995), 17, which mentions that Henry Flather and Henry Dixon were commissioned to 'record the progress of large engineering works.'

505   Collins, *Record Pictures*. [No page numbers].

506   Ibid.

create distance from or address their colonial underpinnings, and also an indication of what it would take for universities to decolonise: alongside big, structural changes, there would have to be a rewriting of their everyday language that still repeatedly sides with the coloniser. A new biographical catalogue entry for Rogers would include the complaints and investigations and the reason that brought him to Mombasa, which was that the IBEAC required more police to deal with resistance. It would not call him an able administrator.

In the archives in Nairobi, by chance, I come across two complaints about Rogers' conduct. One man who gave evidence against him to the official investigation complained that Rogers retaliated in a number of unpleasant ways, threatening to make his debts public and encouraging his creditors to bring law suits against him.[4] Another said he was fined and threatened with imprisonment for lodging a complaint against Rogers.[5] At the National Archives in Kew, you can find the report into his administration, which investigated many more complaints.[6] But this is all outside the frame of the photographs and it isn't noted in the catalogue: we can see how sanitised narratives and descriptions are perpetuated by those institutions charged with 'preserving'

these images, and blur the distinction between promotion and record. Collins calls these 'faithful images'—but faithful to what? To see them as 'faithful' calls to mind Adrienne Rich's description of white solipsism: 'to speak, imagine and think as if whiteness described the world'.[507] Instead, productive questions to ask of this genre of photographs can be found in Allan Sekula's writing on photography between labour and capital: 'How does photography serve to legitimate and normalise existing power relationships? How does it serve as the voice of authority, while simultaneously claiming to constitute a token of exchange between equal partners?'[508]

While we can start to think of the photographs of both London railways and the Uganda Railway as part of a history of engineering, construction and labour, the history of colonial photography is just as important. As many historians have noted, photography was an important tool of colonialism: it was key to colonial processes of recording, surveillance, and knowledge production.[509] The development of engineering photography was connected to the development of imperial 'knowledge' from its outset: Chrimes notes that the earliest photographs received by the Institution of Civil Engineers depicted the construction of the Thul Ghat incline on the Great Indian Peninsula Railway.[510]

Unlike engineering photography, colonial photography has generated a wealth of literature. James R. Ryan's Picturing Empire considers the influence of imperialism on photographic practices in the context of landscape photography, military expeditions and hunting, and ethnography. Nicholas Mirzoeff similarly sees imperial visuality as a means of ordering biopower and legitimising authority, and Anna Arabindan-Kesson, in her article on South Asians in Victorian Jamaica, summaries photography's 'systematic way of constructing images that could naturalise and transform observable reality into a readily

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4 To Arthur H. Hardinge, 17 March 1899. PC/Coast/1/1/54. National Archives, Nairobi.

5 To C. H. Crauford. PC/Coast/1/1/54. National Archives, Nairobi.

6 I had intended to read the inquiry into Rogers' actions, but I wasn't able to due to the COIVD-19 pandemic. It's at the National Archives: 'Mr A. S. Roger's Administration of Lamu', TNA Kew, FO 2/427.

507   Adrienne Rich quoted in Sara Ahmed, 'A Phenomenology of Whiteness', *Feminist Theory* 8:2 (2007): 164.

508   Allan Sekula, 'Photography between Labour and Capital,' in *Mining Photographs and Other Pictures 1948-1968* (Halifax: The Press of the Nova Scotia College of Art and Design, 1983): 193.

509   See Nicholas Mirzoeff, *The Right to Look: A Counterhistory of Visuality* (Durham and London: Duke University Press, 2011).

510   Chrimes, *Civil Engineering*, 9.

history.[7]

Inside Rogers' album, we see the colonialist's favourite landscape shot, the panorama: everything is laid out before you; nothing is close enough for scrutiny. The photographer looks down on the railway, distanced from construction by the view from above.

7 This also raises the important issue of the repatriation of archives. For discussions of this topic, see M Banton, 'Displaced Archives in the National Archives of the United Kingdom' in J. Lowry, ed., *Displaced Archives* (Routledge, 2017); Forget Chaterera-Zambuko and James Lowry, 'Lost Unities: An Exhibition for Archival Repatriation,' *Museum of British Colonialism*. https://www.museumofbritishcolonialism.org/lost-unities (accessed 13 September 2021).

understood narrative.'[511] This work is all useful in considering photography's role in the legitimation of colonial authority, racial hierarchy, surveillance, and its celebration of colonial 'achievement'. But when it comes to the ethics of working with colonial photography, these studies are often silent—they reproduce colonial images, even those of explicit violence, with no apparent consideration of whether this is appropriate, or whether it has the effect they desire. As Sharpe writes:

> we know that, as far as images of Black people are concerned, in their circulation they often don't, in fact, do the imaging work that we expect of them … the repetition of the visual, discursive, state and other quotidian and extraordinary cruel and unusual violences enacted on Black people does not lead to a cessation of violence, nor does it, across or within communities, lead primarily to sympathy or something like empathy. Such repetitions often work to solidify and make continuous the colonial project of violence.[512]

Instead, it's often only works of black feminism that confront these issues head on. In Listening to Images, for example, Campt asks how we consider 'images assumed only to register forms of institutional accounting or state management.'[513] Amongst a number of examples, Campt analyses photographs of black women taken by Trappist missionaries in South Africa, drawing out the violent implications of 'the photographic aestheticization of black South Africans into a temporal elsewhere outside of history': this, she concludes, was 'neither a benign nor romantic act', but created an image that was 'deployed to invoke an idyllic image of authentic native culture that required separation and protection.'[514] Her investigations into different forms of photography produced for 'the regulatory needs of the state or the classificatory imperatives of colonization' are framed by the search for a 'radical visual archive of the African diaspora,'[515] a quest that requires an appreciation of the 'quiet, the quotidian, and the everyday practices of refusal', the haptic quality of photograph albums

511 Anna Arabindan-Kesson, 'Picturing South Asians in Victorian Jamaica', in Tim Barringer and Wayne Modest, eds., *Victorian Jamaica* (Durham and London: Duke University Press, 2018), 401.
512 Sharpe, *In the Wake*, 116-117.
513 Campt, *Listening to Images*, 3.
514 Ibid., 57.
515 Ibid., 3-5.

and the interrogation of the 'archival encounter', and the 'fissures, gaps and interstices that emerge when we refuse to accept the "truth" of images.'[516]

Campt's work opens up different approaches to colonial photography: she directs the reader to Kanitra Fletcher, for example, and her analysis of the work of the artists Kenyatta A. C. Hinkle and Wangechi Mutu, who both 're-cover colonialist photographs to recover postcolonial black female subjectivities.'[517] Mutu uses photographs from colonial archives in collage, while Hinkle draws over colonial images of black women. This manipulation of colonial imagery resonates with the work of artist and filmmaker Onyeka Igwe, whose film 'Specialised Technique' (2018) edits and distorts footage taken by William Sellers and the Colonial Film Unit in an attempt to reclaim the work, which had been conceived and directed on the basis of racist assumptions about the way in which black people were able to perceive film.[518]

The work of the black artists and writers I have cited shows the importance of disrupting, redacting or annotating these images: as Fletcher writes, 'in one sense, Hinkle's drawings speak to a conditioned impulse to cover black women's bodies in the postcards as a form of protection', but they also engage with the images as 'inherently fictive, constructed objects.'[519] Unlike studies that reproduce colonial photographs with no consideration of the ethics of viewing and of knowledge production, I try to challenge the idea that western academics have a right to look at and reproduce colonial images. Although I do not seek to 're-cover' colonial images in exactly the same way as Hinckle and Mutu, I do attempt to begin to lay bare their place in colonial ideology by working around the image, bringing to the fore stories that are peripherally located—sometimes literally, in the margins of albums, in captions, annotations, or archive catalogues—but centrally important. By beginning to think about the 'social biography' of photographs and albums, their owners, but also their current

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516   Ibid., 8.
517   Kanitra Fletcher, 'Re-covered: Wangechi Mutu, Kenyatta A. C. Hinkle, and the postcolonial potentiality of black women in colonialist photographs', *Social Dynamics* 40:1 (2014): 181.
518   Onyeka Igwe, 'Specialised Technique', 2018. https://lux.org.uk/work/specialised-technique (accessed 8 September 2021). Igwe discussed the context of the film at an event at Lux in Waterlow Park, London, 5 July 2018. See also Onyeka Igwe, 'being close to, with or amongst', *Feminist Review* 125 (2020): 44-53.
519   Fletcher, 'Re-covered', 194.

locations, in certain museums and libraries, we can disrupt their narratives by refusing to take what's in the frame as the only story.

