REMAKING THE FINANCIAL INFRASTRUCTURE OF THE CITY OF LONDON

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Abstract

In the political economy of finance, the infrastructure of the material environment has tended to be underexamined, with only cursory attention given to how new technologies are enabled by planning decisions and built into the fabric of working spaces. Yet the production of certain infrastructure systems enables some financial centres to have a competitive advantage over others. This chapter responds to this omission by exploring how the City of London, a core hub for financial services, prioritised the remaking of its infrastructure as a way to rebuild and extend its power. The general coverage of infrastructure in respect to the City remains sparse, a troubling analytical gap when one considers that infrastructure is always an enduring question for government and private sector agents. The chapter probes the political economy of infrastructural dynamics from the 1980s to the present, a prominent period in which the City has grappled with manifold commercial, technological, regulatory, and cultural changes. The argument uncovers how different groups of professional players – major firms, local government agencies, property owners, architects, and developers – interacted in ways which produced a significant transformation in the infrastructural experience of the City.

Keywords

Built environment; City of London; computerisation; financial infrastructure; power; skyscrapers; telecommunications; United Kingdom (UK).

In the literature on the political economy of finance, and in particular global financial centres, the infrastructure of the material environment has tended to be underexamined, with only cursory attention given to how new technologies are enabled by urban planning decisions and built into the fabric of working spaces. Yet the production of certain infrastructure systems enables some financial centres to have a competitive advantage over others and shape the larger trajectory of capitalism. This chapter responds to this omission by exploring how the City of London (hereinafter referred to as the City), a core hub for financial and professional services, prioritised the remaking of its infrastructure as a way to rebuild and extend its power. The chapter argues that the City's infrastructural architecture is a neglected feature of its authority. Despite some notable interventions, the general coverage of infrastructure in respect to the City remains sparse, or is located in industry-specific debates, a troubling analytical gap when one considers that the rulemaking over, and manufacturing of, infrastructure is always an enduring question for government and private sector agents.

To conduct this survey, the chapter probes the political economy of infrastructural dynamics from the 1980s to the present, a prominent period in which the City has grappled with manifold commercial, technological, regulatory, and cultural changes. The argument uncovers how different groups of professional players – including major firms, local government agencies, property owners, architects, and developers – interacted in ways which produced a significant transformation in the infrastructural experience of the City. The chapter is organised into three sections. In the first section, the discussion clarifies how financial infrastructure is being conceptually imagined as an evolving, historically determined process, including a particular emphasis on treating 'hard infrastructures', such as buildings, as part of a holistic analysis (Dyer *et al*. 2019: 220). In the second and main section, the empirical story of the City's physical change is explained. The discussion explores how two profound technological trends over the past four decades – office computerisation and new telecommunications – provoked a remaking of the financial infrastructure of the UK's main financial centre. The chapter unpacks how, during the 1980s, the City was confronted with major problems in its office stock, in respect to both overall capacity and the internal structure of how buildings could benefit from new technologies. Through the pressure of key banks, among others, the City altered its planning rules and encouraged the construction of its current built configuration; that is, a welcoming container and facilitator of global capital. The third section wraps-up the chapter with some concluding thoughts.

I. CONCEPTUALISING FINANCIAL INFRASTRUCTURE

As examined by Carola Westermeier, Malcolm Campbell-Verduyn, and Barbara Brandl in their introductory chapter to this volume (p3-4), the study of financial infrastructures is inevitably preoccupied with material objects, such as fiber optic cables, computers, and payment systems, among many other examples. Yet any serious analysis of such structures will, through trying to make sense of functionality or wider politics, invite consideration of systemic socio-economic processes. As other writers have discussed in the social sciences, built infrastructures, or processes of 'infrastructuring' (Star and Bowker 2002), have a 'peculiar ontology': they are things (to adher to a substantialist philosophy where substances are treated as key units of enquiry), as well as relations between things (to align with a processual sense in which objects cannot be understood outside of relations) (Larkin 2013: 329; Barua

2021). The making and implementation of any financial infrastructure includes a host of design and engineering problems, such as involving the availability of materials; the relative resilience of existing technologies; the landscape of the built environment; and the links to, and impacts on, other ecosystems. Thus, to concur with other reseachers, it arguably makes better conceptual sense to define infrastructures as 'assemblages' or 'entanglements' of human and non-human elements (Bernards and Campbell-Verduyn 2019).