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Examining these two sets of photographs is an attempt to move towards the idea of infrastructural reading as put forward by Davies in his book on imperial infrastructure and spatial resistance in colonial literature. Davies defines infrastructural reading as a critical approach 'designed to excavate the ideological anxieties, limitations and silences concealed within the textual creases of colonial literature, as well as to unearth the more direct objections to and violent defiances of imperial control and capitalist accumulation.'[520] As well as developing a method of analysing colonial texts, Davies also positions infrastructural reading as a 'self-consciously political practice' aligned with anti-imperial resistance.

Working with ideas of infrastructural reading in the context of photography rather than literature does require some different considerations. Photography gives us somewhere to look: and yet because of this, particularly in the case of 'official' images produced by colonial governments and commissioned photographers, we might suspect that they are not the places we need to look: these images present us with views that we're supposed to see. But in reading both inside and outside the frame, we can begin to identify and address the silences of infrastructure photography and pay attention, as Campt directs, to 'fissures, gaps, and interstices', so that absence becomes as strong or as meaningful as presence.[521] In the context of engineering and construction, photography is often presented as a process of recording, but it was very obviously also a process of editing, erasure, and fabrication: narratives were formed by capturing certain moments and not others. If on the surface, record pictures suggest a smooth narrative of progress, there is resistance and disruption outside the frame: in the following chapter, I seek to bring these back into the discussion.

After elaborating on the photographs' contexts—where they were produced, who they were made by and for, and how they circulated—I will examine three

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520   Davies, *Imperial Infrastructure*, 13.
521   Campt, *Listening to Images*, 8.

'London Metropolitan Railway from Paddington to Finsbury Circus. Photographic Views to Illustrate Works in Progress, July 1862, John Fowler, Engineer in Chief.' London Metropolitan Archives, SC/GL/HFL.

themes that feature in each set of photographs: the interrelationship between construction and destruction, the depiction of labour, and the potential for reading resistance and refusal in the images. As well as thinking of the ways in which these photographs address themes of construction and destruction, labour, and resistance, I also want to think about the agency behind this concealment and consider where and how meanings are erased or buried—a process that happens across the life of a photograph, from the point of capture to publication, reproduction, and cataloguing in the space of the archive.

CONTEXTS

Campt has written that photograph albums are 'decidedly haptic objects', a position that to her suggests the necessity of interrogating the archival encounter.[522] Most of these London albums are digitised, but it was worth viewing them in person: I could see their sense of ceremony, their embossed titles and their size—a few are big and heavy; they are certainly objects, not just flat images. In this chapter, I look at three groups of photographs of London, although not all were compiled into albums: first, there are three different sets of the same images in three different archives: in the museum of London, the National Railway Museum, and the Institution of Civil Engineers (ICE). I'll call these the Flather photographs, after their photographer Henry Flather. Second, there's one album entitled 'London Metropolitan Railway from Paddington to Finsbury Circus. Photographic Views to Illustrate Works in Progress. July 1862'; I'll call these the LMA Metropolitan Railway photographs, after their archive and the railway they depict. Finally, there are two albums from the National Railway Museum of the Midland Railway Extension to London; I'll call these the Midland Extension photographs.

All three sets of the Flather photographs are unbound but some are mounted, and these mounts tell us that Henry Flather's studio was 109 Baker Street. I presume each set of Flather's photographs had a different owner: the copies at the ICE, which were once bound, belonged to T. A. Walker, who was chief agent for the joint contractors Messrs Waring, Kelk and Lucas; the other two likely owners are John Fowler, the engineer in chief of the Metropolitan and Metropolitan District Railways, and Benjamin Baker, Fowler's employee and

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522   Campt, *Listening to Images*, 8.

later chief assistant.[523] It is not clear who commissioned the photographs, although Lynda Nead has suggested that it was the contractors.[524] The LMA Metropolitan Railway album contains forty-four images: 1 map, 28 photographs of constructions sites or finished stations, and 15 photographs of architectural drawings. John Fowler's name is on the title page, so we can presume he was the commissioner, the recipient of the album, or both; the photographer, however, isn't named.[525] For the Midland Railway albums we have no information about the recipient or commissioner, but we do have two photographer's stamps: J. B. Pyne Junior, 167 Prince of Wales Road, and J Ward, Euston Road.

Although there's information missing, we can begin to develop a context for these photographs. We know that they were circulated in engineering and construction circles: they were owned and probably commissioned by either engineers or contractors. From the LMA Metropolitan Railway album in particular, in which photographs of railway construction are juxtaposed with photographs of architectural drawings—we can tell that there was also an element of celebration or congratulation, along with the demonstration of 'progress' with the inflection that was often present when the word was used in the minutes of railway company board meetings—movement towards the point at which money could be earnt as well as spent.[526] And we can also say that each set of photographs creates a narrative in which some issues are present and some absent, two themes that I will build on in this chapter.

Although we have the names of three photographers, the value of this is limited: Henry Flather, J War and J. B. Pyne Junior were not the English equivalents of Charles Marville and Felix Nadar, and there is not a great deal of information about their outputs more generally. Flather is the most well-known: he took

523   See W. F. Spear, revised by Mike Chrimes, 'Baker, Sir Benjamin (1840-1970)', *Oxford Dictionary of National Biography*, Online edition, 2008. For the suggestion that Fowler and Baker were recipients of the photographs, see the leaflet for the Science Museum Picture Gallery's exhibition 'Image of the Train: The Victoria Era', July-September 1993. National Railway Museum, 1984-1516/46.

524   Lynda Nead, *Victorian Babylon: People, Street and Images in Nineteenth-Century London* (New Haven and London: Yale University Press, 2000), 40.

525   LMA catalogue suggests that the photographer might have been Flather, but there doesn't seem to be any evidence for this.

526   See, for example, the 'Copy of the Report of the Directors', in Metropolitan District Railway Board and General Meetings, 1864-1869, 82. LMA ACC/1297/MDR/01/001.

'Photographs of the Works in Progress of the Midland Railway-Extension to London,' vol.II. National Railway Museum.

photographs for cartes de visite before he received the railway commission; his studio moved from Regent Street in the 1860s to Peckham, New Cross and Brockley from the 1870s onwards, where he worked as a photographic colourist. In 1896, he moved to Scarborough in the summer months to work as a photographic enlarger and colourist, and he died in Scarborough in 1901. His daughter, Constance, was also a photographer.[527] A Henry Flather exhibited 'carbon enlargements and direct photographs' at the Chicago World Fair in 1893, and although it seems likely this was the same Henry Flather, I can't be sure— the catalogue only reproduces his name and not the subject of his photographs, or any further information.[528]

Two of the three groups of photographs I consider are of the construction of London's first underground railways, the Metropolitan Line and the Metropolitan District. As Richard Dennis argues, the distinctiveness of these two lines 'lay as much in [their] metropolitan character as in [their] subterranean setting'.[529] The Metropolitan Line from Paddington to Farringdon Road opened in January 1863 and following the success of this line, John Fowler, its chief engineer, applied to Parliament with a scheme for completing an Inner Circle line. The Metropolitan District Railway Company was incorporated in 1864 to complete this task and the first section of the District, from South Kensington to Westminster Bridge, was opened on 24 December 1868.[530] It was envisaged that the two companies (The Metropolitan and the Metropolitan District) would merge to complete the Inner Circle, but this was prevented by acrimony between the two boards of directors and the circle wasn't completed until 1884.

The third is of the Midland Railway Extension into St Pancras. The construction of St Pancras was a significant undertaking that required the clearance of entire neighbourhoods. As the *Illustrated London News* reported in March 1867:

527   See the photoLondon database: https://www.photolondon.org.uk/#/ (accessed 14 September 2018).
528   Department of Publicity and Promotion and M. P. Handy, eds., World's Columbian Exhibition 1893, Official Catalogue, Part XI … Department L. Liberal Arts … (Chicago: W. B. Conkey Company, 1893), 62.
529   Richard Dennis, 'Making the Underground Underground', *The London Journal* 38:3 (2013): 203.
530   Charles E. Lee, The Metropolitan District Railway (The Oakwood Press, 1956), 2.

*the whole of this neighbourhood, from Euston-road and Somers Town,
at one extremity, to Camden-square and the North London Railway, at
the other, extending about one mile, and bounded east-ward by the vast
goods depot of the Great Northern Railway and by the Regent's Canal,
is now a scene of great bustle and activity, hundreds of labourers being
constantly occupied in excavating foundations and building massive piles of
brickwork…*[531]

Estimates suggest that to make way for the railway, 4,000 houses were
demolished in Somers Town, Camden, and Agar Town, and 'perhaps as many
as 32,000 people' were displaced.[532] Railway construction also required the
excavation of the Old St Pancras graveyard, 'an operation overseen by the young
Thomas Hardy.'[533]

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If the photographs of the Uganda railway have certain similarities with the
London photographs—in both locations, the images are captured, in some
sense, as official records of construction—there are also key differences. The
London images were taken in the 1860s and 1870s, when the reproduction of
photographs in print was not yet possible; in the 1890s and 1900s, however,
photographs were widely reproduced. Images of the construction of the
Uganda railway were more widely circulated, which led to a number of different
contexts and audiences. First there's the survey: a British party was first sent
out in 1892 under James Macdonald and J. M Pringle to find a possible route

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531   'The Midland Railway Works in St. Pancras', *Illustrated London News*, 23 March 1867,
       279.
532   Emma Jackson, 'Railway Lands', in Charlotte Bates and Alex Rhys-Taylor, eds.,
       Walking Through Social Research (New York and London: Routledge, 2017):
       13-20; S. P. Swenson, *Mapping Poverty in Agar Town: Economic Conditions Prior to the
       Development of St. Pancras Station in 1866*, Working Papers on the Nature of Evidence:
       How Well Do 'Facts' Travel? No. 09/06 (2006). Department of Economic History,
       London School of Economics.
533   Kathy Battista, Brandon LaBelle, Barbara Penner, Steve Pile and Jane Rendell,
       'Exploring "an area of outstanding natural beauty: a treasure hunt around King's
       Cross, London,' *Cultural Geographies* 12:4 (2005): 443. For the investment decisions
       behind the extension, see Geoffrey Channon, 'A Nineteenth-Century Investment
       Decision: The Midland Railway's London Extension', *The Economic History Review* 25:3
       (1972): 447-470.

for a railway; this work was continued from the mid-1890s onwards by a team of photographers including William D. Young.[534] Young had photographed the East Indian Railways in the early 1890s, and moved to East Africa in the mid-1890s to record the construction of the Uganda Railway. His studio was in MacDonald Terrace, Mombasa, although he later moved to Nairobi and then Kyamby, where he farmed—one example of how the railway provided routes into white settlement.[535] Photographs from these government surveys were also used to illustrate reports: Sir Guildford Molesworth's report on the railway, which was presented to parliament in June 1899, was heavily illustrated with photographs.[536]

As well as producing an 'official' or government record of the railway construction, Young produced albums of photographs that have ended up in private collections. In an advert in the British East Africa & Uganda Handbook and Directory, Young advertises his 'high class portraiture', 'expert roll film development', 'picture framing in English mouldings', 'special care devoted to work for amateurs', and 'camera pictures from Mombasa to Victoria Nyanza'—presumably, these camera pictures were bound in albums and sold to customers.[537] Subsequently, these albums have made their way into different archives across the UK: one was previously held by the Royal Photographic Society and is now at the V&A, and a number are in the Royal Commonwealth Society collection at the Cambridge University Library. Their owners were Alexander Stuart Rogers, a colonial policeman and administrator, and Cutherbert Christy, a colonial medical officer. Although none of these albums is exactly the same, there is a lot of overlap: the same photographs and the same handwritten captions occur across the albums. Many of the images in the albums also circulated as postcards, and the original copyright registrations for these can be found at the National Archives in London.[538] Finally, Young's

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534   Richard Vokes, 'Reflections on a Complex (and Cosmopolitan) Archive': 379.
535   For Young's biography, see the Royal Commonwealth Society Photographers Index, Cambridge University Library, available at http://www.lib.cam.ac.uk/rcs_photographers/entry.php?id=493 (accessed 19 September 2018).
536   'Photographs illustrating report on the Uganda Railway, Sir Guildford Molesworth, dated March 28, 1899', TNA CO 1069/185.
537   Handbook for East Africa, Uganda and Zanzibar (Mombasa: Government Printing Press, 1906), xii.
538   TNA COPY 1/465/48-75. These copyright registrations include a copy of the photograph and a registration form with image descriptions.

Henry Flather, The Construction of the Metropolitan District Railway, 1866-1869. Museum of London, ID IN37536.

photographs were also reproduced in books, magazines, and illustrated newspapers.

DEMOLITION AND CONSTRUCTION

Lynda Nead, one of the few scholars who has written about the Flather photographs, sees them as a record of 'extraordinary devastation'. She picks out a photograph of Westminster Abbey, where the foreground is occupied by piles of timber, earth and bricks and the Abbey is only visible to the viewer thanks to the half-demolition of a terrace that used to stand in front of it. 'The excavations,' she writes, 'had no respect for status or tradition … Westminster Abbey itself seems threatened with destruction.'[539] From the photograph, the Abbey does seem threatened, at risk of being overcome by the detritus of demolition and construction, or being demolished itself, or toppling over, its foundations undermined by the railway tunnels. But minutes of the Metropolitan District Railway Company's meetings suggest something slightly different—a process of negotiation, rather than a lack of respect. 'Mr Fowler reported that he had been in communication with Mr Cowper and Mr Barry in reference to the mode of passing through the garden in Westminster Abbey', read a note from a board meeting in November 1865.[540] Just less than a year later, the engineers could report that 'the designs for the Railway works opposite Westminster Abbey have been agreed upon with the Dean and Chapter of Westminster.'[541] It's clear that not every tenant or land owner was treated in the same way: while housing and small businesses were swept away with little concern for residents and proprietors, Westminster Abbey wasn't really threatened at all. But perhaps the point is that it seemed to be: images of demolition can blur the boundaries between what is safe and what is threatened.

In identifying the photographs as images of devastation and destruction, Nead picks up on part of what makes them intriguing and easy to get lost in. On one level, they offer up demolition and excavation as a spectacle to be viewed or observed. But this can be misleading: it obscures the potential difference

539   Nead, *Victorian Babylon*, 40.
540   Minutes of board meeting on 9 November 1864, Metropolitan District Railway Board and General Meetings, 1864-1869, 62. LMA ACC/1297/MDR/01/001.
541   Minutes of board meeting on 20 September 1866, Metropolitan District Railway Board and General Meetings, 1864-1869, 128. LMA ACC/1297/MDR/01/001.

Henry Flather, The Construction of the Metropolitan District Railway, c.1867. Museum of London, ID IN37537.

between the image of 'destruction' and the structural dynamics of demolition for railway construction. As John R. Kellet argues, it was mainly areas of working-class housing that were cleared for railway building; but the sight of Westminster Abbey or the statue of George Canning in Parliament Square surrounded by rubble and building materials creates a display of universal danger.[542] The idea that the viewer of the image is an observer is also reflected two more scenes Flather captures: a row of onlookers watches the works on Victoria Embankment, and the photographic process, from a bridge across the Thames. In another image, three women stand on the roof of a house, demolished buildings ahead of them and a partially covered tunnel to their left. The house on which they stand shows traces of others that used to connect to it in the squares of render on the exposed party wall. Demolition is revealing: what used to be interior is now exterior.

But to see Flather's photographs as a record of devastation is obviously not in line with the context in which they were produced and if we focus on this, we miss what the photographs aimed to do. We can read from these images an atmosphere of threat, of shock at rapid urban change, and the need to bear witness to it; but we also have to acknowledge that the Flather photographs represent a celebration of demolition and construction as two sides of metropolitan progress. Each set of photographs has a different relationship to this idea. The earliest album, the LMA photographs of the construction of the Metropolitan Railway (1862), shows the neatest journey.[543] The album begins with a photograph of the engineers, contractors, politicians and other dignitaries all in top hats—apart from Lady Constance Grosvenor—in two railway carts at Edgware Road Station. Next there is a map by Fowler of the Metropolitan Railway's route through London, with proposed new lines and lines already sanctioned by Parliament also shown. Then we are presented with the new line station by station: first come the architectural drawings, showing elevations and sections of the new stations, and then photographs of construction sites. On the whole, despite the album's title page, these are photographs of places and not processes: in a photograph of works at Paddington Station, for example, one man in a top hat sits underneath a lamppost, but there are no labourers in

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542   See John R. Kellet, *Railways and Victorian Cities* (London: Routledge & Kegan Paul, 1979), 331-4.