This process-based interpretation of financial infrastructure also matters for how one understands historical change, a key theme of my discussion here on the City. In many depictions of financial infrastructure, as a subset of the broader category, the reader can be left with an impression that the system in question is 'robust' or 'stable' in some sense. Such descriptions are often linked to how power is explained, including the implication that certain financial infrastructures imbue or strengthen forms of power (business, state, sector, class etc.). While this reading often has credence, any snapshot of empirical analysis which remains too fixated on the present, without a deeper historical context, runs the risk of underplaying the messy, social evolution of infrastructural forms. For instance, financial infrastructures are often threatened by decay, breakdown, and destruction for a range of reasons. Alternatively, new technologies enter financial markets – in the form of products, systems, or revolutions – and generate changes that were not easily anticipated at earlier points of creation. Financial infrastructures can be built for one purpose, yet also spawn unintended effects on other agendas and practices. In other words, despite appearances of permanence, the materiality of financial infrastructure is always undergoing constant change, necessitating in the process maintenance, repair, revision, or replacement (Ramakrishnan, O'Reilly, and Budds 2021).

With these points in mind, this chapter suggests that any concept of financial infrastructure needs to be open to the material whole within which such systems operate, including attention to the mutual interactions between different infrastructures. We need conceptual thinking which is flexible to trace and accommodate ongoing motion in the built environment, along with a sense of the indeterminacy and unpredictability of historical change. As a consequence, the discussion in the rest of this chapter views the notion of financial infrastructure through a wider, historically-grounded lens, whereby 'hard infrastructures', such as buildings, are also treated as part of a systemic analysis under the same term (Dyer *et al*. 2019: 220). In this sense, therefore, any political economy of financial infrastructure must involve 'the structure of buildings, cities, and metropolitan regions' (Ruby and Ruby 2017: 5), of which the City offers an illuminating case that we can now turn to.

II. FINANCIAL INFRASTRUCTURAL CHANGE IN THE CITY OF LONDON

The City has historically been among the major financial hubs in the world, from its role enabling British colonialism during the seventeenth to early twentieth centuries to its international repositioning over the past seventy years (Kynaston 2002, 2011; Cassis 2010). Notwithstanding recent doubts around London's status post-Brexit (Thompson 2017; Kalaitzake 2022), it is often ranked second to New York as a financial geography, with strengths in banking; insurance; asset management; fintech; as well as related professional services, such as law, accountancy, and consulting (Z/Yen 2023). The focus here is on one aspect of this recent history: how we can understand infrastructural change in the City from the 1980s to the present. During this period, there was a significant transformation in the built environment of the Square Mile (the informal moniker for the City) to meet the demand for business activity and employment. Among key explanations for the expansion of the City during this time, scholars have tended to focus on macro policy shifts, such as the initial development of the Eurodollar market; the Big Bang regulatory reforms in the 1980s; or further post-Cold War liberalisation efforts.[1] The political conditions that facilitated these commercial shifts are certainly vital to any story of the City. Yet the modern power of London as a financial centre and, in turn, its larger role in transnational capitalism, would not have been possible without corresponding changes in large infrastructural systems.

It is surprising how this point is often missing from many political economy accounts of the City's history, although there are some notable exceptions (see Pardo-Guerra 2019). For some political economy analysts, disciplinary biases may be at play, such as categorising the built environment as an object of interest predominantly for geographers or other experts found in architecture and property. However, this lacuna undermines our understanding of the City as a financial centre in two major ways. First, from a practical commercial perspective, political rulemaking is inevitably operationalised through infrastructures. But it should not be assumed that the built environment is ready for new commercial possibilities following a policy shift; rather, there is often a mismatch between supply and demand, provoking fresh struggles and a scramble for investment. Nor should it be assumed that policymaking, local or national, always leads in the creation of infrastructures since, as is often seen, unexpected technologies can pressure owners, tenants, and developers to advance quicker than policymakers. Second, this analysis matters for explaining the power that the City generates as a complex capitalist ecosystem. As some writers has argued, 'London's highly advanced (physical) technological infrastructure' is 'a competitive edge that is consistently overlooked within the literature' (Kalaitzake 2022: 625). Infrastructural benefits of the City, such as transport connectivity, telecoms, and cyber resilience, are consistently promoted by policymakers to consolidate and extend the City's power (City of London Corporation 2023a). Indeed, we could go further to claim that the quality of the City's infrastructure is not simply one factor among others (such as regulation, the legal environment, or human capital), but the foundation of its power, since certain forms of business activity could not operate adequately without such modern systems.

Two technological trends which profoundly shape the City's built infrastructure will be highlighted in this brief account: (1) computerisation, understood as the incorporation of new desktop hardware devices and software systems into offices; and (2) telecoms, particularly the roll-out of fiber optic cable systems. Some contextual detail on these technologies is needed here before explaining the specific City history. In reference to the former, prior to the micro-computer revolution, companies dedicated entire rooms and floors to mainframe computers due to the size, heat, and noise of such equipment (Thomas 2019, 2023;

[1] The London-centred Eurodollar ('offshore') market, established in the late 1950s and estimated to be worth a gross size of $1150 billion by 1980, was a key institutional innovation which enabled the UK to maintain a competitive advantage by making loans and accepting deposits in US dollars (Schenk 1998; Braun, Krampf and Murau 2021). The Big Bang regulatory reforms, launched in October 1986 and closely associated with Prime Minster Margaret Thatcher (1979-1990), contained two significant acts centred on the London Stock Exchange: the abolition of monopolistic fixed commissions on securities transactions; and the opening of the exchange membership to foreign companies. Echoing the Conservatives, the Labour government (1997-2007) continued to adopt a sympathetic political treatment of the City (Plender and Wallace 1985; Reid 1988; Moran 1991; Kynaston 2002, 2011; Talani 2012; Martin 2016; Copley 2021).

Kaufmann-Buhler 2021). In the 1960s, led by innovations in the US, the use of computing was predominantly aimed at lowering clerical-related costs and human inaccuracies in the paper system (Thomas 2014). From the 1970s, banks did make use of some terminals, such as the Quotron unit and screens made by Reuters and Telerate, but these were mainly for information purposes, such as displaying equity prices (Plender and Wallace 1985; Pardo-Guerra 2019). In 1981, the debut of the personal computer (PC) by IBM heralded a new era, promoted as a multifunctional device that could be positioned on the desk of the worker for the first time. Such shifts towards the 'mechanisation of office work' were combined with a range of justifications, including enhanced productivity, customer service, and job satisfaction (Giuliano 1982). In contrast to the general PC, the Bloomberg Terminal, launched in 1982, was marketed as a customisable workstation for financial institutions seeking to connect their traders with real-time financial data and market-relevant news (McCracken 2015). By the end of the 1980s, computerisation had become mainstreamed in major commercial centres, with an estimated three quarters of City employees working at a screen (Duffy and Henney 1989).