543   For the history of the Metropolitan Line, London's first underground railway, see Alan A. Jackson, *London's Metropolitan Railway* (Newton Abbot: David & Charles, 1986).

'London Metropolitan Railway from Paddington to Finsbury Circus. Photographic Views to Illustrate Works in Progress, July 1862, John Fowler, Engineer in Chief.' London Metropolitan Archives, SC/GL/HFL.

view. In another image of the same site from a different angle, we see a horse and cart and the blurred figure of a man standing under a bridge. On the whole, the images are not heavily populated, with two exceptions: in the first image at Baker Street, looking east, we see labourers below ground level and contractors and engineers above. In the second image, at the junction of Upper Baker Street and Allsop Terrace, labourers sit or stand on pipes or wooden supports. But these two images are not typical of the album as a whole: unlike early French photographs of construction, in which workers were often posed to prevent blurring, the LMA Metropolitan Railway album is populated with ghostly presences—a disembodied torso or half a body that fades with movement.[544] Often, both construction sites and finished stations or cuttings are quiet. Movement is implied in the half-finished structures or the completed rails but not depicted in the photograph.

The photographs in this album order construction into a process—from drawing to building site to finished structure—but also bring order to the levels of construction: we see drawings and plans at rail level, at street level, and at platform level. The Midland Extension album functions in a similar way, as a means of ordering, recording and collecting images and writing on the construction works. Many although not all of the photographs have captions; some provide a description of the image's subject—'temporary bridge over old St Pancras Road', for example—and a district or contract number; photographs of the construction of the Belsize Tunnel give the shaft number. We can see different kinds of locating here: the images are tied to a place, but also to the particular job or contract. At the end of the second volume of photographs, three pages are filled with newspaper cuttings of reports on and engravings of the railway's construction. One article recounts the ceremony of laying the first brick of the Belsize Tunnel, which took place in January in 'driving snow', and reports the speech of Mr Price, the Deputy Chairman of the Midland Railway Company; another article announces that the works are approaching completion. As with the photographs these newspaper cuttings show the successful execution of the project, but they also set this achievement within a wider context. In his speech at the ceremony to mark the laying of the tunnel's first brick, Price recounts the progress brought by the railway, which 'broke down [the] barriers to a freer intercourse and brought [man] face to face with

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544   For the conventions of early French construction photography, see Weiss, Engineering, Photography and the Construction of Modern Paris, 1857-1911, 67.

his fellowman', and emphasises the importance of London: 'The metropolis of England is very rapidly becoming the metropolis of the whole world … there is no district which must not anxiously desire to be brought into more close and immediate relations with this great centre of commercial power.'[545]

As the Flather photographs are unbound and have no captions, their effect is slightly different: they don't carry the same sense of celebration. In these images we also see more of the context of demolition and construction and the boundary between the construction site and the city. Often, what the photographs show is the lack of a firm boundary—in two photographs of construction along Praed Street, the excavations seem to be open to the city. It's not always clear where the construction site begins and ends or which houses were acquired by the railway company and which residents or shopkeepers were expected to continue with their daily life while surrounded by excavation and construction. As indicated in a Metropolitan District Railway Directors' Report from 1867, it was 'sometimes necessary to acquire a considerably greater area' than was 'permanently required for the purposes of the undertaking'; as a result, the Company was left with 'surplus lands of considerable value.'[546]

But it is important to note that despite the sense of chaos, the exposed interiors, the rubble, and the holes in the ground, the actual process of demolition is not recorded in these photographs: the photographer's job only begins after demolition has taken place. This is made clear by an article in the Midland Extension album, which explains that 'the ground forming the site of the station has been cleared of houses and buildings'; the photographs pick up the narrative mid-construction, when the demolition for St Pancras station is only implicit in the empty space of the of the building site. The aftereffects of demolition are much more present in the Flather photographs, but even here there was still no interest in recording the sites prior to or during demolition—save at Leinster Gardens, where the railway ran underneath a terrace of houses. We see the beginning of the excavation process and then the gap where housing used to be with the tunnel mouth below.

545   'Midland Railway London Extension' in *The Railway News and Joint Stock Journal*, 28 January 1865, 77.
546   Directors' Report 1867, Metropolitan District Railway Board and General Meetings, 1864-1869, 166. LMA ACC/1297/MDR/01/001.

While the vast majority of the photographs are of construction in progress, we also see the finished product: the demolition and chaos lead to stations; a concrete core ends up as a bridge. So, like the LMA Metropolitan Railway album, in which the combination of architectural drawings and photographs of construction and completed structures demonstrates the project's progress, the Flather photographs also capture a transition from construction to completion. And yet these images still often suggest that construction is continuous: in an image of the completed Kensington Station, for example, the photograph is composed at an angle rather than straight on and as a result, in the foreground we see piles of timber, tools and rubble. The road hasn't been finished; or perhaps it is about to be dug up. In the background, in the left-hand corner, we see a building clad in scaffolding, the Town Hall Tavern under construction.[547] This photograph suggests that construction doesn't have an end point, after all, but is part of a continuous cycle of demolition and renewal. The same is true of LMA Metropolitan Railway album photographs of station interiors, where we rarely see a pristine, finished station: instead, they are captured on the cusp of completion, with piles of rubble and ladders still visible around the station platforms.

If these engineering photographs give us a view into the process of construction that we don't find elsewhere, the account they suggest of the way in which the works progressed functions in the opposite sense: it conceals rather than reveals. As I have already argued, the images suggest a smooth narrative from planning and construction to completion because they capture both construction in progress and near-finished structures. But in reality, the progression of the works wasn't always so simple: the railway company required enough money to purchase the land they needed and to pursue legal action if the situation arose. The engineers' reports in the company minute books both minimise the impact of delays and reinforce the necessity of securing adequate funding to allow for the timely purchase of land. Ensuring the timely progression of construction was important in ensuring 'continuity of flow in the circulation of capital': as David Harvey has written, 'the process cannot be interrupted without incurring

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547   The copies of Flather's photographs in the National Railway Museum have annotations on the reverse, possibly by the railway writer and enthusiast Charles E. Lee. The identification of the Town Hall Tavern comes from these verso notes. NRM, 1984-1516/22.

losses.'[548] In this context, the photographs act as evidence of construction sites but also of the process of capital flow.

Similarly, as discussed in the previous chapter, delays and disruption interfered with the projected timeline of the construction of the Uganda Railway from its outset. In this context, as in London, photographs functioned to order construction and to provide proof that work was actually taking place, and also could be used to indicate the supposed difficulties that were being faced: a number of the albums, for example, featured multiple photographs of the rails traversing the Mau Escarpment, a steep slope that runs along the western edge of the Great Rift Valley. If the albums were intended as evidence of 'feats of construction', they also endeavoured to show what the British would have seen as colonial state formation: in Young's commercial albums, alongside images that speak to ethnographic classification and the invocation of a timeless, untouched landscape, we see a developing colonial state infrastructure: a statue of William Mackinnon, the hospital, the harbour and the customs landing stage, government buildings, the consulate at Mombasa, the chief police station, the CMS church.[549] Often, these sites are captured from a distance and from an aerial viewpoint and thus present a clear example of the white imperial gaze, a phrase used by bell hooks to describe 'the look that seeks to dominate, subjugate and colonize.'[550]

In these albums, the explicit destruction in view is of the felling of trees and the 'clearing' of land. It is important to acknowledge the cutting down of trees as destructive disruption, particularly because the Chief Engineer was admonished by the Commissioner for destroying forests without care.[551] Otherwise, what we see is the attempt to bring together visual evidence of a functioning colonial

William D Young Album, Mombasa Railway. Royal Photographic Society Collection, V&A Museum.

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548   David Harvey, *The Enigma of Capital and the Crises of Capitalism* (Profile Books, 2010).

549   This is particularly true of the first album in the Rogers Collection, but the RPS album has the photograph of the Mackinnon statue, the customs landing stage—this image was made into a postcard—and the Mombasa Hospital. See 'Views of Mombasa by William D Young c1900', Rogers Collection of East Africa, Y3046G, Cambridge University Library; 'William D Young Album, Mombasa Railway', Royal Photographic Society Collection, XRP 777, V&A.

550   bell hooks, *Black Looks: Race and Representation* (Boston, MA: South End Press, 1992), 7.