In reference to telecoms – which should be viewed as interwoven with these corporate computing trends – the 1980s saw significant investment in fiber optic technology as telecom firms rebuilt their communications infrastructure. Compared to copper cables, fiber optic offers a number of advantages, including: superior speed and greater bandwidth; lighter weight; minimal susceptibility to radio interference; and enhanced security. The first commercialised fiber optic investments were made in locations and along routes where communication traffic was heaviest, such as around New York, Chicago, and Washington DC (Moss 1987). Bandwidth capacity continued to improve through the 1980s and 1990s, along with lowered costs. In the UK, the development of such infrastructure was encouraged by the privatisation of the industry, which included an early experiment from 1981 with Mercury Communications, before the incorporation of British Telecom as a public limited company in 1984 (Moss 1987; Ward 2019). By 1989, the technology had advanced to enable the first transatlantic, submarine fiber optic cable, a development which proved crucial for operationalising long-distance electronic foreign exchange trading (Eichengreen, Lafarguette and Mehl 2021). When the internet began commercialising in the 1990s, data flows became more important than voice traffic, and fiber optic cables were repurposed for handling the increasing demand for bandwidth and storage capacity (Graham 1999).

By tracing the impact of these macro technological forces – which have obviously shaped many locations in the world – we can explore how infrastructural change co-evolved and, indeed, enabled the regulatory changes of the 1980s to become a material manifestation. This historical story highlights my argument about the need to track, through a process lens, infrastructural change in the service of finance where technology plays a disruptive force. We find that some agents are inevitably better at perceiving and preparing for these emergent trends than others. With this context in mind, we turn to address how the City was remade.

i. Confronting inadequate infrastructure and policymaking (1980-1986)

In the early 1980s, there was a serious mismatch between what financial companies desired for their working environments and the infrastructural resources the City could offer. In other words, computerisation and more advanced telecommunications had been developed and were viewed as critical for the future, but this did not mean that such technologies could be immediately deployed into the physical space of the City. Two problems were apparent. First, much of the office stock was built either from the eighteenth to early twentieth centuries and, thus, could not be easily reconverted due to conservation rules; or was derived from the early post-WWII decades, which featured poor quality buildings that were now decaying or obsolete (Roberts and Kynaston 2002).[2] Property owners and users argued that more space was required, built to a superior standard, with a flexible internal design which could accommodate ongoing commercial adjustments (DEGW and EOSYS Ltd. 1983; Duffy and Henney 1989; Thomas 2020). Such buildings were in short supply within the City and, as a result, some firms began to relocate to other locations in London, such as Salomon Brothers' move to Victoria. Second, according to critics, compounding this material situation, the City of London Corporation, as the local authority, had a insular planning culture which was too focused on heritage concerns rather than the needs of business. The most emblematic and controversial projection of this culture came in 1984 when a Draft Local Plan proposed expanding conservation areas in the City, such as limiting the potential for enlarging any building to no more than 20 per cent (Corporation of London 1984; Eagleton-Pierce 2023).[3]

Following the publication of the Draft Local Plan, a firestorm of criticism was unleashed against the local authority by a range of City players, including companies (such as Barclays and Credit Suisse First Boston); the property industry (for instance, Land Securities and Savills); and the wider policy community (including the Bank of England and the Centre for Policy Studies) (Corporation of London 1985). Such groups argued that the future of the City was threatened by an overly cautious, isolationist Corporation approach which did not adequately grasp the precise infrastructural demands of professional services in the context of global finance. As a result of this pushback, an internal power struggle at the local authority brought forward new decision-makers who were more amenable to corporate interests and the Big Bang agenda within the second Thatcher term (1983-87).[4] Subsequently, in a revised and approved Local Plan in 1986, conservation issues were still present and viewed as part of the Corporation's guardian role, but did not restrict planning to the same degree as the Draft agenda (Corporation of London 1986; Eagleton-Pierce 2023).[5] Elsewhere at this time, although not a clear threat to the Corporation, one can also note that the launch of the London Docklands Development Corporation in 1981 by the Thatcher government set in motion the development of Canary Whaft which would become, by the 1990s, a major office rival to the City. Overall, the result of this planning shift energised corporate users, property owners, investers, architects, and the wider development community to plan for new working spaces in the City that could enable the benefits of computerisation and new telecoms to be realised.

[2] The City has 27 conservation areas which are spaces of special architectural and historic interest in which additional planning controls are applied to developments. Much of the core of the City, such as around Bank Junction, is under a conservation edict.
[3] This proposal also needs to be understood in the context of a 'conservationist backlash against the destructive vandalism of some 1960s developments' in the City (Roberts and Kynaston 2002: 39).
[4] In the most significant moves, Michael Cassidy assumed the position of Chair of the Planning and Communications Committee in 1985, replacing Chief Architect Stuart Murphy. Cassidy subsequently hired Peter Wynne Rees as City Planning Officer (1985-2014).
[5] For instance, in comparison to the Draft Local Plan, plot ratios of five to one were allowed in all new building developments, along with the authorisation to build deeper basements and access 'air rights' over transport infrastructure. Such changes enabled an expansion of the City floor space by 25 per cent (Thomas 2023).

ii. Building the new financial infrastructure (1987-1999)

From the late 1980s, in order to respond to business demand, the City experienced a period of rapid expansion which involved the reconfiguration of existing buildings as well as the development of new sites (Ross Goobey 1992; Hendershott *et al.* 2010). For instance, office stock availability grew from around 620,000,000m^2 in 1987 to approximately 740,000,000m^2 in 1993. According to another estimate, between 1985 to 1992, around half of the City's office stock featured some form of reconditioning (Powers 2007). There were at least three technical problems to resolve at this time. First, the power cabling for computing and peripheral devices required considerable space, for which raised flooring was viewed as an essential need of building design. Second, for major banks, particularly US and Japanese players, there was an aspiration for large, open trading floors, ranging from 2000m^2 to 5000m^2, enough to fit 500 to 800 traders in a single space (Duffy and Henney 1989; Ross Goobey 1992; Pryke 1994). As outlined in respect to macro technological trends, the most elaborate trading desks needed to contain multiple terminals and screens, equipment which encouraged the demand for open floors. Third, such computing produced what was called at the time 'wild heat' which, if not removed or controlled through air conditioning, could damage the infrastructure. In addition, given the importance of maintaining corporate data and records, which were increasingly being digitised, some tenants also requested space for 'back up' power sources on site in case of supply distruption from the National Grid (Daniels and Bobe 1992; Thomas 2023).

The opening of the Broadgate development next to Liverpool Street Station in 1991 can be offered as a pertinent illustration of how these problems were managed. Architecturally defined as a 'groundscraper', that is, a building with a large footprint, relatively few stories, and a flexible interior, Broadgate added almost 118,000m^2 of office space and served as a model for City developers on how to reinvent private development. Developed by Stanhope Properties, run by Sir Stuart Lipton (who remains a major City player), and Rosehaugh, headed by the financier Godfrey Bradman, the scheme was an innovative project which tried to anticipate and shape what physical infrastructure would be needed in the City (Davenport 1991; Ross Goobey 1992; Harris 2021). DEGW, a leading architectural design agency, was brought in to determine what the likely tenants wanted from the space (Thomas 2023). American Express, UBS, Royal Bank of Scotland, Deutsche Bank, Henderson Group and Icap were all initial occupiers, as well as the European Bank for Reconstruction and Development (Marmot and Worthington 1986; O'Doherty 2009). Broadgate contained the open office spaces they required. The emphasis on malleable internal structures also carried a conscious financial impulse: it made the balance sheet of developers and tenants more resilient in the face of inevitable business cycle changes or new fashions (Thomas 2020). In addition, Broadgate was also interesting not only in terms of how technological infrastructure was driving the need for new building forms, but also because of how the location of the development – at the 'periphery' of the City, rather than in its 'core' – signalled where clients were willing to be housed for the future.[6] As Broadgate expanded and inspired other projects

[6] Historically, all major banks needed to be located in close proximity to the Bank of England in the core of the City. This was justified on the basis of the Bank's supervision role and its own centralised settlement system (Pryke 1991). In 1984, as the Big Bang reforms developed, this spatial norm began to loosen and the Bank accepted that the activity of financial services could be positioned in many locations, within and beyond the City.

through the 1990s, the observation of Frank Duffy at DEGW became a reality: '[b]uildings have become, in a sense, an extension of the computer' (Duffy and Henney 1989: 33).[7]