551   H. H. Johnson to George Whitehouse, 26 January 1900. Weston Library, Oxford. MSS. Afr.s.1046(11): Whitehouse Correspondence 1896-1902.

Government Quarters and Railway Station.
Views of Mombasa by William D Young c1900',
Rogers Collection of East Africa, Y3046G,
Cambridge University Library

state—one with western markers of capitalist modernity. The railway, like the police and the hospital, signifies to white people the fulfilment of their infrastructural 'promises' or 'obligations', as they were sometimes construed. The survey albums suggest a similar desire to depict a functioning construction project: the line is captured at different points, along with its surrounding infrastructure: methods for transporting materials and supplies for construction and the accommodation of labourers. The camera's gaze is wider than the construction site: the railway brings with it a colonial state, not just a means of transportation. Of course, these images were selective: they showed features of the colonial state without indicating the ways in which it was constantly being undermined, resisted and thwarted in its aims. Photography allowed the government to project its ideas of colonial rule, unhampered by the reality that these ideas were never fully realised.

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'Any person defacing or removing any Government notice, proclamation or order from this board or from any other place to which it is lawfully affixed shall be punished with simple imprisonment for a term which may extend to one month or with a fine which may extend to Rs500, or with both.'[552]

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In addition to illustrating reports and circulating as postcards, photographs of the Uganda Railway were also reproduced in newspapers and books: as well as records of construction, these images were key in generating what Vokes has called the 'wider visual imaginary of Empire' for a UK audience.[553] Just as it is possible to discern a difference between the photographs selected for Young's commercial albums and the government photographs, published images of the railway were of a certain type, and were almost always framed within the same narrative of progress—the 'advance of civilisation', as the Illustrated London News put it.[554] The ILN reported on the ceremony that marked the start of the works, which was 'performed by Mrs George Whitehouse, wife of the chief

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552   Notice, 20 November 1895. PC/Coast/1/1/13.
553   Vokes, 'Reflections on a Complex (and Cosmopolitan) Archive', 384.
554   'The Advance of Civilisation in East Africa: Scenes on the Uganda Railway', *Illustrated London News*, 7 January 1899, 15; 17 December 1898, 915.

10. 'But London is an ancient city'

A couple of years into my research, I presented my work on photographs of railway construction at one a PriArc project meeting in Oslo.[1] The presentation went through photograph albums of railway projects in London and of the Uganda Railway and tried to use the visual material to set up the argument that while the London albums often captured the mess and disorder of construction, the albums of construction photographs of the Uganda Railway often presented the seemingly pristine—an image of the landscape quietly and almost imperceptibly bisected by a railway line. This suggested that the practice of using photography to record infrastructure projects in the nineteenth and early twentieth century resulted in different narratives of progress in different contexts: while the images of London often foregrounded a complex understanding of progress, where destruction and upheaval were afforded a place in the narrative of construction, the album of railway building in Mombasa functioned very differently. Here, we can see the projection of a colonial ideal; the erasure of complexity and resistance; and an evocation of the pastoral—in fact, often a studied avoidance of the practice of construction.

One comment I received in response to this presentation stuck in my mind. 'But London is an ancient city', the professor said, 'of course we see more mess and demolition.' The implication of her comment was that Mombasa was not ancient: there was nothing in the city to demolish, so no wonder we don't

engineer … in the presence of a large gathering.'[555] According to the report, the Consul-General spoke of the 'great advantages to East Africa which the construction of the railway would confer in opening out the country to British trade', while the ILN added that 'before many years are over there can be little doubt that the line will be through to Lake Victoria Nyanza'—an assertion that only really makes sense if we presume that there was doubt about the railway's completion. The article is illustrated by a photograph of locomotives on the beach at Mombasa Island.

In 1898, the Uganda Railway Committee were contacted by a representative of the Star, who inquired about photographs of the railway for publication. The committee resolved that the representative of the paper should 'be afforded facilities for making such copies of the photographs in question as he wished, and that similar facilities should be granted to any journalists who should apply for them': the committee were keen to spread the image of the railway.[556] In addition to the Star, over the course of the railway's construction, the ILN published both illustrations and photographs of the process: in 1899, two pages of photographs depicted scenes including the arrival of missionaries, the Voi river, and the bridge between Mombasa Island and the mainland, which the paper audaciously stated was 'the first bridge in East Africa'—a claim in line with the colonialist's racist disbelief that Africans were capable of construction before western influence.[557] In 1902, to announce the end of plate-laying in December 1901, the ILN emphasised the difficulties that had been overcome—'dense forests had to be penetrated, rocks had to be cut or tunnelled, and at the same time the workers had to content with malarial fever and the attacks of wild beasts'—and the benefits of the railway, which would supposedly 'bring facilities of transit within the reach of some four millions of people.'[558]

This shift to emphasising the benefits to African people rather than to British trade is accompanied by a photograph caption that identifies a group of African

1 PriArc is the abbreviated name for the HERA-funded project of which my PhD is a part. https://heranet.info/projects/hera-2016-uses-of-the-past/printing-the-past-architecture-print-culture-and-uses-of-the-past-in-modern-europe/ (accessed 24 August 2021).

555   'The Uganda Railway', *Illustrated London News*, 29 August 1896, 274.
556   Minutes of the 79th Meeting of the Uganda Railway Committee, 20 October 1898. In *Further Correspondence*, 1898, 190.
557   'The Advance of Civilisation in East Africa: Scenes on the Uganda Railway', *Illustrated London News*, 7 January 1899, 15.
558   'The Uganda Railway', *Illustrated London News*, 11 January 1902, 42.

see similar scenes of craters in the street and half-destroyed buildings. The comment stuck with me because Mombasa *is* ancient: the city is said to have been founded in 900 AD; in a 'famous local epic poem', it is literally described as an 'ancient city'.[2] We also know that the construction of the railway required the acquisition of land that was already in use—part of a cemetery, for example—and consequently disrupted existing inhabitations and figurations of the city.[3] We do not see in the albums any demolition or the relocation of graves, if the railway company even bothered to do such a thing, because that is not what we are supposed to see: these photographs were not intended to suggest narratives of demolition or destruction.

There were other ways the comment could have been phrased, focussing on the size of the cities or the routes the railways took. But implying that Mombasa was not 'ancient' ties in with the way in which white Europeans often erase African history, conceiving of the continent only through the lens and timeline of colonialism and perceiving only an empty space before European arrival. As well as denying Mombasa's long history, the comment also privileges a particular understanding of demolition and the city that focuses on the material. While stone architecture in Mombasa 'became a privileged space of local civilizational discourse sometime between the twelfth and fourteenth centuries'[4] and this materiality is obviously important in the city's history, as architectural historian Prita Meier explains, an understanding of Mombasa cannot

2 Prita Meier, *Swahili Port Cities: The Architecture of Elsewhere* (Indiana University Press, 2016): 33.
3 Letter to the Chief Engineer Uganda Railway, 8 June 1899. PC/Coast/1/1/21(B).
4 Meier, *Swahili Port Cities*, 37.

people as 'potential railway passengers'.[559] Photography allowed a colonial project to be presented as commensurate with a pastoral idyll and as a passenger railway, created to facilitate the mobility of local peoples—when in fact, the railway coincided with and was linked to the confinement of African people to reserves and the constriction and policing of mobility, the very opposite of what this image promises. In other publications, the photographs play a similar role: in a history of East Africa published in 1908, the author writes in the preface that 'the photographs which illustrate every section of the work would alone show the progress which has been made and the exceptional range of resources and products of the colonies.'[560]

LABOUR

As well as being images of excavation and construction, these are also, to varying degrees, photographs of labour. While the construction sites captured in the LMA Metropolitan Railway album of photographs of London are relatively unpopulated and the photographer doesn't seem to demonstrate much interest in capturing scenes of labour—a smudge in one photograph of Portland Road Station at rail level suggests an attempt to edit out the ghostly torsos of two labourers in movement— the Flather photographs and the Midland Extension album show more of the process of construction. These are scenes of labour in which the workers are often looking at the camera, but are rarely ceremoniously posed: in one image, men in the foreground laying bricks turn their heads to look up but the men behind continue without any acknowledgment of the camera. Some images show a group of men working in the middle ground and distance, but there are also closer shots where we see individual faces, expressions. Unlike the stillness in some of the LMA Metropolitan Railway photographs, Flather's images either capture blurred movement or suggest that

559   'The Completion of the Uganda Railway to the Victoria Nyanza, December 19', *Illustrated London News*, 11 January 1902, 50.
560   Somerset Playne, East Africa (British): Its History, People, Commerce, Industries, and Resources (The Foreign and Colonial Compiling and Publishing Co., 1908-9), Preface.

only focus on the material: the organisation of the city into neighbourhoods, for example, doesn't follow 'a series of streets or the boundaries of areas', but 'patterns of migration and significant historical events … a kind of palimpsest of communal memories and shared experiences.'[5] These understandings of urban spatiality have to influence the ways in which we view and understand demolition and destruction: it manifests in the disruption of events and conceptions of space as well as in the physical urban fabric.

construction has only been paused momentarily.[561]

All three sets of images of London—the LMA Metropolitan Railway album, Flather's photographs, and the Midland Extension album—predate projects such as John Thomson's Street Life in London (1878), which claimed to bring 'to bear the precision of photography' on the conditions of the 'humbler classes', or Leicester photographer Sydney Newton's images of railway workers on the Great Central Railway London extension, 1894-1900.[562] Although these engineering photographs are arguably similar in that they captured, to varying degrees, scenes of labour, there are some key differences. In his study of photography and the British Empire, historian James R. Ryan draws links between the way in which photographers like Thomson and 'social explorers' like Henry Mayhew used the language of imperialism in depicting their London subjects, conjuring associations between '"savagery"' in the metropolis and on the imperial frontier.'[563] Photography aided attempts to catalogue 'urban types' and, as Ryan argues, helped to naturalise them through its claim to documentary reality.

Although engineering photographers did produce images of labourers in London, they don't yet demonstrate the same ethnographic interest in their subjects as Mayhew or Thompson. In the LMA Metropolitan Railway album, labourers appear in the minority of images and are often blurred. In her study of photographs of black women, Hartman writes that the images 'coerced the black poor into visibility as a condition of policing and charity, making those bound to appear suffer the burden of representation.'[564] The blurred outlines in the London railway photographs mean that the labourers escape the burden of

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5 Meier, *Swahili Port Cities*, 31-32.

561   The wet-plate process, which was developed in 1851, cut exposure times from minutes to ten or fifteen seconds. As G. H. Martin and David Francis explain in 'The Camera's Eye', this still did not allow the clear capture of movement—hence why figures in Flather's photographs are often blurred. See G. H. Martin and David Francis, 'The Camera's Eye', in H. J. Dyos and Michael Wolff, eds., *The Victorian City: Images and Realities* vol. II (London: Routledge & Kegan Paul, 1978), 232.

562   *Street Life in London* quoted in James R. Ryan, *Picturing Empire: Photography and the Visualization of the British Empire* (London: Reaktion, 1997), 174. For Sydney Newton's photographs, see Bryan John Ayres, 'Navvy Communities and Families in the Construction of the Great Central Railway London Extension, 1894-1900', PhD Thesis, 2015.

563   Ryan, *Picturing Empire*, 177-8.

564   Hartman, *Wayward Lives, Beautiful Experiments*, 21.

being visible. In Flather's photographs, where we do see images of labourers up close, there are opportunities to read defiance, either in those who don't stop their work for the camera, or those who do stop but seem to view the camera with bemusement.

The result of this relationship between the labourers and the camera is that the objectification and heroization of the labouring body isn't as clear here as it is in other images of labour from the period.[565] The inclusion of labourers in these photographs was certainly a choice—and one that suggests some interest in scenes of work—but their position within the images is ambiguous because their depictions are so often imprecise. Unlike Thomson's ethnographic photographs of London's poor, engineering photographers in the 1860s didn't attempt to provide exact portraits of labourers themselves, and unlike Sydney Newton's later images of workers on the Great Central London Railway Extension, there is no interest in their lives outside of the construction site.[566]

The navvies' presence in these images seems to reflect their position in official records: as historian David Brooke has argued, navvies are noticeably underrepresented in terms of parliamentary evidence and most accounts of their lives and working conditions come from literature produced by middle-class women, which was often moralistic, 'lurid accounts of their misdeeds which appeared in the press', and the evidence given to the Select Committee on Railway Labourers of 1846, which included testimony from only three navvies but many engineers, contractors, policemen, and railway missionaries.[567]

This lack of evidence in turn has led to a lack of historiographical material on navvies, particularly those who worked in London: although Brooke has used census data to study the origins of men engaged in railway construction, this method proves difficult in the context of large cities because 'the imprecise

Henry Flather, The Construction of the Metropolitan District Railway, c.1867. Museum of London, ID IN37542.

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565   For discussions of images of labour in the nineteenth century, see Tim Barringer, *Men at Work: Art and Labour in Victorian Britain* (New Haven and London: Yale University Press, 2005); Paul Dobraszczyk, 'Sewers, Wooding Engraving and the Sublime: Picturing London's Main Drainage System in the Illustrated London News, 1859-62', *Victorian Periodicals Review* 38:4 (2005): 349-78.

566   Bryan John Ayres, 'Navvy Communities and Families in the Construction of the Great Central Railway London Extension, 1894-1900', PhD Thesis, 2015.

567   David Brooke, 'The Railway Navvy—A Reassessment', *Construction History* 5 (1999): 35-36.

Uganda Railway Photographs. No.1, Series A. The National Archives, Kew. CO 1069/185.

description "railway labourer" was frequently used as the occupational title of both navvies and some employees of railway companies.'[568] Those who worked on the Metropolitan and Metropolitan District Railways also slip through the cracks because the classification of these lines is somewhat ambiguous: built by the cut and cover method, they were different from the later 'tube' underground railways, but they were also different from railways built outside of large cities, both in terms of the work required and the relationship of the labourers to their context. Most of the evidence comes from newspapers: reports of accidents during construction and other incidents.[569]

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While the wider context of Young's commercial albums was the construction of the British colonial state, the immediate subject of at least three of his albums and the government photographs was the actual construction of the Uganda Railway. Analysing these photographs as images of construction and labour, we can immediately see a difference between photographs taken for the colonial government survey and those presented in the commercial albums: whereas the former depict works in progress—both surveying and construction—the later tend to show completed works or construction from a distance. Although there are some images of labour [In a reverse, Mau Escarpment] and of labourers' tents, photographs of completed cuttings [soap-stone cutting, mile 504], bridges and rails are more frequent in the commercial albums. On the whole, these images are either empty of people or sparsely populated: the only photograph that begins to suggest the sheer number of labourers who worked on the railway is of plate laying gangs crammed onto railway carts on top of tools and materials.

If the labour of constructing the railway is only hinted at in the commercial album photographs, the colonial government photographs do depict survey and construction works in progress. But despite this difference in focus, both types of image—government and commercial—still imply an effective construction progress and a functional relationship between labourers and their 'employers'. In the commercial albums, this is suggested almost by

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568   David Brooke, 'The Railway Navvy of the 1881 Census', *Quarterly Journal of Social Affairs* 2:4 (1986): 366.

569   See, for example, 'Accident on the Metropolitan Railway', *London Evening Standard*, Thursday 19 June 1862, 2.

William D Young, 'Uganda Railway Construction I'. Rogers Zanzibar and E Africa Collection, Y30468H. Cambridge University Library.

the lack of focus on labour; in the colonial government photographs, the relationship is recorded in photographs that show Indian labourers being paid; in Molesworth's report, it is explicitly stated: 'the men themselves seem to be perfectly satisfied with this agreement.'[570] As I outlined in the previous chapter, this frequently was not the case: the relationship between labourers and the railway was often one of outright hostility. In this context, where labour relations were contested, photography is both a form of recording and of editing: the government photographs, so numerous and seemingly comprehensive, and the report, supported by photographs of men at work, clearly leave so much undocumented. Often, what we see in the images is the inverse of the problem: this photograph of the payment of labourers suggests a functioning labour system; unsurprisingly, there are no photographs of the strikes or discussion of forced labour. Here, the traces of other stories are apparent in the heavy sense of absence: completed railway lines run through the landscape with no visual evidence of labour or explicit destruction. In the London photographs, in contrast, difficulties in obtaining land are blurred by the pervading sense of destruction: even landmarks like Westminster Abbey seem threatened.