In addition to the computerisation in financial services, the late 1980s and 1990s were also significant for the parallel development of new telecoms infrastructure. By the end of the century, in the context of the liberalisation of the industry led by successive administrations (Thatcher, Major, and Blair), six firms had constructed fiber-optic grids beneath the streets of the City (BT, Mercury, City of London Telecommunications (COLT), WorldCom, Energis, and Sohonet) (Graham 1999).[8] The launch of COLT in 1992 is an interesting example of the interplay between finance and infrastructure because it was funded by Fidelity Investments, the US asset manager, with the aim of serving banking, insurance, and law firm clients.[9] As its original home territory, the COLT network was thickest in the City, but by 2000, new connections extended into the West End and Docklands in the east, totaling 257 kilometres of cabling (Rutherford 2005; Pehrsson 2020). One of the most significant technological benefits of COLT's infrastructure to corporate players was the deployment of the first SONET/SDH network in the UK.[10] Superior to the existing BT legacy system, the SONET/SDH protocol, now a worldwide standard, enables larger bandwidth and the capacity to swiich between multiple data types, such as voice, video, and other data (Fransman 2002). In sum, by the early 2000s, in light of widespread broadband adoption and more advanced wireless technology, some of the main foundations of the current financial infrastructure of the City come into view.

iii. Infrastructure takes to the sky: The Eastern Cluster of the City (2000-)

We can see how the modern history of the infrastructure of the City contains material forms undergoing frequent ruptures. What appears in one moment to be fixed and permanent is, in the face of new demands and social forces, dislodged and rendered redundant. Capitalist infrastructure, in all its planetary dynamics, still follows Marx and Engels' (1998: 38) famous line: 'all that is solid melts into air'. In the remaking of the City's financial infrastructure, the 2000s was another notable period of change due to important policy decisions at the Corporation. In 2002, under pressure from the emergence of Canary Wharf as a rival financial district and the new Greater London Authority, the Corporation approved the Unitary Development Plan (UDP), a policy which permitted consideration of tall buildings in the City. Although the City had some skyscrapers, such as Tower 42, built in 1981 for NatWest bank, strict heritage rules, notably to protect viewing corridors of St Paul's Cathedral and the Tower of London, prevented many from being proposed (Gassner 2020). By contrast, the UDP introduced a 'new architectural language in the City' (Kaika 2010: 453), one that was legitimised via the neoliberal-inflected threat that, without the approval of such development, London would 'miss out' on global business. In addition, the justification for the verticalisation

[7] In reference to other projects inspired by Broadgate, 125 London Wall (Alban Gate), designed by Sir Terence Farrell, is also considered synonymous with the Big Bang reforms. Upon completion in 1992, the building was occupied by JPMorgan who sought a modern office space with a large floorplate.
[8] As explored by Ward (2019), there exists a long history of attempts by financial interests in the City to gain privileged access to the latest telecoms technology. For instance, in 1983, in the context of BT's privatisation, the City was one of the first areas in the UK to receive experimental fiber-optic cables.
[9] The investment was also made due to the profitable opportunities emerging in the private telecoms space at this time (Fransman 2002).
[10] Synchronous Optical Networking (SONET) was originally developed for North America. Synchronous Digital Hierarchy (SDH) is a similar technology developed in Europe and Japan.

of the City was also made on grounds that urban space needed to be denser, particularly to limit commuter mobility and the further encroachment of green spaces (Glauser 2019).

The development of the Eastern Cluster of the City – extending from Bishopsgate in the west and eastwards along Leadenhall Street, and from Liverpool Street in the north to Fenchurch Street in the south – has become the main space for skyscraper construction this century. In 2004, the trend began with the opening of 30 St Mary Axe ('the Gherkin'), now a landmark building (Powell 2006). Subsequent significant projects included Heron Tower (completed in 2007), Broadgate Tower (completed in 2008), the Leadenhall Building (completed in 2014), and 22 Bishopsgate (completed in 2020 and now the tallest, topping out at 278m). Other neighbouring skyscrapers are planned, including 1 Undershaft, scheduled to be the tallest building at 310m when completed. By 2019, the Corporation summised that the Eastern Cluster had become the new 'epicentre' of the City (City of London Corporation 2019: 7) and, certainly for casual observers, such skyscrapers project a powerful 'hill-like' skyline profile.