INFRASTRUCTURAL READING: RESISTANCE AND REFUSAL

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'But even then these adventurers of Portuguese mercantilism were forced to build Fort Jesus, showing that Kenyan people had always been ready to resist foreign control and exploitation.'[571]

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On the surface, these photographs of the Uganda Railway all project the image of a functioning railway construction project, with the more complicated reality only hinted at by an image of 'a narrow squeak', where an engine nearly hits an inspection party on the rails. Young made this image into a postcard, presumably because it suggested that railway building was an exciting and unpredictable venture, but it doesn't show what often happen when there

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570   Photographs illustrating report on the Uganda Railway, Sir Guildford Molesworth, dated March 28, 1899', 10, TNA CO 1069/185.
571   Ngugi wa Thiong'o, *Petals of Blood*, 81.

were accidents: people were injured, often seriously, or killed; the archives contain numerous cases of labourers suffering fatal accidents on the rails. The constructed, fictionalised narratives of Young's commercial albums sometimes seem impenetrable. In searching for images of the women she writes about, Hartman admits a similar experience; that she grew frustrated with what the photographic archive could offer her: 'the surveys and the sociological pictures left me cold. These photographs never grasped the beautiful struggle to survive, glimpsed the alternative modes of life, or illuminated the mutual aid and commonwealth of the slum.'[572]

But in both the London and Uganda Railway albums, there is also what Vokes calls a 'concealed archive of meaning' that haunts the spaces around the image.[573] Once I've moved outside the frame, it's possible to look back and find traces of the seemingly invisible. In some images, these traces are the heavy sense of absence: a rail laid through the landscape with no visible labour or destruction. In others, they are presences that imply resistance: men with their backs to the site of construction, on a slightly higher vantage point, might be guards, who were 'employed' only as a response to local resistance. Sometimes, when you look harder, a whole album becomes not only an artefact of colonial violence and capitalist modernity but evidence of resistance: Alexander Stuart Rogers, who owned three albums of Young photographs, was born in Peshawar and worked for the Punjab Police; but he was sent to Mombasa in 1890 because the IBEA was facing opposition from local people.[574] As Ariella Azoulay has argued, 'photography is much more than what is printed on photographic paper.'[575] If the photographs are viewed as objects with a lifespan or a 'social biography', the product of their owners' existence in certain places, then meanings can shift and break loose from what we see in an image.[576] The 'archive of concealed meaning'

572   Hartman, *Wayward Lives, Beautiful Experiments*, 19-20.
573   Vokes, 'Reflections on a Complex (and Cosmopolitan) Archive', 405.
574   See biography of Rogers on Janus, the online catalogue of Cambridge archival collections: https://janus.lib.cam.ac.uk/db/node.xsp?id=EAD%2FGBR%2F0115%2FY30468A-I (accessed 20 September 2018).
575   Ariella Azoulay, *The Civil Contract of Photography* (Brooklyn, NY: Zone Books, 2008), 14.
576   For a discussion of anthropological approaches to understanding the meaning of photographs, see Vokes, 'Reflections on a Complex (and Cosmopolitan) Archive'; Deborah Poole, 'An Excess of Description: Ethnography, Race, and Visual Technologies', *Annual Review of Anthropology* 34 (2005): 259-79.

is there, but it requires the reshaping and reframing of sources to bring it to the surface. Even if the photographs were commissioned to record, they must also edit at the same time because the record they provide is not complete: only certain scenes were deemed worthy of being recorded or could be recorded. We have to read paths and meanings into the images because they represented choices – a reality that emerges more clearly in photographs of the Uganda Railway.

Although images of infrastructure are often made to tell stories of 'progress' and 'civilisation' and to bring order to chaotic processes, we can identify another narrative that runs alongside, one of anxieties and resistance. This second narrative was not always made explicit outside of government reports; in print and commercially available images, faith in progress and civilisation was often foregrounded. In the light of this, we might conclude that as well as 'monstrously bearing witness to from a position of safety',[577] the white gaze also buries and denies violence, particularly in the context of infrastructure construction, where the projection of a future of modernity and progress is necessary to justify the disruption and expenditure.[578]

577   Daniel C. Blight, 'White Gaze', 1000 Words. http://www.1000wordsmag.com/michelle-dizon-viet-le/ (accessed 8 September 2021).
578   Gupta, 'The Future in Ruins'.

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CONCLUSION

In a discussion on bitcoin hosted in July 2021 by lobbying group Crypto Council for Innovation,[579] Jack Dorsey, the co-founder and CEO of Twitter, said that his hope for the cryptocurrency was that it would create 'world peace.'[580] Even Tesla CEO Elon Musk, who was also on the panel, couldn't keep a straight face at the suggestion that a cryptocurrency with an equivalent annual carbon footprint to Argentina would bring world peace.[581] But the fact that the idea was mentioned shows how nineteenth-century technological dreams remain dominant—the elites of global capitalism still pedal narratives of progress that first emerged in the 1800s.

These narratives don't just centre on the elusive idea of 'world peace'. In June 2017, Mark Zuckerberg, CEO of Facebook, announced that the company's mission had changed from 'making the world more open and connected' to 'giving people the power to build community and bring the world closer together.' This statement was uncannily similar to remarks in early nineteenth-century writing about the railway: one commentator in the Quarterly Review in 1839, for example, predicted 'the gradual annihilation, approaching almost to the final extinction, of that space and those distances which have hitherto been supposed unalterably to separate the various nations of the globe.'[582] According to the nineteenth-century liberal press, railways would bring people closer together and in doing so, they would create 'social harmony' and 'conflict free progress'. Then as now, these narratives of technological progress and bitcoin-fuelled world peace serve to obfuscate the workings of racial capitalism and the unequal effects of infrastructure development. They provide depoliticised narratives of 'connectivity', 'progress' and 'peace' while reinforcing the idea that the current capitalist system is both sustainable and capable of delivering such outcomes.

This thesis has investigated how infrastructural narratives operated in the

579   https://cryptoforinnovation.org/ (accessed 22 July 2021).
580   Bitcoin Magazine, Twitter post. 21 July 2021, 20:10. https://twitter.com/bitcoinmagazine/status/1417925045972881409?s=10. 'Bitcoin As a Tool For Economic Empowerment', https://www.thebword.org/c/track-2-Bitcoin-As-A-Tool-For-Economic-Empowerment (accessed 28 July 2021).
581   Lauren Aratani, 'Electricity needed to mine bitcoin is more than used by "entire countries"', Guardian, 27 February 2021. https://www.theguardian.com/technology/2021/feb/27/bitcoin-mining-electricity-use-environmental-impact (accessed 28 July 2021).
582   Quarterly Review 63 (1839), 22, quoted in Schivelbusch, *The Railway Journey*, 34.

nineteenth century with the arrival of the railways and their development as a tool of colonialism. It has shown how infrastructure was often used to create sanitised narratives of progress while at the same time using coercive labour practices, creating racial and class hierarchies and dispossessing people of land. Recognising the duality of this process is particularly important: while infrastructural narratives promised progress, they also often distracted readers and viewers from the actual practices of exploitation and dispossession that were taking place.

Chapter One argued that nineteenth-century infrastructural narratives in the ILN depicted the railway as an agent of 'civilisation' and increased communication, 'peace', vanishing barriers and borders. Often the railway, like other infrastructural developments, was framed as an inherent benefit. As Sinnema argues, these narratives helped to mitigate fears of disruption from railway development, celebrating instead the opening of new lines and marvelling at the power of the railway. Certain disturbances—those of construction and accidents, for example—were also accommodated and naturalised in the ILN's reports. By including and illustrating these incidents and processes, the paper helped to evoke infrastructural realities and futures where some forms of disruption and disorder were expected, understood, and even reconciled as a necessary corollary of 'progress'.

While other authors have focussed on accidents as a means of studying railway narratives,[583] I was also interested in depictions of labour disputes and colonial resistance, which functioned differently from the ILN's coverage of train derailments and explosions. Labour disputes were rarely given a visual narrative, and while the Uganda Railway did receive illustrated coverage in the ILN, the reports demonstrated an overwhelming confidence in both imperial and infrastructural 'progress'. If illustrations of accidents provided a means of interrogating—and ultimately accommodating—the mechanical risks of technological development, anxieties around unruly labour and anti-colonial resistance were not given such space. Perhaps both were too difficult to reconcile into infrastructural narratives.

Chapter Two moved from the depiction of infrastructures in nineteenth-century print culture to the railway's relationship to land appropriation and

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583   Sinnema, *Dynamics of the Pictured Page*; Fyfe, 'Illustrating the Railway Accident'.

commodification. The chapter demonstrated the ways in which railways contributed to the development of 'regimes of ownership' based on class and race and considered how land acquisition often involved selective processes and mapping and surveying by governments and railway companies. According to these processes, or tactics of dispossession, some people were determined to be valid owners and occupiers of land—therefore worthy of compensation and recognition—and others were not.

Chapter Two also examined the concept of 'public interest', which was often used both by railway companies and the colonial government to justify railway development, but also by landowners to oppose it. Despite its frequent invocation, 'public interest' was left undefined or defined strategically to suit the motivations of the party relying on the concept. In this sense, 'public interest' can be read as what Fitz-Gibbon terms an 'act of fiction'—an idea formed for the ease of a colonial or English legal system but naturalised as 'fact'.[584] Nevertheless, definitions of public interest were challenged by trade unionists who read infrastructure projects as profit-making schemes and East Africans who challenged the colonial government's understanding of 'public interest' by occupying and cultivating the railway zone.

Chapter Three built on analyses of infrastructural time to frame a study of delays to the construction of the Uganda Railway. The chapter argued that the temporality of the Uganda Railway's initial infrastructural narratives—stories of improvement, progress and completion used to sell the project—differed from the reality of construction, which was subject to delays, resistance and disruption. While early reports on the railway's viability suggested that construction would be easy, once the project was underway, numerous difficulties emerged. Sickness and injury caused considerable delays, as did labour disturbances and anti-colonial resistance.

Like Chapter One, this chapter showed how infrastructural narratives failed to incorporate or account for labour disruption. Strikes during construction were constantly depicted as unforeseeable and unexpected, and often went unreported with no record in the railway's annual reports, despite lengthy correspondence between the Chief Engineer and the Railway Committee on the matter. The transition from the initial narrative of ease and achievability to

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584   Fitz-Gibbon, *Marketable Values* [ebook].

one of delay and disruption had a function: while the railway's early narratives aimed to 'sell' the project, after construction had started, narratives of delay and disruption were used to justify exploitative practices that continued beyond the period of construction.

Chapter Four attempted an infrastructural reading of photographs of the construction of the Uganda Railway and railways in nineteenth-century London. This chapter interpreted these images as tools to order the disruption that occurred with railway development and colonisation and traced how they were used to suggest a functioning colonial state or the resolution of a construction site into a finished cutting or station. Following anthropological approaches to photography, the chapter also used the 'social biography' of the albums to discern meanings in the images beyond what is visible in the frame. In doing so, it questioned the narratives of visuality as they have been employed in relation to infrastructure.

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As well as investigating infrastructural narratives of progress and resistance, this thesis also had methodological aims. With the accompanying microhistories, I have attempted to pair research and writing on the nineteenth-century with reflections on the conditions of the production of research and to draw connections between the nineteenth century and the present day. Some of these microhistories were more closely related to the main text—and perhaps could have been a part of it—and others were more detached, but together I intended the microhistories to create a commentary that ran throughout the thesis, both emphasising its main themes and situating the research and writing in the context of its production.

Another methodological influence on this thesis has been ideas of opacity as articulated by the theorist Édouard Glissant, and to a lesser extent, the practices of fugitivity and waywardness theorised and described by Saidiya Hartman. I drew on these influences to attempt to combat regimes of visuality—those that seek to make people, places or resources visible so that they can be appropriated, diverted, stolen, or managed. As Chapter Two demonstrated, these regimes of selective visibility were colonial tactics to recognise the subjectivity—and land ownership rights—of white settlers and not Africans. But this dynamic exists in research as well as in practices of land and patent registration, labour

management, and the exploitation of resources. In Chapter Four, by defining the limits of what colonial photographs show, I have attempted to assert the right the opacity, defined by Glissant as 'subsistence within an irreducible singularity'[585] and the recognition that 'to feel in solidarity with [the other] or to build with him or to like what he does, it is not necessary for me to grasp him.'[586]

On the surface, there is a potential tension between these assertions of the right to opacity and the methods of historians and activist groups who call for increased awareness of atrocities committed by the British empire. The Museum of British Colonialism, for example, seeks to 'make visible suppressed, destroyed, or underrepresented histories relating to British colonialism.'[587] Similarly, other works aim to change our understanding of familiar parts of British culture, illustrating, for example, how proceeds from slavery transformed the Scottish landscape into what we see today by allowing for the investment in and development of farmland.[588] These projects work with the idea of reversing the processes by which certain histories are deliberately hidden or concealed and demanding what Mirzoeff has called a counterhistory of visuality.[589] In my reading, opacity does not deny all moves to visibility; instead, it counters colonial and extractive desires to 'grasp' and to own through practices of knowing and seeing.

Finally, I have attempted to articulate a politics in this thesis, both in terms of the ethics of research and academia and in relation to infrastructure. Among other things, I have used this thesis to articulate an interest in the ways in which infrastructural developments and narratives have been mobilised in support of the destructive systems of capitalism and colonialism. The support infrastructures provided was material in the sense that they allowed the extraction of resources and wealth from colonised countries and facilitated the movement of armies, but it was also ideological. Infrastructures, particularly railways, were used to indicate 'progress' and to try to mitigate both working

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585   Glissant, *Poetics of Relation*, 190.
586   Ibid, 193.
587   'Our Work', https://www.museumofbritishcolonialism.org/ (accessed 13 September 2021).
588   Col Gordon, 'Landed Part 3: Colonial Connections', *Farmerama* Radio, 25 July 2021. https://soundcloud.com/farmerama-radio (accessed 13 September 2021); Tom M. Devine, ed., *Recovering Scotland's Slavery Past* (Edinburgh University Press, 2015).
589   Mirzoeff, *The Right to Look*.

class and anti-colonial resistance. As a result, understanding how this process of mitigation occurred is useful in attempting to formulate strategies of anti-capitalist resistance. Technological routes to 'freedom' are still alive in contemporary British Left-Wing thought,[590] but it's not clear that their proponents have learnt from the failures of nineteenth-century movements that also invested hopes in the power of networks, technologies, and infrastructures to bring political change.

* * *

Over the five years of this project, small shifts have occurred in infrastructural studies. These have accompanied growing calls to decolonise universities and curricula in the UK and have led to conferences, events and publications that centre gender and infrastructure or infrastructure and care.[591] This work is not new, but it has been given renewed visibility, and the readings it presents of infrastructure as formal and informal and a significant factor in the shaping of 'postsocialist and postcolonial experience'[592] represent the future of the discipline. These studies of infrastructure that prioritise understandings from the global south and connect the 'intimacies of daily life' to the 'broader legal, economic, humanitarian and state planning systems'[593] can also be linked to demands for mobility justice and radical infrastructure.[594] Sheller sees mobility justice as means of fighting for 'equitable infrastructures' and 'fair and just forms of sustainable transport and ecological urbanism', but also a demand for the

590   See, for example, Aaron Bastani, *Fully Automated Luxury Communism* (London: Verso, 2019).

591   Iulia Statica and Barbara Penner, 'Gender and Infrastructure: Intersections between Postsocialist and Postcolonial Geographies', The Bartlett School of Architecture, 4 March 2021 – 5 March 2021. https://vimeo.com/showcase/8281675 (accessed 13 September 2021); Huda Tayob, Irit Katz, and Giovanna Astolfo, 'Infrastructures of Care: Spaces of Displacement and Refuge', The Bartlett School of Architecture, 1 February 2019. https://www.ucl.ac.uk/bartlett/development/sites/bartlett/files/infrastructures_of_care_cfp1.pdf (accessed 13 September 2021).

592   Statica and Penner, 'Gender and Infrastructure', Bartlett School of Architecture, 2021.

593   Tayob, Katz, and Astolfo, 'Infrastructures of Care: Spaces of Displacement and Refuge', Bartlett School of Architecture, 1 February 2019. https://www.ucl.ac.uk/bartlett/development/sites/bartlett/files/infrastructures_of_care_cfp1.pdf (accessed 13 September 2021).

594   Sheller, *Mobility Justice*.

'equitable global distribution of natural resources and rights to move or dwell.'[595] Mobility justice as I see it is a politics of abolition: it calls for the abolition of borders, prisons and policing and the reorganisation of 'how we live our lives together in the world.'[596] As theorists of abolition have often stated, this work requires imagination and the rejection of the ways in which capitalism limits understandings of the possible. If infrastructural studies could begin to consider this version of mobility justice, that would constitute a small step towards expanding our conception of the possible and moving towards achievable dreams of freedom.

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595   Ibid, 20.
596   Ruth Wilson Gilmore, quoted in Rinaldo Walcott, *On Property* (Windsor, Ontario: Biblioasis, 2021): 76.

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