Three reasons behind the emergence of the Eastern Cluster can be given. First, as noted from the UDP policy shift, developers and planners believe that demand for offices will continue to rise. This forecast has largely proved accurate. In terms of the City workforce, it stood at 245,000 in 2004; rose to 414,000 by 2014; and totals 615,000 in 2023. At the same time, the total floorspace in the City was 775,000,000m^2 in 2004; before increasing to 862,000,000m^2 in 2014; and, by 2022, new development, much of it in the Eastern Cluster, had increased the figure to 944,000,000m^2 (Hendershott *et al*. 2010; City of London Corporation 2023b; City of London Corporation 2023c).[11] Second, compared to 1990s, occupiers now require infrastructure which is not only adaptable to IT requirements, but also operates with enhanced energy efficiency. Indeed, the flight to quality buildings in the City – those that have such sustainable credentials – has meant that it has become harder to let older structures with weaker environmental standards.[12] Third, since the global financial crisis and the post-Covid work from home trend, the Corporation has been trying to diversity the economic and cultural functions of the City. Such policy activism has been partly effective. For instance, by 2022, 14 per cent of jobs in the City were defined as technology-focused and the local authority has been keen to market the Eastern Cluster as a start-up hub with 'sustainable' and 'resilient' office spaces (City of London Corporation 2021: 6; City of London Corporation 2023b). The effort to promote the City as a tourist destination is connected to this strategy. For example, most of the new tall buildings are required to provide viewing platforms, attractive plazas, green spaces, and street art. In this sense, therefore, the physical infrastructure of the Eastern Cluster has a double function: it both enables commerce to be realised and, through encouraging non-financial business and tourism, broadens the scope for commodification beyond the financial sector.

[11] This general upward trajectory has, of course, featured many cycles. For instance, since the onset of the Covid pandemic, the vacancy rate for offices in the City has risen from 3 per cent at the beginning of 2020 to 10 per cent by the end of 2023 (Sidders and De Paoli 2023).
[12] The pressure to move to buildings that have a lighter carbon footprint has been encouraged by firms that have a wider commitment to achieving net zero, along with stricter government regulations on minimum energy efficiency standards.

III. CONCLUSION

This chapter has explored how we can understand the recent historical evolution of financial infrastructure in a global commercial centre, the City of London. By examining two dimensions of infrastructure – modern computerisation and new telecommunications – I have explained how the built environment was transformed to facilitate the needs of major business enterprises. Infrastructure is conceptualised here as a process whereby technologies are physically enmeshed into a diverse array of socio-economic interests, reshaping working practices in the process. The operationisation of this financial infrastructure in the City was initiated through the guidance (or threat) of US, European, and Japanese banks who wanted to enhance their working environments for profitable trading. But I have also explained how such direction can only be followed within a complex ecosystem of infrastructural organisation, involving legal planning agencies, property owners, developers, architectural designers, and relevant investors. Such decision-making includes attention to a range of concerns, notably competition with other financial centres, local heritage rules and, increasingly, the desire for sustainability and diversifying the commercial function of the territory. Professional groups in such policy games interact with each other in different ways – ranging from cooperative ties to antagonistic struggles – to forge the blueprints for new forms of financial infrastructure. We need to understand how such infrastructure moves from conception to physical reality to grasp how financial centres, such as the City, try to retain and consolidate their forms of power. Once normalised, these systems often become taken-for-granted by end users yet, as plotted in this historical story, it would be better to recognise how such infrastructure is not just one dimension of capitalist life, but the very substratum enabling other structures of power to operate.

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